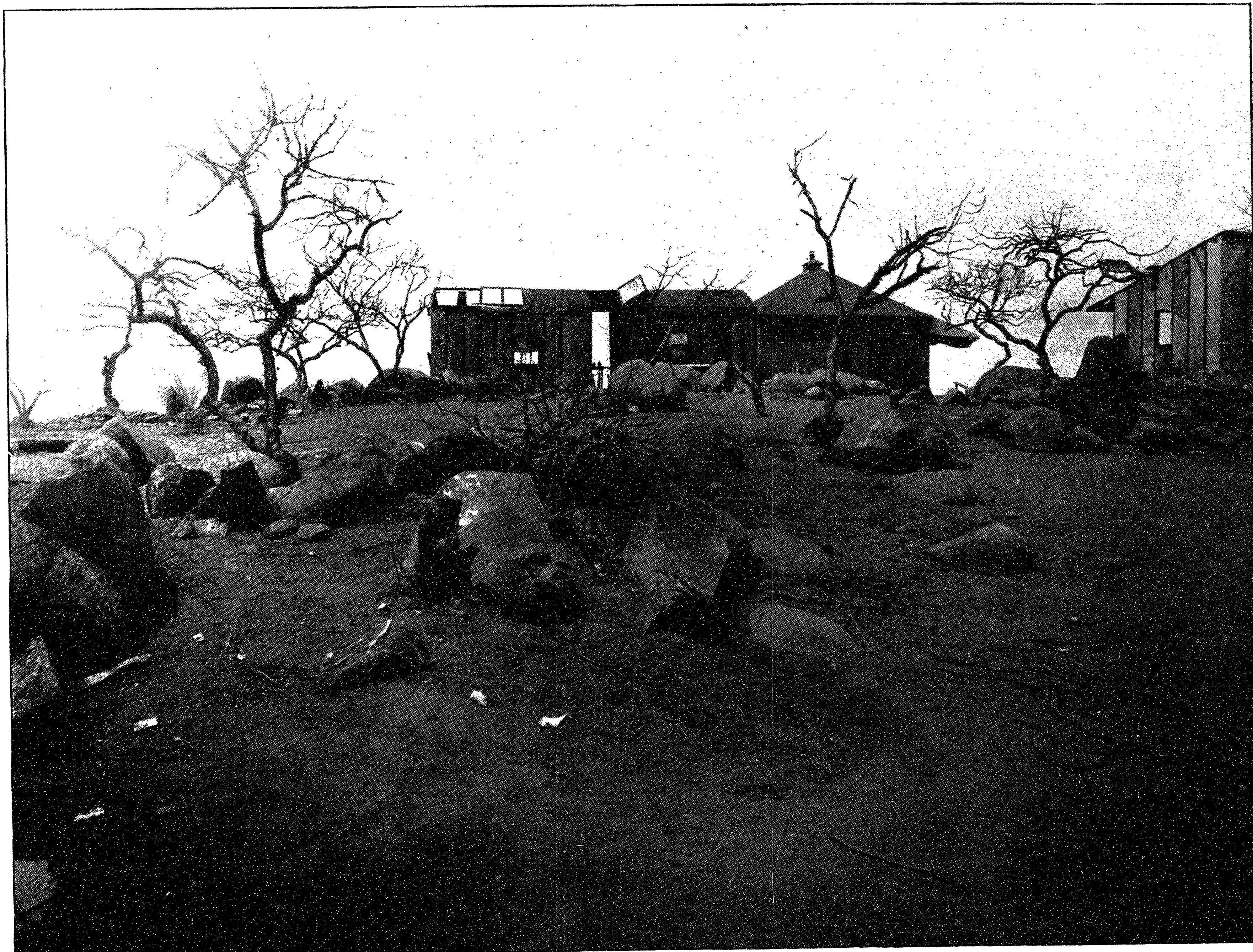

EXTERIOR OF THE STATION, FROM THE NORTH.

ANNALS

OF

THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE.

VOL. XXXIV.

A CATALOGUE OF 7922 SOUTHERN STARS

OBSERVED WITH

THE MERIDIAN PHOTOMETER

DURING THE YEARS 1889-91.

BY

SOLON I. BAILEY,

Assistant Professor of Astronomy,

AND REDUCED UNDER THE DIRECTION OF

EDWARD C. PICKERING.

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PREFACE.

THE observations contained in the present volume are intended to furnish magnitudes for the southern stars on the same scale as that on which the magnitudes of the northern stars are expressed in Volumes XIV. and XXIV. The present publication, therefore, completes a catalogue of the magnitudes of all the brighter stars and of a large number of faint stars regularly distributed in all parts of the sky, from the north to the south pole. The observations here discussed were made with the same instrument, and by nearly the same method, as those described in Volumes XXIII. and XXIV. All of the observations were made by Professor Solon I. Bailey, and nearly all were recorded by Mr. Marshall H. Bailey. The writer alone, however, is responsible for the plan of the work, the method of reduction, and the preparation of the results for publication. Important aid was rendered throughout this work by Mrs. M. Fleming, and the large amount of clerical and numerical work was done by the corps of women computers under her direction. Although the observations contained in Volumes XXIV. and XXXIV. were not made by the same persons, much material has been provided to determine any differences due to this cause. Professor Bailey made several series of observations before leaving Cambridge for Peru, and in Peru observed about two thousand stars, which are also contained in Volume XIV. Nearly all of the brighter stars between —30° and —40° occur also in Volume XXIII., and have since been again observed in Cambridge. After Professor Bailey's first visit to Peru, he took part in the re-observation of the brighter northern stars with the writer, by whom this work has since been completed. Accordingly, measures have been obtained, on at least three nights, of all the stars contained in Volume XIV. with the large, as well as with the small, meridian photometer. While no material change was made in the method of observation, one improvement was introduced in the form of record. The observed declination of each object measured, as well as its hour angle, was always recorded. In cases of doubt as to identification, the object observed can always be determined by means of these readings. Much time has been spent in the search for such errors as those due to clouds, to erroneous identification, and to incorrect readings. The success attained is shown by the fact that out of about twenty thousand sets, of four settings each, there are unexplained discrepancies exceeding six tenths of a magnitude in thirty cases only. These are probably due to actual variations of the stars, to unnoticed clouds and other unavoidable sources of error. The number of southern stars observed is nearly eight thousand, and the total number of photometric settings is 98,744.

A history of the expedition, written by Professor Bailey, is given in Chapter I. The general catalogue containing the results of the observations is given in Chapter IV., and a catalogue of the stars of the sixth magnitude and brighter is given in Chapter VI. The form of the latter is nearly the same as that of the Harvard Photometry, extracted from Volume XIV., which gives a similar catalogue of the bright stars north of $-30°$. The two together furnish photometric magnitudes on a uniform scale of all of the brighter stars in the sky.

EDWARD C. PICKERING,
Director of Harvard College Observatory,

CAMBRIDGE, MASS., U. S., *April 26, 1895.*

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PHOTOMETRIC OBSERVATIONS OF SOUTHERN STARS.

CHAPTER I.

HISTORY OF THE EXPEDITION.

On February 2, 1889, at noon, our party, consisting of Mrs. Bailey, our son Irving, and myself, left San Francisco for Callao, Peru. The direct route from Cambridge, via New York and the Isthmus, would have been followed but that work connected with the total solar eclipse of January 1, 1889 took us to California. Even then, if time had been the only consideration, we might have crossed the Continent, taken passage from New York to Colon, and thus reached Panama some days earlier than by the slow coasting steamers from San Francisco. The Pacific Mail was the only steamship company with a regular service to Panama, and on one of their ships, the San José, Captain Russell, we took passage. On board with us were the Bache 8-inch photographic telescope which had been used at the solar eclipse, some dry plates, and other apparatus, — in all nine cases.

During the six days required to reach Mazatlan, Mexico, the weather was delightful, the Pacific true to its name, and not even sea-sickness appeared to disturb the evenness of life. The shores of Southern California, near which we sailed, were somewhat low and apparently but little inhabited.

Mazatlan is a small city of about twelve thousand inhabitants and of special interest as giving us a first view of a Spanish-American city. The houses of the better class are built about a central court which is often adorned with fountains and flowers. The streets are narrow, and the houses are so plain and even rude outside as to give little hint to a novice of the comfort and even luxury within. There is a fairly commodious harbor for small craft, but the water is so shallow that large ships are obliged to anchor a mile or two from shore. We took breakfast in the "Gran Hotel Central," a neatly-built and well-equipped establishment. The weather which had been quite cold when we left San Francisco gradually grew warmer. At Mazatlan it was not oppressive, but as we proceeded down the coast it grew uncomfortably warm.

On February 11, we reached Acapulco, not now a place of so much importance as formerly. It has, however, what is exceedingly rare on the Spanish-American Pacific coast, a fine harbor. The entrance is in form of a horse-shoe, and is difficult to make out after the ship has come to anchor. The vegetation about Acapulco is decidedly tropical, the cocoa-nut palms adding grace to the landscape. The Indians brought for sale various kinds of fruit, — oranges, limes, bananas, etc., — together with numerous styles of native handiwork. These Indians had the appearance of being pure-blooded descendants of the Aztecs or the races ruled by them. They are now but the toilers in the land, though some negroes and half-breeds share their lot. The scenery along the coast of Mexico is somewhat monotonous, yet beautiful. In the background, the blue ragged outline of the Sierra Madre range relieves the view which would otherwise be found tame.

On Tuesday, February 12, during the afternoon, we sailed across the Gulf of Tehuantepec. Here the wind blew quite a gale, bringing a grateful change from the excessive heat of the last few days. The Gulf at this season of the year is said to be nearly always swept by a strong breeze, as the wind from the Gulf of Mexico crossing the land, which is here quite narrow, spreads out fan-shaped on the Gulf of Tehuantepec. The terminus of the proposed ship-railway was pointed out to us. The prevalence of the wind, above mentioned, would doubtless seriously impede the access of sailing vessels to a harbor at this point. In the early morning I saw the Southern Cross well above the horizon. We were in latitude $+15° 44'$ at noon of the day following.

During the day Mr. Robinson, an American gentleman long resident in Guatemala and president of a railway in that country, gave me the following statement of affairs in the Central American Republics. Though called republics, they are in reality only despotisms of the most perfect type. In practice the president has nearly absolute power. Elections are but farces, no one venturing to oppose those in power. The only appeal from this order is by revolution. These are frequent, but usually futile. As in Mexico, the Indians are practically slaves, for by the laws a peon if in debt to his employer can be compelled to work it out. Nearly all the lower classes employed on the great plantations are in debt to their employer, and owing to low wages and careless habits are unable to free themselves from debt and at the same time from bondage. There is a middle class composed of those of mixed blood who despise the Indians, and are in turn despised by them; who have cut loose from the Church and have no faith at all. They are more quick and intelligent than the Indians, but also more dangerous, always ready for riot and insurrection. The people of these States are incapable of self-government. The condition of semi-slavery, though sad, is claimed to be necessary for the maintenance of any prosperity; some say that the fault is in the lack of good government, but apparently the trouble lies deeper, — in the character of the people.

On Wednesday, February 13, we arrived at Ocos, about four miles from the Mexican line in Guatemala. Ocos is a new port with an iron mole, a custom-house, depository, and some rude buildings. The country is level and thickly wooded for several miles back from the coast; while in the background rise some lofty peaks belonging to the Cordillera. These are conical and probably extinct volcanoes. About forty-five miles away we saw Tacanà, said to be fourteen thousand feet high. Fifteen hundred sacks of coffee were taken on board here. Late at night we arrived at Champerica. A railway leads from this port thirty miles into the interior to the most extensive coffee-producing districts of Guatemala. Rains in this region are very heavy. In the rainy season they cause frequent wash-outs on the railway, as no gravel can be found for constructing a proper roadbed. Coffee is said to be grown in Guatemala at an altitude of from three to four thousand feet. Sometimes it is grown as high as five thousand feet, but there is danger of frosts at this altitude which are fatal to the coffee plants. Sharks were very numerous about the ship. They were from eight to ten feet long, and several could frequently be seen at the same time.

In the early morning of Saturday we arrived at Acajutla, El Salvador. We remained here all day taking on freight. The country is not so level as along the coast of Guatemala; it rises twenty or thirty feet abruptly from the sea, and slopes up to lofty mountain ranges and some volcanic cones. One of these, Izalco, is active. By day every seven minutes with considerable regularity a column of vapor is seen to rise from the opening which is near the summit. This ascends gradually for a minute or two until it is perhaps a mile high. It then becomes detached and floats away. Several of these, the preceding more dissipated, may be seen in the atmosphere at the same time. At night at these times a fiery column is seen to rise to a considerable height above the mountain, and a stream of lava can be seen flowing down the mountain for a long distance. This stream can also be seen by day from the clouds of vapor that rise above it. The duration of the fiery appearance caused by the outburst was much less than that of the cloud in becoming detached. The flow of lava could be seen for a considerable time after the outburst. The period was measured on several occasions during the afternoon and evening, and at the time of our visit agreed quite well with the reputed seven minutes. This volcano is known as "The Lighthouse of Salvador," and serves as a beacon to sailors at sea.

Early in the morning of February 17 we arrived at La Libertad, El Salvador, where we remained till about half-past four in the afternoon. It is a little town of only three or four streets. The country is somewhat abrupt, and rises regularly to high mountains with numerous volcanic cones, but none apparently active. During the day a sperm whale, probably from fifty to seventy-five feet long, played about the ship, frequently coming to the surface to breathe. He several times dove under the steamer, coming to the surface again on the opposite side. The following morning we arrived in Corinto, Nicaragua. This town has a large and well-protected harbor. The boatmen here used oars made of nearly V-shaped blades fastened to the handles with cords. The soil was sandy, and the weather exceedingly warm.

On the afternoon of February 19 we arrived at Punta Arenas, Costa Rica. From this town a railway leads to San José de Costa Rica, the capital of the republic. The houses of Punta Arenas are not so picturesque as some of the other towns we visited, there being no central courts adorned with fountains and flowers. The Gulf of Nicoya is a fine sheet of water with rugged scenery on both sides, and extends many miles to the northward beyond Punta Arenas. During our trip from this port to Panama, no more landings were made.

On February 23 we had an exhibition of Central American manners by a native of Nicaragua en route for Europe. He took offence at a fancied insult from a young English tourist, and armed himself with a revolver, ready to shoot at the slightest provocation. He was disarmed by order of the captain. In sailing up the Bay of Panama we were favored with a more pleasing exhibition in the form of a most remarkable phosphorescent display. The special feature of interest, aside from its general brilliancy, was an appearance resembling the fireworks known as "devil-chasers." A mass of light often appeared which, suddenly breaking into parts, would dart and wriggle in every direction for a considerable distance.

We anchored near Panama in the early morning of February 24. Captain Russell kindly invited us to remain on board till our vessel should sail south. Owing to competition between the English and Chilian steamship companies, low rates for passage to Callao were obtained. At Panama we were joined by my brother, Mr. M. H. Bailey, who came directly from New York, bringing with him about one hundred cases and packages. We visited "La Boca," the mouth of the canal, during our stay in Panama. Work was practically suspended, however, and decay and desolation were the marked features. On the way we passed the company's hospital and burial-grounds. The vastness of each bore witness to the power of the forces with which the promoters of the canal were obliged to contend. Panama is a city of considerable size, and owes its prosperity in recent years largely to the canal enterprise. A depression will doubtless follow as soon as this enterprise shall be definitely abandoned. The harbor of Panama is beautiful, and the city looks well in the distance.

We left Panama, February 26, and arrived in Guayaquil, March 1. It is a city of about thirty-five thousand inhabitants, on the right bank of the river Guayas. The climate is excessively warm, and is said to be very unhealthy. One of the finest buildings is the hospital. The scenery inland from Guayaquil is very fine, but Chimborazo was not visible during our stay. Touching at Tumbez, Saturday, we passed nearly all day Sunday at Payta, Peru. Payta is the port of Piura, some distance inland. It is a dreary and desolate looking town situated at the foot of a bluff at the very edge of the sea. From Payta southward the coast region is barren and monotonous, — only fertile when watered by some river, — but relieved by the vast roll of the Cordillera in the background.

From Salaverry, where our chief cargo was a lot of criminals for the prison at Lima, we sailed directly for Callao. We arrived at this port on the morning of March 6. The lively appearance of the harbor of Callao, with the shipping of all nations, made a pleasant change from the petty ports we had seen since leaving San Francisco, and made us more cheerful for the future. Among the army of clamorous boatmen, we selected one whose countenance bespoke rather less than the average rascality, and were soon after established in the "French and English Hotel" in Lima.

After two days passed in Lima, in calling upon gentlemen to whom we had letters of introduction and arranging business matters, we left that city for Chosica. The railroad runs along the valley of the Rimac, a small but tumultuous stream. After leaving Lima the valley gradually narrowed, but everywhere irrigation rendered the land apparently very productive, — sugar-cane, Indian corn, and a variety of fruits were noticed. We passed the ruins of many ancient Indian towns always placed on the hillsides, where they did not intrude on fertile soil. In this respect they were much more provident than their successors of to-day. Here and there traces of ancient roads and irrigating canals were seen, often in a state of good preservation. When we neared Chosica the valley grew narrower, but broadened at the village into a green and beautiful expanse shut in by steep and barren mountains.

Before leaving the United States, Chosica had been suggested as a desirable site for temporary use. It had been described as a broad valley with a fair outlook, and we had been informed that by going a short distance we should find some slope or plain where a good southern horizon (a necessary condition for our work) could be obtained. In this, however, we were disappointed. To the south of the valley rose abrupt, precipitous mountains, and an observing station in the valley was altogether out of question. In the afternoon we climbed the mountain south of the hotel, conducted by Mr. James B. Mulloy, and accompanied by an aged *cholo* who carried a lunch-basket. Climbing these barren mountains, where no tree grows for shade and no green things except cacti relieve the glare of the outlook, is excessively warm and fatiguing work. A path constructed by the Chilian soldiers during the late war led to the summit of the ridge. By an aneroid barometer the height reached was thirty-five hundred feet above the hotel, and hence about fifty-six hundred feet above sea-level. This location was surrounded by precipices, and the accommodation for buildings was very scant. The path up was also quite poor. The horizon, however, was good, and the outlook on the way up and at the crest was very fine. The mountains about Chosica are outlying spurs of the Cordillera, which lies about fifty miles eastward. From this vast chain, whose general course is north and south, run out gigantic spurs westward nearly to the sea. From these main spurs in turn run other spurs, whose direction is in general north and south. Between the primary spurs flow the rivers from the mountains, where they are fed by the snows. Between the secondary spurs are deep valleys, but those near the coast are without water and with precipitous, barren sides, clad only in cactus growths, yet ready to spring into life with the rain which rarely comes. These deep, gloomy side ravines are called *quebradas*, and the steep ridges between them *cerros*.

From the ridge on which we stood, we saw to the north across the valley of the Rimac a summit that had a green appearance and seemed to be rounded and smooth. Also, south of the Rimac valley where we were, there was considerable haze, possibly caused by the burning of cane rubbish in the valley. The following day being Sunday we rested, and started Monday morning to visit the summit mentioned above. Mr. Mulloy had returned to Lima the day before, and we engaged an Indian guide who claimed familiarity with the region. The party consisted of Mr. M. H. Bailey, myself, and the Indian guide. We crossed the Rimac by a little suspension-bridge, traversed the valley by a dusty lane through fields green with fruits, vegetables, and *alfalfa*, all irrigated from the Rimac. Indeed, no cultivation here is possible without irrigation, and there is no water except in the Rimac. Crossing the valley to the north, we skirted along its side westward by the base of an almost perpendicular cliff, until we came to the mouth of one of the deep, gloomy ravines that run northward between precipitous walls until stopped by the main spur of the Andes running west.

Here we left the green valley and pleasant breeze and turned into the bed of an ancient stream. But before proceeding we paused a moment to look back. It was a beautiful sight. The green valley, the tumbling river, the grazing cattle, and the quiet village, — all shut in by the grim mountains. Just at our feet lay an ancient town with walls still standing in many places, though only built of adobe and loose stones. This village placed well up from the fertile valley apparently once contained a population of two thousand people. Directly across the river are the ruins of another town fully as large, and just above Chosica, on opposite sides of the river, are the ruins of two more. From many trips taken among these ancient towns later, I should place the population of the valley near Chosica in the days of the Incas at six thousand. To-day there are perhaps five hundred. This may be an extreme case, but well illustrates how Peru has changed since she fell into the hands of the Spanish conquerors.

Turning our backs upon the valley and its associations, we faced our mules up the ravine northward. Shut in by the steep walls that rose a thousand or more feet on either side, the breeze faded away, but the sun beat down with great heat. We followed along the dry bed of what must at some time have been a torrent of tremendous power; for it had worn a rut fifty feet deep into the bed of the ravine, and had brought down great numbers of bowlders, some of enormous size, that evidently once had their home high up on the mountain in front of us. At first our way was broad, and the ground over which we passed was composed of mud brought down by water and baked so hard by the sun that the feet of the mules made no visible impression upon it. It was, however, cracked in all directions by the heat of the sun or by its own drying. At first I inclined to the belief that these unmistakable marks of running water pointed to a change of climate, since rain was said to be unknown. As a fact of our later experience, rain is not at all unknown in this vicinity, but from subsequent observations it seems more probable that these marks are due to the effect of occasional cloud-bursts, such as will be referred to hereafter. We rode up this barren rocky valley for an hour until we approached the head. The two ridges that formed the sides rose constantly in height and gradually approached each other, until they came nearly together as they joined the main ridge running west.

Here we were obliged to leave the bed of the river, and climbing sometimes afoot and sometimes on mule-back, we kept on for an hour or two longer. At length, after some scouting, our guide informed us that the path was lost; that a land-slide had destroyed all traces of it, and that we must return. We had risen at this time about two thousand feet above Chosica and were near the end of the ravine. Ahead of us and on both sides rose steep, barren mountains two thousand feet higher still. We sent our guide to reconnoitre again, telling him that path or no path we intended to reach the summit that day. This information served to increase his activity, and in time by taking a long sweep he struck another path that led by repeated zigzags up the side of the *cerro* to the west. About two o'clock we gained the crest of this and took lunch. Here the view was magnificent. To the east the vast ranges of the Andes rose higher and higher in the distance. To the west was a great expanse of cloud, covering Lima and the coast, whose upper surface was wavy and as well defined as the sea.

After a rest we proceeded mule-back for half an hour, then leaving our animals went the last mile afoot. This was our first visit to "Mount Harvard," as we called the hitherto nameless summit. It had been a hard climb, but we were repaid. Five miles away in a straight line a glimpse of green indicated the valley of the Rimac. The rest was hidden by the mountains. In every direction nothing but barren mountains were to be seen. Where we stood the rocky nature of the ground had nearly disappeared. The soil was a hard sand, covered here and there with huge bowlders and with many varieties of cacti. The hill sloped down in every direction. To the north and south we looked down into gloomy ravines thousands of feet deep. To the east and west the slopes were more gradual, and there were exquisite little valleys needing only water to make them spots of beauty. It was nearing sunset, however, and the hoarse whir of a condor's wings as he swept by over our heads admonished us to be moving. Hastily returning to the spot where our animals were fastened, we managed to get down to the valley at early evening. As we looked back from our hotel at the dark outline against the sky, the thought of a residence on that isolated spot brought a strange sense of gloom and loneliness.

The next day we returned to Lima. No definite information could be obtained as to the amount of cloudiness outside of Lima if even there, as no records had been kept. The rainy season in the mountains is from November or December to March or April, more or less in different years. Toward the coast the rainfall grows less and less, while, in general, little or no rain falls within forty or fifty miles of the ocean. The limit of rain, however, is not fixed, but varies greatly in different years. In Lima there is no real rainy season, but there is a decided cloudy season. This is due to a low cloud which is found more or less common along the whole coast. This coast cloud is most prevalent from May to November, and often settles down upon the city and country in the form of a dense mist, which is exceedingly wet and disagreeable and has a decided effect on the vegetation. It seemed, therefore, that while the lofty clouds which cause the rainy season in the interior are gradually dissipated many miles from the coast and the dense coast cloud never extends far away from the ocean, a situation chosen between these two, if such were possible, might perhaps escape both. Mount Harvard seemed to be as favorably situated to attain this end as could be desired. Different persons gave very different advice: Monte Meiggs, Jauja, Arequipa, Vincocaya, and Puno were well spoken of. Mr. Ralph Abercrombie, the English meteorologist, at that time in Lima, who had been making studies along the coast, spoke very highly of the Atacama desert. Mr. Cilley, President of the Oroya Railway, suggested that if we could ascend to a proper elevation above the valley, probably Chosica or Matucana would be most favorable. As at present no trains were running beyond Chosica, a site near that place would save the difficulty and danger of transporting our instruments for long distances by mule-back. Dr. Raimondi also spoke favorably of a site on some elevation near Chosica, though the valley itself would probably be bad, owing to the coast cloud or fog. He thought that, as previously stated, we might at that point escape the fog of the coast and the clouds of the mountains. It should be mentioned, also, that a number of years previous to our visit, the Peruvian government, with the intention of establishing a national observatory, appointed a commission to fix upon the most favorable site. This commission fixed upon the vicinity of Jauja beyond the mountains. While it is probable that the conditions there may be very favorable, no trustworthy evidence could be found to justify this view beyond the reports and impressions of a few gentlemen. It seems that no systematic records of rain, cloudiness, or other atmospheric conditions were ever made. Moreover, the locality was very remote from civilization and railways.

On March 14 my brother and myself were granted an audience with the President of the Republic, General Cáceres. Dr. Montjoy, a member of the Peruvian Congress, presented us to the *Ministro de Hacienda y Comercio*, Señor Delgado, who in turn presented us to the President. The President repeated the promises which he had previously made in writing, and expressed himself as strongly disposed to do everything in his power to assist us. The audience was given in the *Casa del Gobierno*, which occupies one entire side of the grand *plaza* of Lima. We entered through an archway guarded by a sentry to the office of Señor Delgado. By him we were conducted through a door usually kept locked, through an inner court occupied by numerous soldiers, up a stairway and along a corridor, both well guarded, to a locked door. After a slight delay we were admitted into a large reception room, thence into an inner reception room, and here the President met us. President Cáceres was a tall, stern man, with battle-scarred countenance and erect, soldierly bearing; his face showed the marks of privation and passion. He impressed us as a strong man, who at heart loved his country. President Cáceres, like so many of his predecessors in office, fought his way to power, and the numerous soldiery and frequent rumors of revolution gave evidence of the need of vigilance. In passing out we saw an inner court, made beautiful by flowers and fountains. It was said to be the spot where Pizarro died, and in an inner room the blood-stain where he fell, struck down by the "men of Chili," is said to be still visible. The history of Peru shows that the example of violence and bloodshed set by the conquerors of the country has been followed too well, not only in the times of the viceroys, but under the Republic also.

An order had been issued to the governors to assist us, and an order was promised, compelling the governor of any province to furnish peons to assist in transporting our instruments. We did not, however, find it necessary to use this order. Eight days were spent in consulting with gentlemen in Lima, who had information to give about different parts of Peru. In the midst of so much conflicting testimony, it seemed best to proceed up the valley of the Rimac, at least as far as Chicla, and afterward to decide whether to investigate further before choosing a provisional site. On March 20 we returned to Chosica by rail, and made preparations to continue the journey muleback. Mr. R. B. Hubbell, superintendent of the railway, furnished us a guide, Antonio Vieyra, one of his employés. Dr. Schmidt, a German traveller who wished to see the scenery of the Oroya valley, joined us.

About half-past eight in the morning of March 21 we left Chosica. We had planned to start at five o'clock, and our mules were promised for that hour; but it is seldom possible in Peru to move early or promptly. Mrs. Bailey remained at the hotel in Chosica, and during our absence, as at other times, made various meteorological observations. The road from Chosica to Matucana is pretty rough, and in many cases even dangerous. It is simply a mule path four feet wide, trailing along the face of the mountain, in many places lofty, steep, and slippery. Frequently it winds around the face of a cliff, cut into the solid rock, and the path worn smooth by innumerable feet for hundreds of years has nothing whatever to prevent the careless from slipping over the side and falling hundreds of feet to the river below. To add to the difficulty, one meets in a day hundreds of laden mules, donkeys, and llamas. The only safety is to insist upon the inside track. Accidents are not rare. About noon we stopped at the little *pueblo* of Cocachacra for breakfast. We breakfasted in a little cane and adobe hut on *chupe*, eggs, and fowl. As the fowl was lean, tough, and half-raw, and the eggs few, our main reliance was placed on the *chupe*. This is a soup, and may be regarded as the national food of Peru. Briefly described, it is made of a little of everything the cook may chance to have in the house, but always with plenty of *picante*, or red peppers. Where meat is scarce, it is made of vegetables alone, and when hastily prepared at high altitudes consists of little more than a somewhat fiery mixture of half-cooked vegetables floating in water. When properly prepared it is a very satisfactory dish for a hungry man. Outside of the large towns it is commonly made with dried llama or sheep flesh. The flavor is peculiar but not bad, unless one chances to be a novice and has his stomach disturbed by the sight of long strips of this flesh blackening in the sun on poles about the entrance of the hut.

A short time after leaving Cocachacra we passed the Verrugas River, a small tributary of the Rimac, which one could readily cross without wetting his feet. The Verrugas valley, however, extends to the right for a great distance, rising in vast slopes to the height of ten or twelve thousand feet. About half a mile above the Rimac, the Verrugas valley is crossed by a splendid iron viaduct of the Oroya Railway. This spans the valley, the height of the central column being two hundred and fifty-two feet. Viewed from below it seemed by its position and strength impregnable. From this river, called *Agua de Verrugas*, is named the peculiar and dangerous disease known as Verrugas. At the time of the construction of the road it was especially prevalent in this vicinity, and from it arose a great mortality among the workmen. It is still common, and is found as far inland as Matucana. The disease is characterized by intense pain, but, especially, by the appearance on different parts of the body of sacs filled with blood. These are sometimes of considerable size, and when the number of them is great, the loss of blood is considerable. Nevertheless, it is regarded as a favorable symptom to have the disease appear on the outside, and medicines are taken to produce this result. It was thought to be caused by drinking Verrugas water, and in this vicinity no one drinks water except in the form of *chicha*, the national drink.

It has been mentioned that the mountains which shut in Chosica were, with the exception of some stray cacti, completely barren. About half-way from Chosica to Matucana, the sides of the valley first began to take on a faint green tinge, and this effect slowly increased as we approached Matucana. As the time of our visit was the latter part of March, which is toward the close of the rainy season, this evidence of vegetation furnished a very good test of the rainfall for the year in question. Indeed, about four o'clock, and soon after leaving Verrugas, a light rain began to fall, which grew heavier as we approached Matucana. Our guide missed the path just before dark, by which we barely escaped a night in the fields or a long tramp afoot. It had already become dark, and hopeless of finding our way through the fields and over adobe walls mule-back, we had left our animals and begun an attempt afoot, when a man appeared with a lantern and guided us into the right path. We reached the town about two hours after dark, and found food and shelter in a little hotel kept by an Italian. A good dinner and a hard bed made some amends for the labors of the day. At half-past six the next morning a heavy fog or cloud settled down over the mountains surrounding the valley, which did not altogether lift before our departure two hours later. Matucana lies in a deep valley and is surrounded by mountains more lofty than those at Chosica. These mountains are, however, green with a rank vegetation; while here and there small brooks running into the Rimac bear witness to a considerable rainfall. To the south, from the most favorable location to be found in the valley, the mountains rose twenty-three degrees above the true horizon, thus rendering the valley itself entirely unfit for our purpose. Above Matucana the road wound along the bottom and sides of an exceedingly steep and narrow valley, continually shut in by high mountains in all directions.

Just before reaching San Mateo we found a pleasant site at an elevation of about 10,500 feet. The day was somewhat overcast, and the higher mountains were partly covered with clouds. As well as could be determined, the mountains south rose only 8° above the true horizon. In other directions, however, the outlook was poor: N. 23°; W. 29°; E. 32°. At the village of San Mateo, where we stopped for breakfast, one of the party, Mr. M. H. Bailey, suffered quite severely from *soroche* or mountain-sickness. It manifested itself by dizziness, faintness, and nausea; complete unconsciousness occurred twice for a few minutes' duration. The patient was placed on the ground, and bruised garlic, the odor of which is thought by the natives to have great efficacy, was provided in abundance. A little hot soup, however, as soon as it could be furnished, speedily brought the patient into better condition, and after a fair breakfast he was ready to proceed. This mountain-sickness, called in Peru *Soroche* or *Puna*, is one of the most unpleasant features of lofty mountain excursions. Its occurrence depends not only on the individual, but also upon the condition in which he chances to be at the time. When the traveller is in a wearied and somewhat exhausted condition from want of food, the illness comes on at a much lower altitude than it otherwise would. There is a general impression, also, that the *soroche* is worse in some localities than in others at corresponding altitudes. My brother on our way to Arequipa, some months later, had a serious attack at an altitude of less than seven thousand feet; but three days later he passed through Crucero Alto at an elevation of 14,666 feet, with no greater discomfort than a feeling of dizziness. I, myself, have experienced nothing worse than dizziness at altitudes less than sixteen thousand feet. In an attempt, however, to climb the volcano El Misti near Arequipa, I was attacked at an elevation between sixteen thousand and seventeen thousand feet with violent nausea and vomiting, which continued for several hours until I had descended to a lower altitude. So far as my observations have gone, the majority of people among the Andes are more or less troubled by *soroche* at elevations greater than fourteen thousand feet. Animals are subject to this malady as well as men.

Almost immediately after leaving San Mateo, the valley becomes so narrow that there is only room for the river at the bottom, and the path cut into the solid rock winds about the base of a cliff that rises perpendicularly about three thousand feet. In a few minutes we come to the wildest bit of scenery it has been my privilege to see in Peru, or, indeed, in any country. This is the locality of the *Puente del Infiernillo.* Just below this bridge we dismount to look about us. At the point where we alight is a little stretch of rock and sand beside the river, giving plenty of room for our mules. Directly over our heads rises a cliff which we estimate at three thousand feet. The water dripping from near the summit strikes the ground some ten feet from the base of the cliff. The Rimac, pouring through a natural grotto or arch worn through one side of a cliff, plunges down several hundred feet, forming a mass of foam immediately in front of us. Above is the railway bridge, spanning the valley with the black mouth of a tunnel at either end. Ascending the ravine by a steep path cut into the side of the cliff, we enter a somewhat open valley. From here to Chicla the scenery, though grand, is not so wild as before. We reached Chicla about half-past five in the afternoon in a gentle rain which increased during the evening. The sky cleared for an hour or more about midnight. The next morning, however, was cloudy. The country about Chicla, consisting of mountain-slopes, was green, but the higher slopes and summits were covered with snow. The valley at Chicla is narrow and shut in by lofty mountains. The town itself is 12,220 feet above sea-level and 139 kilometres from Callao. When the railway is in running order its terminus is Chicla. The road is graded, however, and tunnels partly constructed as far as the summit tunnel. This tunnel which cuts through the crest of the Cordillera is at an altitude of 15,722 feet, and is the highest tunnel in the world. It is intended that the road shall be prolonged to the fertile country beyond, as far at least as Oroya.

An early morning stroll on the steep hillsides near the hotel soon made me realize by a feeling of exhaustion and a tendency to dizziness that I was two miles above sea-level. The most favorable spot that could be found gave an horizon: S. 22°; N. 27°; W. 19°; E. 33°. Our observations thus far had demonstrated that no site suitable to our purpose could be found in the Rimac valley along the line of the Oroya Railway. Accordingly, although the country farther inland had a fascination for us, it seemed wise to return to Chosica at once. On the same day we returned to Matucana. Our German companion had a narrow escape in passing by the *Puente del Infiernillo.* Just before reaching the bridge the path cut in the side of the cliff descends very sharply, and has been worn so smooth by the feet of passing animals that our guide urged us strongly to dismount and lead our mules down. Our German friend insisted on riding down, however, and in about the middle of the descent a saddle strap gave way and the doctor went over his mule's head. He managed, however, in falling to get his arms about his mule's neck and swing himself toward the inner side of the path. Fortunately, the mule stood still, and the doctor, by clinging to his bridle, saved himself from rolling downward. Had he gone over the side of the path he would have fallen several hundred feet into the river, and certain death would have resulted. As it was he bruised himself so badly that the remainder of his trip was very painful to him.

At Matucana we learned with surprise that owing to a tremendous fall of rain or cloud-burst in the Verrugas valley the viaduct had been washed away and so much damage done to the roads in that vicinity that it would be impossible to pass. Accordingly, although the information seemed almost incredible, we concluded to wait over a day.

The following day, Sunday, March 24, was very clear and beautiful. We passed the day in ascending the mountain slope to the north of the village. A pleasant winding path led us gradually upward through a region so completely covered with flowers that it seemed like an endless garden. Wild heliotrope, especially, grew in such abundance that the air was full of its fragrance. At an elevation of ten thousand feet by our aneroid barometer, we came to a little Indian village of from one to two dozen huts. The people here are engaged in agriculture, potatoes being the chief crop; they also raise herds of cattle which usually find abundant pasturage on the surrounding mountain-sides. These Indians or half-breeds live in little adobe grass-thatched huts of one or two rooms, lighted only by a single door, and almost completely dark when this is closed. We knocked at the doorway of one of these. The family consisted of a young man, his wife, and three children, one an infant. This hut contained two rooms. The floor was earth and about half-covered with heaps of potatoes. A few boxes and rude benches, several pieces of earthen ware, and some dirty clothes completed what furniture, etc., was in sight. There was no table, no bed, no windows. The father seemed rather quiet and gloomy, but all were hospitable, and gave us the best they had. We had brought a lunch with us. The woman furnished us an abundance of good milk and some cheese, and we fared sumptuously. The air was balmy, and the hum of bees was heard; while the grazing cattle made a very pretty scene. There was a small stream not far away, and we were informed that sufficient water could be obtained in the dry season. A pleasant site near by gave the following horizon: S. 6°; N. 17°; W. 32°; E. 12°. Another site a mile or two from this, close by a somewhat larger Indian hamlet, gave: S. 5°.5; N. 20°; W. 25°; E. 13°. Another rather inaccessible site overlooking the Rimac valley gave a somewhat better horizon. We returned to the hotel at about five o'clock. The sky was cloudy during the evening, but the late night was clear.

At half-past seven in the morning of the next day we left Matucana for Chosica. On arriving at the Verrugas valley we found that the report of the destruction of the bridge was correct. We had left a trickling brook a few days before, and we found the same tiny stream on our return; yet in the mean time this petty river had torn down a massive iron structure lifted more than two hundred feet above its bed. It seemed impossible; and in the absence of reliable testimony various theories were advanced to account for such a sudden and tremendous catastrophe.

A visit to the valley below the bridge just after the event served to throw some light on the "modus operandi." For half a mile below the bridge were masses of débris, huge bowlders, and pieces of iron. Some massive fragments of iron carried down the Verrugas valley to the Rimac, and even a few hundred feet in the Rimac, gave sufficient witness to the tremendous downfall of water. An immense fall of rain collected on the vast precipitous slopes of the Verrugas valley was gathered in an incredibly short time into the narrow opening where the bridge was found. This torrent bore before it enormous bowlders which, thrown with tremendous force against the central column, bore it away and caused the collapse of the whole structure. A curious feature in connection with its destruction was that a single line of rails, detached from the rest of the structure and held together by bolts, remained stretched across the valley. A somewhat similar occurrence at San Bartolomé throws light on the Verrugas affair. Near this village is a deep railway cut terminating in a narrow valley, which is crossed at right angles by an iron bridge. The bed of the stream which this bridge crosses, usually dry, had been prepared for chance floods by enlarging it and paving the bottom near the railway with heavy smooth stones to facilitate the passage of bowlders and other materials brought down in time of flood. An eyewitness of the event, who was obliged to run for his life, says that the fall of water was so sudden that the mass descending the valley presented a solid wave-front twenty or more feet high. In five minutes the bridge was carried away, the natural outlet of the stream was blocked with stones and mud, and the torrent turned at right angles through the deep railway cut. In spite of this abrupt change of direction, within an hour the cut was filled for a distance of several hundred feet with a mass of mud and bowlders to a depth of ten, and in some places twenty feet. Some of the stones there deposited weighed several tons, and could not be removed by derricks without blasting.

At Cocachacra we found a special train which had brought some officials to that point on their way to Verrugas. A seat on a hard-gaited mule having by this time lost something of its attractiveness, we accepted one in this train, and an hour later were in Chosica. Through the kindness of Mr. Hubbell I arranged while in Matucana for a daily comparison of the sky in that place and in Chosica. This comparison was made each evening for eighteen days, with the result of forty-seven hundredths as the mean cloudiness at that hour in Chosica, and forty-two hundredths in Matucana. The question of selecting a temporary site for our work was now somewhat simplified. It was evident that no suitable location was to be found along the railway in the valley. In every case the outlook south was cut off by mountains. Two plans remained, — to leave the railway and ascend to some elevation near by, or to leave the Oroya valley and seek a situation elsewhere, preferably along the Mollendo railway. In favor of the latter plan was considerable information to the effect that the sky of Arequipa and vicinity was exceptionally clear, and that a good horizon could probably be obtained near the city. On the other hand, the same had been claimed for Chosica and other points. Moreover, from information received while in the United States and substantiated by some gentlemen in Lima, the landing at Mollendo would prove dangerous for the instruments, and would imperil the success of the expedition. On many accounts, also, it would be advantageous to be within a convenient distance from Lima.

Of the different possible sites near the Rimac valley, none was near enough to the railway to avoid the necessity of transporting all our "impedimenta" on the backs of animals. The only practicable localities, so far as our investigations went, were at San Mateo, at the Indian villages near Matucana, and near Chosica. The horizon was poor at the first two sites, but they had the advantage of a seemingly abundant water-supply, a considerable local food supply, and forage for animals. At the summit which we afterward occupied, near Chosica, however, the horizon was very fine; but no supplies were at hand, and all food and water would need to be carried several miles. The condition of the railway and the recent destruction of the Verrugas viaduct, together with complications between the Peruvian government and the railway authorities, would make it several months before the trains could be again running beyond Chosica, or possibly San Bartolomé, twenty-two kilometres beyond Chosica. The selection of Matucana or San Mateo would therefore necessitate a long and somewhat dangerous transportation of our instruments. For reasons, previously mentioned, the summit near Chosica, being neither coast nor mountain, promised a minimum of cloudiness.

As soon as it became known that it was desired to find the most suitable elevation near Chosica for an astronomical site, various *cholos* came to us with stories of fine localities convenient to food and water. Several of these were investigated with the conviction that either the *cholos* were wofully ignorant of what we wanted, or more probably that they invented their descriptions, hoping to win money in the capacity of guides. From all these points I returned wearied with climbing and angry with my guide for what seemed to me deception. No site was found that presented so many advantages as Mount Harvard, and here I finally decided to place the station. By thus promptly choosing a location, the clear season of 1889 was saved for astronomical work, and the following cloudy season gave abundant opportunity for investigating other localities. Although a path once passed near the summit, it was in such condition from landslides and washouts that it would need to be put in repair before the instruments and other materials were sent up. Accordingly, some ten or twelve peons were put to work upon this road. For a part of the way only few repairs were necessary. The route proceeded from the hotel across the Rimac by a little suspension-bridge, along a lane leading through the irrigated fields of the *hacienda* known as Moyapampa, then down the valley, skirting the base of a nearly perpendicular wall of rock till it came to the mouth of the ravine leading north. Here it lost sight of all vegetation and water. For half a mile no repairs were needed, as the way led along a floor formed of hard-baked mud brought down in some long-forgotten time. The way then led along the bottom of what must have been a torrent's bed, worn from thirty to fifty feet into the bottom of the valley. From the perpendicular walls of this ravine projected many large rounded bowlders, some of enormous size and ready to fall at slight provocation. Very few repairs were needed for the two miles along this ravine; but, finally, it was decided to cut a path up on one side and continue it along the base of the ridge to the west for about two miles, considerable work being necessary. At the end of this distance a path was made by repeated zigzags up the side of the same ridge to the crest. Thence the way led along the edge of this ridge until it ended at the summit of Mount Harvard. The distance from the hotel to the summit we estimated at eight miles by the path, and at five miles in an air line. Within three weeks the path was considered suitable for mules to pass with loads.

An arrangement had been made for the transfer of all our freight from the station to the mountain by means of mules. We had brought with us from the United States, besides the necessary luggage and instruments, two small portable houses. One of these intended for the use of the instruments consisted simply of a frame with a heavy canvas roof. Building paper was brought in the roll to cover the walls. This building was thirty feet long by ten feet wide. A dwelling-house was also brought, made in sections of different sizes, but in nearly all cases too large for convenient carriage by mules. These sections were covered on the outside with canvas and on the inside with a very heavy paper or light paper board. Many difficulties were encountered in transporting by mule-back along a path which at times wound along the bottom of an exceedingly crooked ravine, and at other times along the side of a cliff, the heavy pieces of apparatus, some of which were of awkward shape. The sections of the dwelling-house, especially, were only sent with the greatest difficulty. Each mule was led by an Indian, and even then the sections were somewhat injured by contact with the rocks.

On April 15, the first instalment of freight, consisting of three mule loads of unimportant materials, was sent up the mountain. These were left at the summit, and the men and animals returned. On the following day nine mule loads of goods arrived safely at the summit. At one o'clock in the afternoon I left the hotel for the mountain intending to pass the night there. The day was nearly cloudless, and the ride up the ravine was very warm. About half-way up, the muleteers were met returning with their animals, and soon afterward the camp was passed where the men employed in repairing the road were staying. The road was, however, practically completed and would be finished in a day or two. A boy had been engaged to follow me and assist in unpacking and arranging for the night, but he failed to appear. The path seemed to serve very well for a mule, but in some places was very steep. It was half-past four when I arrived at the summit. Some boxes were unpacked and a large piece of canvas found, with which I fashioned a rude tent, and prepared in it a bed for the night. Just about sunset there was a slight shower lasting a few minutes and a magnificent rainbow spanning the valley of the Rimac and resting on the mountains on either side. The fact that the nearest human being was miles away gave me a peculiar sense of proprietorship in this exhibition of nature. The impressive silence that reigned there was especially striking. By listening carefully the murmur of the Rimac rushing along in its rocky bed could be faintly but distinctly heard. The only other sound was that of a condor's wings as it occasionally swept down near me, evidently surprised at the changes. The evening proved quite cloudy, and having no way of occupying myself after dark I sought the shelter of my tent, and soon slept the sleep of the tired. About midnight the sky became partially clear, so that the meridian of the place was approximately located. The atmosphere seemed quite clear although in the valley there was considerable fog, the white appearance growing more marked in the lower portions, while the summits at my own level showed little if any fog. In picking up a stick I was not pleased to find a large centipede clinging to it. He paid with his life, however, the penalty of so rashly venturing to make my acquaintance.

The following day eight mule loads of goods arrived at the summit. The day was passed alone for the most part, as the Indians who had promised to come did not arrive. During the day I succeeded in laying out the ground for the buildings. The summit of the mountain was nearly level for about one hundred feet square. From this small area the land sloped down quite abruptly on all sides save one, where the incline was more gradual and furnished a convenient approach for animals. There was another slight shower in the afternoon. At about four o'clock I returned to the hotel afoot, accomplishing the trip in an hour and a half. On the way down Antonio Vieyra was met coming up the mountain. With him were a man and his wife, belonging to the lower class of half-breeds, commonly known as *cholos*.

The next day, April 18, I returned to the mountain, and with the assistance of Vieyra and the *cholo* got the frame of the instrument building together and the floor laid. That night Vieyra and I exchanged our beds from the ground to the floor of this building. There was no roof as yet, but no rain interfered with our comfort; while work was proceeding upon the summit Mr. M. H. Bailey superintended the unpacking when necessary at Chosica, and the subsequent re-packing on the backs of mules. The muleteers employed were skilful in fastening the loads upon their animals; but many cargoes were extremely inconvenient for this mode of transportation. Great care was taken lest any essential parts of our instruments should get broken. In the transportation of lenses and other delicate parts, the load was packed with the greatest care, and a man procured to lead each mule. By so doing all our apparatus arrived in safety. Several times heavily laden mules fell, but fortunately not in bad places. One mule loaded with several long timbers slipped down a steep embankment, rolling over and over several times, but strangely escaped with no worse damage than the loss of some pieces of skin. The mules are accustomed to travel mountain paths, and the danger lay chiefly in the fact that many of their loads projected so far, either in front or on the sides, that they were constantly striking against the rocky sides of the way and threatening to throw the animals from the path. In some spots such a fall would have been death to the mule and serious damage to the cargo; but fortunately no accidents occurred in these localities. The first load of goods went up the mountain April 15, and the last arrived May 7. In all there were about eighty loads.

During this time foundations were put under the two portable buildings, and these buildings were set up. A kitchen was also built of a light wooden frame-work covered with building paper. This kitchen, aside from the wood floor to which it was fastened, was very light, not weighing more than one hundred pounds. The instrument building was also covered with paper in two layers, — black building paper outside and a strong manilla paper within. The natives employed to assist in this labor seemed unable to overcome their astonishment at this class of building, and insisted that adobe would be better. The fastening of the paper in proper fashion was quite laborious and attended with some ludicrous incidents; for our *cholo* assistant, more zealous than wise, was continually placing his ladder against the paper wall. The paper was strong enough to support him until he nearly reached the top, when he would plunge suddenly through the wall to his astonishment and my dismay.

By May 8, the buildings were set up and in fair condition; and on the following day Mrs. Bailey and our four-year-old son came to the mountain. I deemed it safer for my son to ride in front of me on my mule rather than alone on a donkey. On the evening of the same day, May 9, the first photographic plate was made with the Bache telescope. A pier for this telescope, as well as one for the Meridian Photometer, was constructed of stones found in the neighborhood. There was a great abundance of them, many being quite regular in form.

When completed, our buildings consisted of a structure thirty feet long by ten feet wide, with three apartments, the largest containing the Bache telescope and Meridian Photometer; next to this was a photographic dark room, and beyond at the west end a small tool-room. This building had a wooden frame, and light floor made of boards three eighths of an inch thick. The roof was canvas, and the walls, as already stated, were of double paper. This paper made a fairly serviceable wall, capable of some resistance, but not sufficient to prevent occasional damages. The partitions were also of paper. The dark room was lined throughout with black paper. The doors leading outside were of wood, but the inside doors were of paper. This building was placed so that the long sides faced north and south. The dwelling-house was placed so that its northeast corner nearly touched the southwest corner of the instrument building, leaving only a passageway between. The triangle, formed between a line drawn from the southeast corner of the dwelling-house to the middle of the south side of the other building and the adjacent walls, was floored and covered with a paper awning. This piazza was used as a dining-room, and though completely open on one side was never uncomfortably cool, with the exception of a few days in the rainy season and when the mountain was wrapped in cloud. One chief annoyance in the use of this outdoor dining-room arose from small whirlwinds which swept up the mountain from the valleys in different directions. These whirlwinds were very numerous, and though never large enough to do any real damage often brought along great quantities of dust and small articles which proved an unpleasant addition to the *menu*. These could be seen a long distance away. They were often four feet in diameter, and judged by the column of dust a hundred feet high or more. The dwelling-house was covered with canvas without, and light, though strong, straw board within. It was open to the roof, and was divided into three apartments. It was occupied by my own family and brother. To accommodate a Peruvian assistant, Señor Elias Vieyra, who was engaged about this time, an additional room of paper was built on the northern side, and still another paper room was erected for the two servants who resided with us. These buildings, together with the kitchen a few feet away, completed the establishment.

The general appearance of these buildings, as seen from the north, is shown in the frontispiece. The shutters at the left are open and permit the Bache telescope to be seen. A little farther to the right is the slit, through which the Meridian Photometer work was carried on. A portion of the dwelling-house is also visible. The paper-covered shed at the extreme right is the kitchen. The apparently lifeless trees were covered with green foliage for two or three months only, during the rainy season of 1890.

The interior of the instrument building, looking east from the dark room, is shown in Plate II. The Bache telescope is in the background. The latitude of the station, 11° 51′ S, makes the polar axis appear nearly horizontal. This instrument was mounted somewhat high, so that the walls of the building would not interfere with its range of work. In the foreground is the Meridian Photometer.

Plate III. shows the view from the station looking south. The coast cloud, as explained on page 26, is seen obscuring the valley of the Rimac. The village of Chosica is situated at the left, a thousand feet lower than the upper surface of the cloud, the altitude of which is about four thousand feet. Beyond the cloud appear two of the main spurs of the Andes that run west from the Cordillera, as explained on page 6. From the nearer of these, secondary spurs reach north toward the Rimac valley. In the foreground is another of these secondary spurs, running from Mount Harvard south to the Rimac. The path to the station led up the ravine to the left of this ridge for two or three miles and finally traversed its crest.

As has been stated, the mountain furnished neither water nor food. These were brought daily from Chosica eight miles away and nearly four thousand feet below. Considerable difficulty was at first experienced in finding a trustworthy man to act as muleteer. Those first obtained were drunken or lazy, so that we were repeatedly disappointed by the non-arrival of our day's water and provisions. Although we intended to keep several days' supply in advance, this was not always practicable, and several times we were for hours without water, and with none too luxurious a diet. At length, however, we found a muleteer who, if not perfect, was in general very faithful, and in time really became very fond of us and entirely trustworthy. His name was Ascensio, and for his trusty service under very trying circumstances he will always be most kindly remembered by the members of the Mount Harvard party. To get good and fresh provisions was not an easy matter, cut off as we were from any opportunity for personal inspection. Chosica furnished a very limited market, and Ascensio, though desirous of doing well, was not an expert. During a large part of our life there, however, we received through the kindness of Mr. R. B. Hubbell, superintendent of the Oroya Railway, and his wife, a basket of provisions from Lima twice every week. Mr. M. H. Bailey had charge in general of these business affairs, and the rather even tenor of our lives was largely due to his skill and patience in managing the people with whom we dealt. The question of servants gave an experience much the same as with a mule-driver. Several were tried who were either unsuitable or who wearied of the lonely life on the mountain. At length, however, a young man and his wife were found who were contented and faithful.

From the time of our first visit to Mount Harvard on March 11 throughout the rest of the year the region seemed extremely dry and barren. The ravine, however, through which our path to the mountain led, showed unmistakable evidence of tremendous rainfall sometime in the past. The outlet of this channel also passes through the ruins of an Indian village. The fact that some of the houses have been torn away in part makes it probable that a torrent of unusual violence has come down at some time during the last three or four centuries since these villages were deserted. For several miles after leaving Chosica, almost the only vegetation met with is cactus plants of various species. Toward the summit, however, the soil becomes less rocky, and a great number of shrubs and small trees are found. These are, however, destitute of foliage, and to appearance, lifeless. By breaking them this appearance is seen to be deceptive, as they are full of sap. During the first months of our stay on the mountain, these plants and trees, apparently so dead but really so full of life, were a mystery to us. The evidence on every hand also of rain — in the beds of innumerable rivulets great and small — bore witness to a condition of things different from what we had seen. At first the impression was that the climate had changed. Various persons in Chosica had informed us that it never rained in the locality. During the following January, February, and March, however, heavy rain fell several times, and in March and April of 1890 the trees and shrubs leaved out in profusion, and the mountain-sides near the station showed an abundance of green plants and flowers. In the same months of 1889 the region appeared completely barren. The simple explanation, therefore, would seem to be that once in several years abundant rain falls; that the perennial plants and trees are fitted by nature to stand the long season of drought, lasting sometimes perhaps for many years, while the seeds of other plants lie unseen and quiet in the dry ground; and when the rain comes all these spring into life like a transformation scene. In spite of the quite heavy rain at the summit in 1890 nearly all was absorbed "in situ," so that little or none reached the ravine below. A torrent then, such as at times has torn its way through the bottom of the ravine and carried down the huge bowlders that one sees scattered about, is an affair much more rare than a rainfall sufficient to revive vegetation on the higher slopes. Once in several decades, or it may be centuries, comes a tremendous fall of rain or cloud-burst, — perhaps local in its action, — of which the Verrugas and San Bartolomé disasters furnish well-known recent examples. Although I have learned to place little confidence in the testimony of natives on meteorological subjects, the fact that there is no tradition or account of any such affair in this locality would seem to put the last occurrence back many years.

Aside from the rainy season, which will be referred to later, life on Mount Harvard, so far as climate is concerned, was delightful. The days were very warm in the sunshine, but in the shade seldom uncomfortably so. The early morning and the evening were always comfortable. Throughout the year without exception, the nights were cool, so much so that a little fire was grateful during the late evening, and blankets or other warm covering were always necessary for sleep. The apparently dead trees, to which I have referred, furnished sufficient firewood both for our evening fire in the sitting-room and for culinary purposes. This fact was an item of great economy; for otherwise we should have needed coal or other fuel, which with its transportation would have been very expensive. A great number of these trees near our station were cut down, and while they were drying, sufficient dead wood was found on the mountain slopes not far away. The question of our water-supply gave us considerable difficulty. Water was necessary, not only for household purposes, but also for the proper development and washing of the large number of photographic plates taken. It was very desirable to find water near the station, and led by reports from natives that it could be found, we made various fruitless expeditions to different localities within several miles. It was a significant feature of this information, that though the informant was quite willing to give extended directions as to the location of the springs, in no case could he at the time be persuaded to guide us thither. He nearly always expressed a readiness to go with us *mañana,* but the to-morrow never came. The foundation for these reports probably came from water found during, or at the close of, some more than usually wet rainy-season. The result of failing to find a water-supply conveniently near was a strictly enforced economy in the use of water. It was suggested that water only slightly dirty, such as had been used for rinsing plates and other similar uses, might be rendered fit for such use again by evaporation and recondensation. Through the kindness of Mr. Mulloy, an apparatus for this purpose was constructed in Lima, consisting of a somewhat rude boiler and a condensing chamber of tin. This chamber was about five feet long by four feet wide, and only an inch in thickness. Within, it was divided into different compartments, through which the steam must pass successively. It was thought that the surface thus exposed to the air would act as a sufficient condenser. This proved a mistake, however, and the apparatus was abandoned. By sufficiently extending the condensing surface, no doubt the apparatus might have worked successfully; but the prospects of a speedy removal to another site, together with the uncertainty of the results to be obtained, made it unwise to incur additional expense.

Animal life was by no means wanting in the vicinity. Of birds, the largest and those that most interested us were the condors. These monarchs of the Andes, with their immense spread of wing, paid us frequent visits. The sound of their wings, even when hundreds of feet above us, was peculiar and somewhat like the sound of wind blowing through the foliage of pines. When near it became a louder and fear-inspiring sound, hearing which, our domestic fowls hurried to some shelter, and even "Serrano" our dog seemed glad to retire to the safety of the house. Since the only fire-arms on the mountain were revolvers, we never succeeded in shooting one of the condors, and consequently their size can only approximately be given. Apparently, the largest had about six or eight feet stretch of wing. Besides these there were a smaller species of vulture, and numerous eagles and owls. Occasional flocks of small bright green parrots were seen, always in considerable numbers and with a great deal of chattering. There were also many smaller birds that built their nests in low shrubs and on the ground.

Of four-footed animals the most common were the lizards that swarmed almost everywhere. Indeed, for some time they were the only terrestrial life seen excepting the insect world. These lizards were in general only of small size, not often more than five or six inches in length, and their innocent presence afforded us some amusement. They ran everywhere, on the rocks and occasionally over the house, but timidly fleeing at the slightest disturbance. Other life, though rarely seen, was not altogether lacking. A little animal resembling a rabbit was occasionally found, and the fox, though seen but once or twice, made his presence felt by sad inroads on our poultry. My little boy twice found, in his rambles near the station, the antler of a deer, although no member of our party saw one of these animals during our stay.

Reptiles were frequently encountered near the dwelling, but they never became intrusive. Francisco, while chopping wood, occasionally found one coiled up inside a dead tree. One day a snake with fangs appeared in the yard near the house. Some hens were in the vicinity, one with chickens. We were surprised to see one of these hens walk cautiously up to the snake, and dexterously peck it in the back close behind the head. The reptile was some three feet long and apparently full grown, yet the hen managed herself so well that at once the snake lay helpless, wriggling in the dust; whereupon Francisco despatched it. It was the only one of the kind we saw on Mount Harvard, being very thick for his length and having a triangular head. I have mentioned that on the first night which I passed on Mount Harvard, a centipede was found. These were occasionally met with afterward, but gave us no more trouble than an occasional slight uneasiness. Scorpions were the most common pests on the mountain, and might be said without much exaggeration to be ubiquitous. They were found in all the buildings at times; one was met with in a shoe, another in a coat sleeve, another in a bed, etc.; yet in no case was any one stung, although there were several narrow escapes. These scorpions were in general about two inches in length, of a yellowish color, and their sting, though very painful, is said not to be dangerous. Fortunately for us, our personal experience throws no light on this unpleasant subject.

Tarantulas were found, also, but only during the rainy season. As I was away from the mountain during the greater part of that time, I did not have the pleasure of seeing one of these individuals in his own home. At other times I have looked for them during my walks over these mountains, but never encountered one. Probably they were driven from their homes by the unusually heavy rains of 1890. Some of these tarantulas were preserved in alcohol. The largest of them measured seven inches stretch of legs; while the body itself was a little over two inches in length. Fleas and flies, with occasional butterflies and dragonflies, with some other small insects, completed the list.

Life on Mount Harvard was somewhat lonely and monotonous. Recreations were few and consisted chiefly of two kinds,—walks about the mountains and lawn-tennis. Usually the days were too warm to render walking enjoyable during the middle of the day, but early in the morning or about sunset these walks were very delightful. The scenery in all directions was grand or beautiful, and the sun setting into the Pacific often gave us superb sunsets. In these walks we all took part, and indeed Vicenta and Francisco, childlike and affectionate as these people often are, met us on our way back, finding the house too lonely during our absence. Our family consisted of Mrs. Bailey and our son; my brother and chief assistant, Mr. M. H. Bailey; a Peruvian assistant, Señor Elias Vieyra; the writer and our two servants, Francisco and Vicenta. Other members of our family were also our dog Serrano, so named from a tribe of Indians in the interior, to one of whom he once belonged; a small dog belonging to Francisco; a cat, the special property of my little boy, and two goats, no mention being made of domestic fowls. Our life was so isolated that man and animal, dog, cat, and goat were on terms of the greatest intimacy and equality. Especially striking was the intimacy between the cat and the two dogs, who always played together with remarkable harmony. In our walks we were followed at varying distances by the cat, the two dogs, and the two goats; while even the fowls seemed to stroll in the same direction after us. When we stopped to rest, dogs, cat, and goats would range themselves about, never going far away from us. No doubt this condition of things was due to our lonely situation, and shows how all animals feel the need of society.

For a different form of recreation, we had cleared a small space near the house of cacti and loose stones for a tennis court. Here, in spite of many difficulties, we found a pleasant relaxation and healthful exercise. The fact that our balls sometimes rolled down the mountain on one side or the other, so that they could not be found, and that our court was very rough and uneven did not quench enthusiasm; and an hour was usually passed each day in this sport.

Perhaps the most unique feature of our house was its situation between two clouds. Below us to the west was the coast cloud. This fog, or low cloud, is prevalent under different names along nearly the whole coast of Peru and Chili. In Lima it is called the *garua*, and is most prevalent in the winter season, from May to September. It prevails, however, to a greater or less extent during the whole year. During the winter it settles down upon the city and is so dense that it resembles a fine mist, and is the nearest approach to rain that the Limenians ever experience. It visibly affects the vegetation of the surrounding barren pampas, and renders the houses and streets of Lima very wet and disagreeable. This cloud, though it does not by any means constantly envelop the city, is always low and extends a varying distance inland, according to the topography. Up the Rimac valley it flows like a great river as far as Chosica, and occasionally farther inland. The eastern border of this cloud is nearly always moving; usually by day it retreats down the valley, returning again in the evening, sometimes going and coming several times in a night; at other times its edge remains down the valley for several days together, the cloud simply covering the level coast regions. Occasionally it fills not only the Rimac valley, but the barren ravines that branch from it north and south, rising till it covers even the ridges at our feet, and flowing around us forms islands of Mount Harvard and the other more lofty points. The upper surface of this cloud was very sharply defined, but of wavelike form, so that its resemblance to water at times was so perfect that we could with difficulty persuade ourselves that far beneath its under surface all the varied activities of ordinary life were going on cheerfully. So persistent was this cloud over the region about Lima, that it was only several weeks after we took up our residence on Mount Harvard that we caught a glimpse of that city. Afterwards, at various times, this lower cloud cleared away, and with our field-glasses and small telescope we could see Lima and Callao, twenty-five miles away, the islands in the harbor and even the shipping, and trace the coast line for a considerable distance. Indeed, although we did not perceive it when we first visited Mount Harvard, owing to this cloud, our horizon from the west to a point a little east of south was formed by the Pacific Ocean. This ever-changing cloud with its shifting panoramas rendered our surroundings much more interesting. If from this view of "clouds wrong side up," as a visitor graphically described it, we turned our eyes upward, we at times saw another cloud system, lofty cirri, far above us, so that frequently we were between two clouds in a wide but shallow world, ourselves almost the sole inhabitants.

Fortunately for work, the clouds above us appeared but seldom during the first months of our residence on Mount Harvard. From May 9, when the first plate was taken with the Bache telescope, that instrument was kept at work regularly, when the weather permitted. The first series with the Meridian Photometer was taken May 24. A description of the work done with this instrument will be found in the following chapters. The work of the Bache telescope will be described in another volume of these Annals. The sky during May and June was remarkably free from clouds, and during July and August it was also clear, but during September and October light cirrus clouds gave us a great deal of trouble. These clouds were of so light a nature that the sun and even the moon cast a shadow, and without a careful observation one might call it clear; but the clouds were sufficient to prevent photometric measures, and also seriously affected photographic plates. This condition of things growing worse as the rainy season approached, it was decided to devote the cloudy months following to a meteorological study of different points along the coast, with a view to the selection of the most favorable site for a permanent station, and also to take advantage of this opportunity to continue the work of the Meridian Photometer in a region more free from clouds during this season. Permission to this end was received from the Director in Cambridge, and also instructions to try photometric work for a short time somewhere in northern Chili. During our residence thus far in Peru, we had received considerable information from different parties about Arequipa. Most remarkable stories were told of the clearness of the sky in that region. One gentleman, an engineer who had resided there, went so far as to affirm that only two or three days in a year were cloudy, and even in these the sky would be clear for a portion of the night. As to how much truth these reports might contain, it was impossible to learn without a personal investigation. We had for some time realized the truth of the remark made to us soon after our arrival by the venerable Dr. Raimondi: "Of the clearness and steadiness of the atmosphere in these different places, there is no certain knowledge, and your only way is to investigate it for yourselves." In Lima, however, we met Mr. Ralph Abercrombie, who had been making a meteorological study along the west coast of South America. He spoke highly of Arequipa, Vincocaya, and Puno; but in a letter written later, he was of the opinion that the clearest point along the coast was somewhere in the Atacama desert.

The Meridian Photometer with the record books and other accessories were packed in four cases and shipped to Callao, where they were to be held subject to further orders. On November 8, our party left Mount Harvard. Señor Elias Vieyra was left in charge of the station during our absence. It was hoped that the climate would be such that the Bache photographic telescope could be kept at work for a considerable number of nights during the greater part of the cloudy season. The two servants remained with Señor Vieyra; Mrs. Bailey had decided to remain in Lima or Chosica during our absence.

Since at this time but three passenger trains per week were running between Chosica and Lima, Saturday, Sunday, and Wednesday, and the boat was advertised to sail from Callao, Wednesday, in order to connect it was necessary to reach Lima by the Sunday train. Saturday, on invitation of Mr. Hubbell, I visited the scene of the Verrugas disaster. A cable had been stretched across the valley, and by means of a cage suspended from this, some traffic was carried on. Fortunately at the time of the disaster one or more locomotives and several cars were on the line above the bridge, so that trains were afterward run on both sides of the Verrugas valley, while the new bridge was in process of construction. Sunday we arrived in Lima and took rooms at the "French and English Hotel," taking our meals during our stay at some convenient restaurant. We did not leave Callao on our way south till Thursday, as our boat sailed one day after the time advertised. This gave us an opportunity to see the city of Lima. The population of the city is said to be more than one hundred thousand. Taking into account, however, the fact that no exact census has ever been taken, it is probable that the number is exaggerated. Few buildings are more than two stories high, and great numbers are but one. With rare exceptions all buildings, both public and private, are built of cane and adobe; but these seemingly ephemeral building materials suit the climate well, and their permanence is shown by the presence of churches and dwellings several centuries old. The shops of Lima are numerous and well furnished, — many of these are kept by foreigners, among whom the Chinese are well represented. Nearly all the hotels and restaurants in the larger towns of Peru are managed by foreigners. During our stay we visited the great cathedral of Lima, said to have been commenced by Pizarro three centuries and a half ago. In a crypt beneath this edifice we were allowed to gaze upon the bones of the great conqueror. In tombs about him also reposed the remains of the archbishops of Lima. The cathedral is grand in its dimensions but gloomy, and a close inspection reveals the touch of time. In spots the stucco has fallen off, and the sun peeps through the ill-repaired roof. An effort was being made during our stay to raise sufficient funds to put it in thorough repair; but since the war with Chili the country has been passing through a period of deep financial depression, and the people are comparatively poor. Numerous exchange and pawn-shops, no less than great numbers of beggars, bear witness to this condition. The weather was quite pleasant during our stay, the sky being covered only with haze and light cirri.

We left Callao on Thursday evening, November 14, by the steamship "Santa Rosa" for Mollendo. The coast between the two ports is desert, varied only by occasional fertile river valleys. At Pisco is exported the fiery drink called by the same name. In the valley of Pisco, also, are raised great quantities of fruit of various kinds, — such as grapes, oranges, *paltas*, and others.

Early Sunday morning we arrived at Mollendo, the port of Arequipa and the interior. There is no harbor here, and steamships anchor a mile more or less from shore. Lighters take the cargo from the ship to the small mole, which is slightly sheltered by a little peninsula that juts out a few rods from the mainland. Mollendo certainly offers but little in the way of convenient landing of passengers or merchandise; but the danger involved seems to have been exaggerated. Mr. MacCord, formerly superintendent of the railway leading from this town to the interior, informed us that no passenger's life was ever lost, and no merchandise of much value. At times the swell is very bad, and close in shore the surf runs so high that passengers are lowered from the ship and afterwards raised to the mole in a "cage." This, however, is infrequent and at the time of our arrival no inconvenience was experienced. Mollendo is a small town of perhaps five hundred people, owing its existence entirely to the fact that it is the terminus of the railway. The old port of Islay, some miles up the coast, was abandoned on the completion of the railway, and many of the buildings were brought to form the new town. Mollendo is situated a little above the sea in a completely barren region of sand and rock. For its own use the railway brought water from the river Chili near Arequipa, in pipes that approximately follow the track, — a distance of about one hundred miles. The people of the port depend upon the same water-supply; all food also of every kind, except such fish as are caught in the vicinity, must be brought by rail or boat.

A short time before our departure from Lima, the Peruvian Government had taken possession of the railways of the south, and kindly offered us free transportation, both for ourselves and instruments. Señor Cantuarias, the Government Superintendent, in addition to furnishing passes showed us personally many favors that rendered our visit to Arequipa and the interior more interesting and profitable. At eight o'clock the following morning we left Mollendo for Arequipa. For about fifteen miles the railway runs southeast along the seashore, then branches east near the fertile valley of the Tambo. Soon after leaving the town of Tambo, the road begins to climb the hills that separate the low-coast region from the more elevated desert pampa of Islay. Through this region the road advances by almost numberless curves and loops but no Ys; and the scenery, though not so wild and rugged as the Rimac valley, is more beautiful. During certain months a scant rainfall keeps alive a coarse vegetation which is said in the proper season to furnish forage for numerous cattle. Climbing up these hills that rise with rounded summits one beyond the other, the traveller catches beautiful glimpses of the sandy, barren coast region, the bright green valley of the Tambo River, and the distant Pacific. At Cachendo, forty miles by the railway from Mollendo, we enter upon the pampa of Islay. From this point to Vitor, a distance of about forty miles, the road lies across the pampa, — a region void of vegetation and quite level except that it gradually rises toward the east. The ground is covered with rock and shifting sands, and all are heated intensely by the nearly vertical sun. Mirages are frequent; and the visions of cool and crystal water in the distance must have proved a tantalizing spectacle to the weary travellers afoot or mule-back in the ante-railroad days. Sand dunes in great numbers abound toward the northeastern margin of the pampa. These are uniformly of very regular crescent shape, always with the convex side toward the winds. They are about twenty-five feet in extent from cusp to cusp and at the centre from six to ten feet high. They are formed from a particular white or gray sand and are said to slowly change their position, moving no doubt slowly with the wind. This seemed probable, as I noticed that the sand was carried by the wind from the convex side toward the opposite side, something as snow is seen to form drifts in winter; but in no other case have I seen structures so perfectly crescent-shaped. The crescent is that of the moon at about the third day after the new moon.

As we drew near to Arequipa the scenery became for a time more grand. The railway wound along the mountain-sides overlooking the steep, narrow valley of the river Chili. As we approached Arequipa, however, the valley grew broader, and fields of waving grain and groves of fruit-trees formed a delightful contrast to the region through which for several hours we had been riding. The first view of the city is really beautiful, surpassing in picturesqueness any other Peruvian city we had seen. It lies in the midst of a wide arable plain, stretching several miles in each direction. Beyond this region of deep green, either desert pampa or mountain extends as far as the eye can reach. Above the city, which rests just at its foot, rises the "Volcano of Arequipa," El Misti, a nearly extinct volcano about nineteen thousand feet high. This symmetrical cone-shaped mountain is flanked toward the east by Pichu-Pichu and to the west by Chachani, the latter rising to the height of twenty thousand feet, and usually covered with snow. The city itself is built of white stone, which in the distance has the appearance of marble, and forms a pleasant contrast with the surrounding green fields. This stone, known as *sillar*, is a volcanic substance found in vast quantities on the flanks of the Misti, and is so soft that it is very easily worked. Indeed, it is chopped into cubes with a sort of adze, much after the fashion of ice-cutting. Tuesday, November 19, was employed in looking about the city. The houses are almost universally of one story, and many of them show marks in ruined walls and other débris of the disastrous effects of the great earthquake of 1868. Before that date many of the buildings were of two stories; but at that time nearly or quite all were thrown down, and now few persons care for more than one story. For the same reason the walls are built very thick, the walls of our room in the hotel being four feet in thickness. Curiously enough to a stranger, also, many of the rooms have heavy-arched roofs made of large blocks of *sillar*. At first this seemed very foolish and dangerous, and there are not lacking natives of Arequipa who decry it. In practice, however, it is not so bad as at first it appears. These heavy-arched roofs do not readily shake down, and are not at all affected by light shocks of earthquake. In an entire absence of lumber, except that imported from other countries, the only convenient and cheap building materials are *sillar* and adobe. A building of thick stone walls is particularly well suited to this dry and warm climate, where, though the days are uncomfortably warm, the nights always are quite cool. Whatever the change without, within these buildings the temperature is remarkably uniform, and the very great dryness of the atmosphere prevents that dampness which would result in other climates. Arequipa is a city of thirty thousand or more inhabitants. We received an invitation to accompany Señor Cantuarias to Puno on the next day but one. On the following day we visited Tingo, a suburb of Arequipa, two miles by railway. Here are some natural springs, furnishing a large quantity of water which is used for public baths. From the roof of our hotel in the city, the "Hotel Americano," the horizon was, S. $+1° 55'$; N. $+7° 8'$; W. $-0° 15'$. To the east the view was intercepted by the dome of a church. The horizon north lies between two lofty peaks of the Chachani range. This day was quite cloudy, and about noon there was a marked solar halo strongly colored with red inside, and about fifteen degrees in diameter. Rain had been scarce for two or three years, and the river Chili was very low. This halo was looked upon by the natives as a sign of rain.

On November 21, at about seven o'clock in the morning, we left Arequipa in company with Señor Cantuarias for the interior. At Yura, altitude 8,450 feet, are some mineral springs and a hotel. From this point to Aguas Calientes the scenery is very fine. The railway winds about the west and north of Chachani, and gives a good view of the opposite sides of these mountains from that in Arequipa. Coropuna in the distance has snow far down its sides, and is said to be 22,800 feet high. We stopped for breakfast at Pampa de Arrieros, altitude 12,300 feet. At Vincocaya, altitude 14,360 feet, is a very fair hotel and an open horizon. It would seem to offer the necessary conveniences for a sojourn of reasonable length. The region about here, though the crest of the Cordillera, is a nearly level plateau, with no elevations of considerable height rising above it. The feeling of *soroche*, however, at the least exertion, together with the bleak, weather-scarred landscape, and scant vegetation, bear witness to the great altitude. From Vincocaya to Crucero Alto, altitude 14,666 feet, a distance of twenty-two miles, the country is level, and the scenery not impressive. Of those present in the car somewhat more than half were quite ill from mountain-sickness. My own feelings were simply a slight dizziness, like incipient sea-sickness. Soon after leaving Crucero Alto, the descent to the lower level of the Titicaca plateau was begun. Here the scenery, though not wild, was beautiful, especially in the vicinity of the large lakes known as Cachipascana and Saracocha, whose elevations are 13,585 feet and 13,595 feet, respectively.

We arrived in Puno about eight o'clock in the evening, and found comfortable quarters at the "Hotel de los Incas," — at least, we got a respectable dinner and a narrow, windowless cell, dignified by the name of chamber, containing a hard bed. Here we found, as in some other parts of Peru, in each chamber a list of all the articles the room contained. This list the proprietor consults at the arrival and departure of guests. In this instance the list was not long enough to cause the landlord much trouble. The following morning I took an early walk about the town, and ascended a hill to the west, which gave a fine view of the city and the lake. Puno is a town of about thirty-five hundred inhabitants, situated on the west side of Lake Titicaca on a large but shallow portion known as Puno Bay. The Indians of Puno and vicinity speak either Aymará or Quichua, and many of them know little or no Spanish. Puno lies in an amphitheatre of hills, except toward the lake. These hills are about a thousand feet high and readily accessible. They once contained very rich silver mines, but these are now mostly abandoned. In the town is a large cathedral built of stone, and the work of the Jesuits. The elevation of the town is 12,300 feet. About ten o'clock in the morning we left Puno with the party of Señor Cantuarias for Santa Rosa, the terminus of the Cuzco Division of the railway. It was intended to carry the road through to Cuzco, but it is very doubtful whether this will be accomplished. Juliaca, not far from Puno, has a fine horizon, a decent hotel, and one good private residence. Señor Juan L. de Romaña, who had kindly accompanied us thus far on our trip, returned from this point to Arequipa. Nearly the whole region between Puno and Santa Rosa is very level, rising slightly toward the latter town. In many places the track runs as straight as on the western prairies in the United States. This plateau has everywhere a good horizon, although to the east and west it is bordered by low ranges of mountains, occasionally rising to a considerable height, but so far away as to appear low. This whole region seems quite populous, and is inhabited almost entirely by Indians. There are some large towns and many scattered huts. The dwellings are usually constructed of adobe, and appear very wretched. Although it was the summer season and the beginning of the rains, — the season for planting, — yet it was very cold, and during the day we experienced quite a hail storm. At Santa Rosa there was both rain and snow. The natives seemed little affected by the cold; and while I shivered in my overcoat, Indian women with bare feet and legs and open breasts seemed happy and comfortable. Snow lies low down on the surrounding mountains, and agriculture under these circumstances must be very limited. Immense flocks of cattle, however, are raised on this plateau. The land is owned in great estates by wealthy families or individuals of the upper class who reside elsewhere, and hire the Indians to care for the cattle. A native Peruvian gentleman of wealth and education, himself interested in one of these estates, informed me that the usual price paid for labor per year is about thirty-two soles, approximately equal to twenty-five dollars in gold. This is paid to women as well as to men, and they are allowed a piece of land to cultivate. In this way they manage to exist, but are so poor that though a whole sheep sells for fifty cents they can seldom taste meat. Corn and wheat will not ripen. The three cereals raised are barley, *quinoa*, and *cañagua*. In the afternoon we returned to Puno.

Taking advantage of our proximity to the lake and Bolivia, we passed the next four days in a brief visit to La Paz. We left Puno at about five in the morning on the little steamer "Yapurà," commanded by Captain Salaverry, who was one of the brave commanders of the ill-fated "La Union" in the recent war with Chili. He shared at once our enthusiasm in wishing to see something of the ancient ruins on the islands Titicaca and Coati. He kindly changed the course of his vessel, so that we skirted along the shores of these two islands, and were able to see quite distinctly the ruins of some of the ancient buildings known as temples and palaces. On the east side of Coati we passed near the so-called "Temple of the Virgins of the Sun," which seemed to be in a very fair state of preservation. Photographs were obtained of these islands. On Titicaca is said to have descended the first Inca, sent down from his father the Sun to instruct man. These islands were once held sacred, and in the days of the Incas were adorned with great care. They are now inhabited by a few Indians who, in their personal appearance and mode of life, give little hint of the glory of their ancestors. We reached Chililaya, Bolivia, after dark, but owing to the shallowness of the water could not approach the mole till daylight the next morning. At Chililaya connection is made with stage for La Paz. The boat keeps on to Desaguadero. This small steamboat is one of two constructed originally as gunboats for the use of the Peruvian Government. They are of about sixty tons burden, and were taken to pieces and brought overland on mule-back from the coast. The fuel used on this trip was llama dung, which is collected and sold by the Indians at about ten cents per sack, and costs for work performed about one half as much as coal. It makes a hot but not very even fire, as it is quickly consumed, and a large quantity is used on a single trip. In this connection it may be of interest to mention that on the trains from Arequipa to the interior a fuel is used called *yareta.* It is a species of moss which grows in dense, dome-shaped masses a foot or more in diameter and is decidedly resinous, so that it makes a very good and cheap substitute for coal. This *yareta* is also used extensively in Arequipa and elsewhere for domestic purposes. From different points on Lake Titicaca superb views are obtained of the Cordillera Nevada or Bolivian Andes, forming on the whole, I believe, the finest mountain range in America. We landed at Chililaya at about seven o'clock Sunday morning, and soon took stage for La Paz. The country between the lake and La Paz is in general level and apparently quite fertile. Along the route Indians were engaged in ploughing and planting. A pair of oxen was generally used, and a plough made of an iron-shod, crooked stick, having another piece fastened to it at a convenient angle. The ground we noticed was usually ploughed over twice with this rude instrument, the second time in a direction at right angles to the first. The country was thickly dotted with the small farm huts of the natives. These are of adobe, with tiled or thatched roofs, and possess one small door with raised threshold, and one small opening about four inches square which serves as a window. I have seen very similar dwellings in ancient Indian villages, and no doubt the common life of the people has changed but little for several centuries. The winds are here very cold, coming oftentimes from the immense snowy range of the Cordillera Nevada, which rises pure white at no great distance. Still the Indians all go barefoot, and either from the dictates of fashion or for greater freedom in walking their trousers are slit up behind as far as the knee. They take more care of their heads, however, for they wear a warm woollen cap drawn tightly down over the ears, and frequently in addition a small round felt hat.

La Paz is situated in a deep valley one or two thousand feet below the Bolivian plateau. "After Paris, La Paz," say the Bolivians, and we decided that it was a long way after. Still, with the brightly-colored roofs and walls of its buildings and the gayly-colored *ponchos* of the *cholos,* it presented a very brilliant and picturesque appearance. We passed one day in La Paz. The city itself presents little of interest in the way of architecture. The following day we returned to Chililaya. The distance is about thirty-six miles and consumed six hours. In the afternoon we started by the same steamer as before for Puno, which we reached the following morning. The afternoon we left Chililaya I tested the temperature of the water of the lake, and found it to be fifty-eight degrees in one place and fifty-seven degrees a little later in another place. At the same time the temperature of the air was fifty-two degrees. At seven o'clock the following morning the temperature of the water was fifty-seven degrees, while that of the air had fallen to forty-two degrees. The presence of this large body of water must tend to equalize the climate of the surrounding plateau in some degree. Near the shore the water has a slightly alkaline taste, while in the deeper parts it is more fresh. The distance between Chililaya and Puno is one hundred and four miles. On Thursday, November 28, we returned to Arequipa. I had intended to remain in Vincocaya for a few days; but the presence of the rainy season and the slight prospect of a clear sky induced me to give up this plan.

On arriving at Arequipa I was taken quite ill, and was confined to my bed until December 5. Meanwhile, Mr. M. H. Bailey kept a careful record of the cloudiness, and investigated so far as he was able the desirability of Arequipa as a permanent site for the station. December 6 and 7 were passed in visiting different points near the city, and in taking some photographs of the scenery. Señor Romaña accompanied us to Carmen Alto, a very desirable location northwest of the city and overlooking it. A comfortable house could probably be hired, and ground rented for use of instruments. There seemed to be no difficulty in finding a site suitable for our work here or elsewhere near the city. The sky, during our stay in the vicinity, promised well, considering that we were in the beginning of the rainy season. It was certainly somewhat better than our experience at Mount Harvard would have led us to expect. Out of the twelve nights that we passed in the city, five were cloudless, or nearly so, one was cloudless for a portion of the night, four were partially, and two completely cloudy. Although we had no instruments for making a severe test, the atmosphere appeared to promise well for steadiness. On our departure I arranged to have a record of night cloudiness kept for several weeks longer. This record was received later, and showed that the latter part of the rainy season was much more rainy and cloudy than I had supposed from our own observations and the testimony of residents.

On December 7 we left Arequipa for Mollendo, arriving there about three o'clock in the afternoon. Although no previous information that we could obtain had led us to expect that the scenery and outlook along the southern Peruvian railways would be very different from those along the Oroya Railway, yet such proved to be the case. The valley of the Rimac is everywhere shut in by precipitous mountains.

Along the Mollendo road, a distance of one hundred and seven miles to Arequipa, and from that city two hundred and eighteen miles farther inland to Puno, there are abundant sites giving a suitable horizon for the work we had to do.

After a day's waiting at the "Hotel de 4th of July," we embarked on the "Imperial" for the south. Information was desired regarding different points along the Chilian coast as far south as Valparaiso. I decided, therefore, to stop at Antofagasta and make a brief study of the desert of Atacama; while my brother should go on at once to Santiago. Travelling along the western coast of South America is rendered very slow by daily calls at different ports. At Iquique we went ashore and called on the American consul, Dr. Merriam, from whom we received some information and advice. On Wednesday, December 11, we arrived at Antofagasta, and I went ashore and found a comfortable hotel. In the afternoon I called on Messrs. Bennet & Co., our bankers, and also met Mr. John Wheelwright, an American resident, who then and afterward showed me many favors. The sky here, as nearly everywhere along the coast, was for the most part cloudy. Antofagasta is situated on low ground near the ocean, and just behind it rise steep and somewhat lofty hills. The whole region is utterly barren. Water is obtained by distillation, and food comes chiefly by boats, though the region inland may possibly supply a little.

On the morning of December 13, at half-past seven, I left Antofagasta for the pampa. The railway runs to the south, gradually rising till a gorge is reached, through which it climbs to the pampa, the western edge of which is nearly two thousand feet above the sea-level. When we left Antofagasta the sky was cloudy; but as the train approached the pampa we passed through and out of the cloud, whose edge, rather well defined, could be seen hanging along the coast hills. From Salas, on the western edge of the pampa, the road runs northeast, gradually rising to Calama, near which the mountain region begins. In the gorge above referred to, near the ocean, are some brackish springs, and near them a little coarse vegetation; but from this region to Calama, a distance of one hundred and forty miles, no green thing is met with. Not even the cactus gains the least foothold here. It is a perfectly desolate region. The effect is increased by the torn-up appearance of the ground in every direction, the result of nitrate workings. Towards the interior, however, are extremely rich mines; and the desert itself, a part of the great desert of Atacama, is a region of wonderful wealth. The ground is filled with nitrates to a depth of many feet, and Chili has found this arid region her source of greatest income for a number of years.

Until we reach Calama, about one hundred and fifty miles from the coast, there are no towns except those that depend entirely upon nitrate and mining works. While crossing the desert the sky was clear, but at Calama the evening was cloudy.

This town depends in large measure upon the neighboring mining interests. Near it is a rather brackish river and extended fields of coarse vegetation. Hotel accommodations were somewhat primitive, and there was little that appeared attractive in this town, viewed from any standpoint. At about eight o'clock on the following morning I left for Pampa Central. The sky was cloudy. In Antofagasta I had received from Señor Carvallo, superintendent of the Nitrate Company, "*La Compañia de Salitres de Antofagasta*" a letter to Señor Perez, the resident superintendent at Pampa Central. This company is the only one engaged in the nitrate business along this railway. They employ a thousand or more men. Work is carried on wherever the yields are the richest, and when expedient the whole town, buildings, and population are shifted many miles along the railway. At present the greater amount of the crude nitrate is obtained in the vicinity of Pampa Central; all of this is shipped direct to Antofagasta, where the reducing works are located. The quantity is such that several trains are despatched daily.

Señor Perez received me cordially, and gave me a room in the *oficina* of the company. There is no hotel in the town, the nearest approach to it being an adobe structure used as an eating-house for workmen. I, however, fared very comfortably through the kindness of the company's officials. The *oficina* is a large building with flat roof, containing offices and rooms for some of the officials. The country about Pampa Central is exceedingly level, with no mountains near to interfere with the horizon. A strong wind from the southwest blows across the pampa every afternoon. This wind renders the climate much more comfortable than it would otherwise be. There is also some lighter wind during the night from the opposite direction. I remained three days at Pampa Central, and the sky during this time was in general very clear. Near the horizon to the eastward a low cloud, said to be caused by the rainy season at that time prevailing in the mountains, could usually be seen. This cloud showed a tendency to rise and cover the sky during the latter part of the night. The first half of the night in each instance was quite clear, but each night light clouds from the east appeared from one to two o'clock in the morning. The atmosphere seemed especially clear. For the first time I was able to see with the naked eye the close polar star *B Octantis* (A. G. C. 29042). I could also see readily eleven stars in the Pleiades. The zodiacal light was very brilliant. At a quarter past eight in the evening it reached quite to the meridian at a point some fifteen degrees north of the zenith. There was a marked absence of haze, and except to the east and northeast, stars of the fourth and fifth magnitudes could be seen even when close to the horizon. From information obtained from Señor Perez it appears that the clearest season in the desert is in the summer, from December to February, and the most cloudy season in the winter, from June to August, inclusive. The sky is said, however, to be comparatively clear during the whole year. A low dense fog or cloud, called *camanchaca*, appears occasionally in the desert, more frequently near the western border. It is very dense and wet, and runs rapidly along the ground, frequently retiring after an hour, perhaps, to appear again soon. The station-master at Cuevitas informed me that it was common there, sometimes appearing every night for a week. Further inland it occurs less frequently, and at Pampa Central Señor Perez informed me that he had seen it but twice during a residence of over a year. This *camanchaca* would seem to be connected with the coast cloud.

On the afternoon of Tuesday, December 17, I returned to Antofagasta. The sky while crossing the pampa was cloudless, but on approaching the western border the edge of the coast cloud was seen, its surface about two thousand feet above the sea and slightly above us. As soon as we began to descend to the coast we passed under this cloud, and in Antofagasta the night was cloudy.

On Wednesday, December 18, I left Antofagasta by the steamship "Bolivia" for Valparaiso, arriving in that city on December 22. The whole Chilian coast to Coquimbo is very barren, and even in the vicinity of Valparaiso the country, though green, needs irrigation for agricultural purposes. Valparaiso is situated rather picturesquely on steep hills with deep ravines between them. The hills are so steep, indeed, that in some instances elevators are used to pass from one street to another. Here I met my brother and obtained from him what information he had been able to gather regarding the region. On the following day I visited Santiago. For some distance from Valparaiso the way lies in deep valleys, but nearer Santiago the country is more open. While in the capital I visited some places of interest, among them the National Observatory. Though possessed of a considerable equipment, the instruments seemed either to be unmounted or out of repair, and evidently the Government has not shown a keen enough interest in its prosperity. Señor Obrecht of the Observatory informed me that he had passed several months at Copiapó and that that city and region offered better conditions for astronomical work than the neighborhood of Santiago. The following is the substance of the information gathered: Valparaiso and vicinity are bad, owing to the prevalence of the coast cloud; Santiago and vicinity are very good in summer, and very bad in winter; Copiapó is better than Santiago; Chañarcillo is better than Copiapó, which is especially subject to the fog or coast cloud; Pampa Central is quite as good and probably better than either of those above mentioned. These conclusions depend largely on the opinions of gentlemen, who as officials of nitrate works and railways in those regions, are familiar with all the places named above. These statements refer chiefly to the matter of a clear sky, that is, simply freedom from clouds. It was resolved to return to Pampa Central for several weeks' work with the Meridian Photometer, but to call on the way at Copiapó for a brief study of that region.

On Friday, December 27, we sailed northward by steamer "Puno," Sunday we arrived at Caldera, the port of Copiapó, and the same day took train for that place. Caldera is a wretched coast-town, situated in the sand at the edge of the sea, with nothing green to break the outlook. Copiapó itself is a somewhat pretentious town of perhaps ten thousand people. It is situated on the banks of a river in a quite fertile valley. The river which renders the region about Copiapó so fruitful is exhausted long before it reaches the ocean. The following day I returned to Caldera, leaving my brother to investigate the region near Chañarcillo alone, and the same day at evening left by steamer "Imperial" for Antofagasta. The following report on Santiago, Chañarcillo, and neighboring localities was prepared by Mr. M. H. Bailey from notes taken during the trip: —

"Having had that part of Atacama reached by the Copiapó Railway, particularly Tres Puntas and Chañarcillo, most highly recommended for our work by Señores San Roman (government engineer) and Greene at Santiago, we determined to visit them before deciding on our location, and obtained the following information: The port, Caldera, is fairly good, usually quiet water, not so good as the harbor at Coquimbo, which is the best on the coast, but better than at Antofagasta, Mollendo, and other places. Contrary to some reports, it is safe landing at all the ports, except at a few of them during rough weather, which occurs seldom.

"The elevation of Tres Puntas is about seven thousand feet, and that of Señor Sanchez' mines, five thousand feet. Copiapó, the capital of the province, is situated in the valley of the river of the same name, which disappears in the desert at some distance below the city. Copiapó may have ten thousand inhabitants. There are two fair hotels. When there is no fog the nights are very clear, but fog is common, coming on any time between dark and two o'clock in the morning, and lasting until towards noon. The valley produces fruits and vegetables in some abundance. The following horizon angles were estimated at the east end of the city: N. 2° to 4°; E. the same; S. 2° to 3°; W. 3° to 5°. Of four nights spent there, two were clear and two were foggy. It was not a low, wet fog, touching the ground, but in the form of rather light, and part of the night scattering, low cloud. There are only two trains a week to Chañarcillo from Copiapó, and the same number to Puquios on the road to Tres Puntas.

"Juan Godoy is a dead mining town, and contains no hotel whatsoever. It may have a population of two thousand, possibly more, including that of the mines. The place is also called Chañarcillo, from the mines near, of which there are about one hundred, in former years very rich in silver, having yielded over $300,000,000. The opinion of men who have spent years there is that fog is quite common at the town, but seldom reaches the two highest mines on the summit of the highest peak, two miles distant by the winding road, and about six hundred feet higher. Water is drawn from wells at a depth of about two hundred feet, and is carried on donkeys to the town and mines at the very low price of 20 centavos (14 cents) a load, which consists of two barrels, of about six gallons each. The water has an unpleasant taste, but is said to be wholesome. As I could find no one who drank water, however, I do not know on what authority the statement was based. Some of the mining houses are not bad, and probably more or less room could be economically rented, only making necessary buildings for the instruments. The horizon is all that could be desired. The man in charge of a mine at the summit, being cross-questioned, replied, 'It is nearly always clear, and the fog seldom reaches as high as this house; it very seldom rains, possibly two or three times a year; perhaps the fog reaches here fifty times in a year.' An old miner who had lived there twenty-six years said in regard to the town, 'Sometimes a whole month is clear, followed by an entire week of fog. Perhaps we have fog twice a week on an average right through the year. Don't know how often it reaches the summit.' For three or four days previous to my arrival, two men told me that they had had fog. It seems to be the general idea that the fog comes on by midnight or earlier. During the three days of my stay it was perfectly clear, except one fog which came on between one and four o'clock in the morning, and did not entirely disappear until afternoon. Men familiar with the places say that Chañarcillo does not have the strong winds that are prevalent at Tres Puntas and Pampa Central.

"On returning to Copiapó I met Mr. Budge, President of the railway, who has lived there ten years, and also two years in Arequipa, Peru. He is a native of Santiago. He spoke well of Chañarcillo and Molle, but did not favor Tres Puntas. Without my mentioning it he recommended Arequipa, speaking of how wonderfully clear the nights seemed to him on going there from Santiago. He said that he never had seen such clear nights before, but had since occasionally seen as good in Copiapó and had noticed Venus cast a shadow in both places. He said also, 'In the rainy season at Arequipa there is frequent rain, coming in the afternoon and usually clearing away soon after dark, although part of the time there are scattering clouds more or less all night, and it is completely cloudy occasionally.'

"Mr. Bray, miner, who had lived at different points on the railway for thirty-five years, and was well acquainted with the locations mentioned above, had lived many years at Chañarcillo, and spoke well of it. He said that fog seldom reached the summit. A young man in Valparaiso had highly recommended Señor Sanchez' mine, saying it was only six miles from Puquios, the end of the railway. He obtained for me from Señor Sanchez a letter of introduction to his son, who is in charge of the mine. But Mr. Bray said he knew that the distance on horseback was not less than nine miles, and eighteen miles to Tres Puntas; it seemed unwise to take a week longer to explore such questionable places. Mr. Bray said he thought Molle, the highest point on the road, would make a good station. He was sure that no fog ever reached Molle, that it rained there a very few times during the winter, and very rarely there was a snow-storm. I did not estimate the horizon at Molle, because there was only one little house with no accommodations, but I do not think the valley is narrow or deep enough to make it bad. If not, it would seem to be preferable to the other places mentioned (except that it would be necessary to build houses), as it is directly on the railway, nearer the productions of the valley, and the trains bring fresh water from a short distance; while it is probably near enough to Chañarcillo to have the same cloud conditions, it is higher and so situated as to escape the fog. But it is not unlikely that the chances for clear nights are quite as good at Arequipa as at any of the places herein described; and it offers the additional advantages of a large city and very productive valley at much less expense."

On New Year's Day, January 1, 1890, I arrived in Antofagasta and found that the cases containing the Meridian Photometer had already been received. In the evening I dined with Mr. Wheelwright, and the next morning visited the silver smelting works at the northern part of the town. The following day I went to Pampa Central, and again became the guest of Señor Perez at the *oficina* of the Nitrate Company.

On January 6, my brother arrived from Copiapó, and we completed the adjustment of the Meridian Photometer, and the following night began regular work. This instrument was mounted on the flat roof of the *oficina*, which served very well for temporary work. For a few nights we were troubled with a strong breeze, which interfered somewhat with our work; but a shelter of stout cloth fastened to a frame-work of wood was procured from Antofagasta, which remedied the difficulty. We remained in Pampa Central till February 25. During this stay of nearly two months the conditions for our observations were remarkably good. Work with the Meridian Photometer demands a sky especially free from cloud. Of the twenty-nine days in January during which observations were made, on twenty-one nights the sky was completely clear; on seven nights it was completely clear for a portion of the time; and one night was cloudy. During February twelve nights were completely clear;

on twelve nights the sky was completely clear for a part of the night; on one night the sky had scattering clouds, and three nights were cloudy. In the morning of February 25 we left Pampa Central for Antofagasta, arriving in the latter town before evening. As before noticed, we passed under a cloud in descending to the coast from the pampa. The following day we left per steamer "Imperial" for Callao. This trip consumed a little over eight days, and Wednesday, March 5, I arrived at Mount Harvard. During my absence Mrs. Bailey, finding the climate of Lima and Chosica not suited to her health and that of our son, had returned to Mount Harvard. Here better health was enjoyed, at the expense, however, of many of the comforts of life. From her and from Señor Vieyra I had learned of heavy rainfalls at Mount Harvard, a thing that we had been led not to expect from all the information we had been able to gather, and from our experience of the year before. Without this information, however, there would have been no difficulty in becoming aware of the fact. The preceding year, on March 11, we had first ascended Mount Harvard, and we found it quite bare of vegetation, except apparently dead shrubs and trees, and various forms of cacti. Now, however, the top of the mountain was green with an abundance of plant life. The ground immediately about the station was very green with a variety of low plants and grass that rapidly grew to maturity. The trees that the year before at the same season had appeared dead were covered with green leaves. Wild-flowers appeared in unexpected places, — heliotrope and nasturtiums in great quantities. Indeed, our surroundings had undergone a transformation. This pleasing change was not to last long. The rains continued at intervals during March and a little in April. As soon, however, as the old order of hot and cloudless days re-established itself, the vegetation vanished as quickly as it had come. Small plants had nevertheless had time to come to maturity and scatter their seeds, where they would await another rainy year for their development.

Although the surroundings were greatly improved, so much cannot be said of the buildings themselves. A very little rain fell in December and January, but in February there was a heavy rainfall several times. With too much confidence in the testimony of the people of Chosica that it never rained in that vicinity, we had constructed an ell to our dwelling, containing two rooms, whose roof and walls were of building paper. These rooms were occupied by Señor Vieyra and the servants. The kitchen was also built of paper. The heavy rains of February proved too severe for these paper roofs, and it became necessary to replace them with canvas well painted. A great deal of inconvenience was occasioned by these changes and others that needed to be made at this time. Aside from actual rainfall, the station from December to March was frequently enveloped in cloud, occasionally for several days at a time. This cloud was so damp and cold that comfort was to be obtained only by staying indoors, and the supply of fuel was often in danger of running out. The health of the party during this time was in general good, and the servants proved faithful and kind under very trying circumstances. Francisco, made too sanguine by the abundant vegetation of the mountain during this period, planted some corn and vegetables. These throve well until the conclusion of the rainy season. They perished, however, at the beginning of the dry season, having attained a height of only a few inches. During our absence of nearly four months in southern Peru and Chili, very little work had been accomplished with the Bache photographic telescope on Mount Harvard. The sky had proved much more cloudy than had been anticipated. Moreover, the following months proved less favorable for our work than the corresponding season of the preceding year. A comparison of the records of cloudiness for the months of January and February show marked contrast in seasons between Mount Harvard and Pampa Central.

In the following table, A represents a completely clear sky, B, a sky completely clear for a portion of the night; C, scattering clouds; D, sky completely cloudy.

			A	B	C	D	Total.
1890	January.	Pampa Central . .	21	7	0	1	29
"	"	Mount Harvard . .	0	2	2	27	31
"	February.	Pampa Central . .	12	12	1	3	28
"	"	Mount Harvard . .	0	0	0	28	28

A record was kept both in Arequipa and Pampa Central for some weeks after our departure. The results showed greater cloudiness in each place than report had represented; but each place also seemed on the whole more favorable than Mount Harvard. The cloudy season in Arequipa is at the same time of year as at Mount Harvard, having its greatest cloudiness in the summer; the maximum cloud of Pampa Central undoubtedly occurs in the winter, while the summer as shown by our residence there is very clear. By changing from one to the other of these localities one could keep in a region of clear sky nearly the whole time. It is possible that a condition somewhat similar to that of the Atacama desert might be found on the Pampa of Islay, Peru.

At Mount Harvard the conditions for work were much worse in May and somewhat worse in June, 1890, than in the same months of 1889. July and August, however, were more favorable in 1890 than in 1889. At this time, information was received from Professor Edward C. Pickering, the Director, that Arequipa had been chosen as the permanent site. By the first of October our work was in such a condition that the change of station could be advantageously made. The Bache telescope was kept at work till the packing had progressed so far that further work with it was impossible. The dwelling-house was not considered of sufficient value to warrant the expense of further transportation. It was, accordingly, given to the servants who had served us faithfully for more than a year, in part as a reward, and in part for extra work done during our packing. The frame-work of the Observatory building was sent to Arequipa.

Less difficulty was experienced in arranging for the descent than for the ascent, probably owing to our greater familiarity with the country and its ways. The whole equipment of the station reached Chosica in safety, although several mules, made unsteady by loads of lumber, rolled down the mountain-side for some distance. No bones were broken, however, and no special damage done. All the instruments were either carried by hand or on the backs of mules that were led by hand. On October 15, we bade a final farewell to Mount Harvard. Although we were pleased to go to a site nearer civilization and where more of the comforts of life would be found, we, nevertheless, felt sorry to leave the mountain that had served us as a home for a year and a half. During some necessary delay in Chosica, I went by rail to Chicla, passing over the Verrugas valley by a swinging cage suspended from a single cable. From Chicla I went on horseback to Casapalca, at an elevation of about fourteen thousand feet, where the smelting works of Bacchus and Johnston and some mines are situated. In returning from Chicla to Chosica I made use of a hand-car, the motive power used being the force of gravitation. The distance from Chicla to Chosica is about fifty-five miles, and the descent some 9,400 feet. By timing the kilometre posts by the side of the track, we found that the rate of speed at times attained was thirty-six miles per hour. Between the towns mentioned are some forty tunnels, and the track often runs along the steep cliffs that shut in the Rimac valley. The views given by this unique mode of transportation were wonderful and sometimes startling.

On October 22, we left Callao and arrived at Mollendo on the morning of October 25. The sky during the whole trip was cloudy night and day. The following day we reached Arequipa, and were met by Señor Romaña and others. We found accommodations at the "Hotel Americano," where we had stopped during our previous visit. The flat roof of the hotel offered fair facilities for carrying on the Meridian Photometer work; but a few days spent in examining the various suburbs of Arequipa rendered it evident that Carmen Alto, referred to in our previous visit to Arequipa, would be finally selected for the station. A vacant house there, suitable for a dwelling and pleasantly situated about a mile and a half from the city which it overlooked, was, therefore, rented from its owner Señor Ramos. On the flat roof of this dwelling the Meridian Photometer was erected, and a suitable shelter of wood and canvas placed over it. The Bache telescope was not mounted, pending the selection of the site by Professor William H. Pickering, whose speedy arrival was expected. Work with the Meridian Photometer was resumed November 29, and the sky proved favorable till the middle of December. The last half of December and the months of January, February, and March were, however, very cloudy, so that work with the photometer was done on only six nights during that period. A sudden change in the sky occurred the last of March, and April proved unexpectedly clear.

On January 17, 1891, Professor Pickering arrived in Arequipa with his family and his assistants, Messrs. Douglass and Vickers. Within a few days Professor Pickering chose for a permanent site a location at Carmen Alto, a short distance north of our residence. A large portion of the time during the remainder of the cloudy season was occupied in assisting in the establishment of the new station. During April, a large amount of work was accomplished with the Meridian Photometer, and May 6, the last series was taken with it, the work planned for the instrument being at that time completed. This instrument and all pertaining to it was packed and sent to Cambridge. All other apparatus was turned over to Professor Pickering.

On May 15, 1891, we bade farewell to Arequipa, and two days later we sailed south. We had decided to return to the United States by the Straits of Magellan and Europe. The journey along the west coast was relieved from monotony by incidents in the Chilian civil war. The trip from Mollendo to Valparaiso ordinarily consumes seven days. On this occasion, however, it occupied eleven days. All ports north of Coquimbo were in the possession of the congressional party, while those to the south were still held by President Balmaceda. War-ships of both parties chased each other up and down the coast, and took and re-took the slightly defended ports. Our steamship, though sailing under the British flag, which commands respect in Chili as elsewhere, was, nevertheless, delayed in entering and leaving ports. Our captain did not think it safe to enter after dark, lest we should be mistaken by some war vessel for an opponent, or damaged by torpedoes. Consequently, our progress was slow. At Iquique we were pleased to see the American flag flying from two handsome war vessels, the "Baltimore" and "San Francisco," and on the following morning from still another, the venerable "Tallapoosa." To the Itata incident was due this unusual display of the stars and stripes. We anchored near the "Cochrane," a heavy and slow war-ship of the congressional party. Just at dark a cannonading was begun by some invisible vessels two or three miles out at sea. It was said to be the "Imperial," a fast merchant steamer that had been taken by the President and fitted with some guns, accompanied probably by two small but swift torpedo boats recently received from Europe. These three vessels constituted at this time the main naval strength of the President. They did not form a heavy fighting force, but, all three having great speed, they could do some fighting and run away, and thus be able to "fight another day." On this occasion it seemed to be pure bravado, as no one could see what object was to be gained by such a demonstration. All stood on deck watching the flashes and listening for the reports. Whatever its meaning might be, our neighbor, the "Cochrane," evidently did not approve of it; for considerable activity was visible aboard her. The anchors were hoisted, and she steamed close by us out to sea, and soon disappeared in the darkness. Her departure had a good effect, for the firing ceased after a time. In the morning the "Cochrane" was back in her old place, and the sailors were cleaning their guns. Shortly after her departure the night before, a terrific explosion startled us and shook our steamer. Women screamed, and the first impression was that an attempt had been made to blow us up. We had been in no such danger, however. A small torpedo boat had been passing, carrying a torpedo said to have been made by amateurs. When near us the torpedo was accidentally exploded. The torpedo boat was completely demolished, and the three or four men aboard were killed. At Caldera we saw the wreck of the war-ship "Blanco." A short time before our arrival the captain of this vessel, flushed with some victory, went ashore to attend a banquet; while those on board, apparently unsuspicious of danger, exercised little caution. Nearly all were undoubtedly asleep when one of the President's torpedo boats, already referred to, crept near the "Blanco" and exploded two or three torpedoes under her. She sank almost immediately with her crew of about two hundred men. At the time of our visit the bodies of one hundred and twenty victims were still in the wreck. The "Blanco" went down in shallow water, so that some of the spars projected above the surface; and a little beneath it, in pleasant weather, a ghastly picture presented itself to the eyes of the curious. At several ports we were detained for some time, while search was made by the authorities for a political refugee, who was thought to have escaped from Iquique and to be on board. In spite of the most careful searching he was not found; but when we arrived at Coquimbo, a port in possession of the President, he came forth from his hiding-place, with one arm in a sling and with other marks of suffering and privation. He was arrayed by his friends in full uniform, and paraded the deck with evident pride. One report was circulated that he had been concealed in a large cask and fed through the bung-hole by a sailor bribed for the purpose, and another that he had been concealed in a seaman's chest.

At Valparaiso were the war-ships of several nations, and the merchant ships of many. The guns of the fort covered the harbor, and an electric search-light swept the surface of the water by night to detect any suspicious arrival. Our captain, whose naturally hasty temper had been sadly disturbed by the indignities he had undergone during the voyage, expressed the wish that under some pretext the English war-ships would open fire on the fort, declaring that one of them, the "Warspite," would be amply sufficient to demolish it. Of the truth of this statement we had no means of judging, as that highly interesting experiment was not tried. After refusing to receive us for half a day, as punishment for having called at rebel ports, the authorities at Valparaiso finally relented, and we were allowed to board the "Galicia," our English steamer bound for Europe. Another day was lost waiting for a heavy gale to subside, and finally we sailed south. Thereafter we had no more forcible reminder of war than the presence of a courteous Chilian gentleman and his wife, who were suspected of sympathizing with the congressional party, and who consequently found it unsafe to remain in the country. The voyage in the South Pacific was rather boisterous; but in the Straits of Magellan, although the cold was severe during the short June days, the water was quiet, and all on board were cheerful. A short stop was made at Punta Arenas, the southernmost town in the world. The remainder of the voyage was pleasantly broken by calls at hitherto unvisited countries. We passed among the Cape Verde Islands, calling at Saint Vincent, and near the Canaries. Teneriffe was seen ninety miles away, rising above some low clouds that hung near the ocean. We reached Bordeaux, July 4, and Cambridge on August 15, 1891.

CHAPTER II.

PLAN OF OBSERVATIONS.

THE Meridian Photometer consists of a telescope with two objectives, the axis of one of which is placed horizontally at right angles to the meridian. It is so constructed that a star near the pole and any star near the meridian can be brought into the field of view at the same time. By means of a double-image prism and Nicol the light of the two stars may be made equal and the relative brightness measured with the aid of a graduated circle and index. Various precautions were taken to avoid systematic errors. Both stars were seen with nearly the same magnifying power, the same aperture, and upon the same background. Care was also taken to reverse the positions of the images after making two of the four measures which constituted each set. In the first instrument constructed, the objectives had apertures of 4 cm. and focal lengths of 80 cm. A power of fifteen diameters was employed. With this instrument 4,260 stars were observed. With a few exceptions they are of the sixth magnitude and brighter, and north of —30°. The results are published in Volume XIV. of these Annals, and the catalogue extracted from that work is known as the Harvard Photometry. The observations extended over three years, and consisted of 700 series of measures, including 94,476 photometric settings. Owing to the small size of the instrument, stars fainter than the sixth magnitude were observed with difficulty. A new instrument of double the dimensions of the other was accordingly constructed. The apertures of the two objectives were 10.5 cm., their focal lengths 166 and 145 cm., and the magnifying powers 28 and 24 diameters. During the six years from 1882 to 1888, this instrument was used on almost every clear evening in Cambridge. The number of series taken was 1,067, of stars 20,982, and of photometric settings 267,092. The results are given in Volumes XXIII. and XXIV. of these Annals. Stars as faint as the ninth magnitude, or even fainter, could be measured satisfactorily. The principal work undertaken was a revision of the magnitudes of the stars of the Durchmusterung. In general, stars were observed in zones at intervals of five degrees in declination from —20° to the north pole. Each zone was twenty minutes in width for stars of the magnitudes 8.0 to 9.0 inclusive, one degree for magnitudes 7.0 to 7.9, and two degrees for magnitudes 6.1 to 6.9. Various other lists of stars were also observed, such as comparison stars for variables, standards of the Uranometria Argentina, stars near the northern and southern horizon, etc. In the Harvard Photometry every star was compared with α *Ursæ Minoris*, and all the observations were reduced to a scale such that the magnitude of this star should be 2.15. This star is too bright for satisfactory comparison with stars of the eighth or ninth magnitude, and λ *Ursæ Minoris* was accordingly substituted for it as a standard with the larger photometer. It did not seem safe to depend on the constancy of the light of a single star, especially as λ *Ursæ Minoris* had been suspected of variability. One hundred stars having declinations between $+58°$ and $+75°$ were each observed on the average on seventeen nights in forming the Harvard Photometry. The resulting magnitudes of these stars were accordingly adopted as a standard system with which other stars could be compared. Six of them were observed, on the average, in each series. The suspected variability of λ *Ursæ Minoris* was not confirmed. The average deviation of the monthly results was only $\pm .08$, which was probably due to accidental and other sources of error.

The investigation described above furnished a large number of measures of the stars visible in Cambridge. It therefore appeared desirable to extend the work so as to include the southern stars. This investigation was undertaken by the expedition under the direction of Professor Solon I. Bailey, and described in the preceding chapter. All of the observations were made by him, and recorded by Mr. M. H. Bailey, except those made on July 23, 1889, and those made on August 26, 1889, before nineteen hours sidereal time, which were recorded by Mrs. S. I. Bailey. Before the instrument was dismounted at Cambridge, twenty-one series of observations were taken by Professor Bailey to familiarize himself with the work, and to reduce his errors of measurement. It was then mounted upon the east balcony of the East Dome of the Observatory, where three more series were taken by him, and one by the Director. These series consisted mainly of stars near the horizon observed in order to determine the coefficient of atmospheric absorption. The last of these observations was made on November 7, 1888. As stated in the preceding chapter, the photometer was sent to Peru in the spring of 1889. It was erected on a mountain 6,600 feet high, about eight miles north of east from the Chosica station of the Oroya Railway. Its latitude is about 11° 51′ south, and its longitude $5^h\ 7^m$ west of Greenwich. The first series was taken on May 24, 1889, and for several months the weather proved very favorable, and the instrument was used on nearly every clear night. As the summer season of the southern hemisphere approached, clouds became more frequent, and at length nearly every evening was cloudy. The instrument was dismounted, and the Messrs. Bailey, taking it with them, went as far south as Valparaiso to find a better location if possible. During January and February, 1890, the photometer was mounted in latitude 23° 10′ south, longitude 6^h 38^m west, at Pampa Central, a small mining town established by "*La Compañia de Salitres de Antofagasta*." The instrument was placed on the roof of the *oficina*, and in this and other ways the company rendered important aid to the expedition. Pampa Central is on the northern borders of the Desert of Atacama, one of the most barren portions of the world. No rain falls there, and it was hoped that the sky would always be clear. Every evening the sea breeze sets in and brings with it dense masses of fog and cloud from the Pacific, which seldom extend as far as this point. In March the observers returned to Chosica, and the photometer was again mounted as before. The weather proved much less favorable than during the previous year, so that the observations in May and June were frequently interrupted by clouds. In September, 1890, the photometer was again dismounted and sent to Arequipa, in latitude 16° 24′ south, longitude 4^h 45^m west. Measures were made here from December 2, 1890, to May 6, 1891. These four sections of the entire work will hereafter be distinguished as I., II., III., and IV. It will be noticed that I. and III. were taken at the same station, but in successive years.

The main object in sending the Meridian Photometer to the southern hemisphere was to extend to the south pole the investigations undertaken in Cambridge, and described above. The method of observation was substantially the same. The preparation of a working-list of stars was greatly simplified by the publication of the Uranometria Argentina, Zone Catalogue, and General Catalogue at the Cordoba Observatory, (Annals Cordoba Observatory, I., VII., VIII., and XIV). Stars from these catalogues will be frequently designated in the present volume by the letters U. A., Z. C., and A. G. C. prefixed to their numbers.

The Harvard Photometry contains all the stars north of —30° which are regarded as of the sixth magnitude or brighter in any of a number of catalogues enumerated in these Annals, Volume XIV., page 83. A similar list has been compiled of stars south of —30°, from the following authorities:—

1. All stars in the Uranometria Argentina whose magnitude is there given as 6.2 or brighter. A cumulus U. A. *Norma*, 38, magn. 6.0 is omitted, not being represented by any star in the Argentine General Catalogue.

2. All stars in the catalogue accompanying Behrmann's Atlas des südlichen gestirnten Himmels except those whose magnitude is there given as 6. These last stars are omitted, since they are generally fainter than the sixth magnitude on the photometric scale. An exception is also made of such stars as do not appear in the Argentine General Catalogue in the place given by Behrmann, provided that some

adjacent bright star could be assumed as the object observed by him. Each of these cases is separately mentioned in the remarks on page 254.

3. All stars in Houzeau's Uranométrie Générale (Annales de l'Observatoire Royal de Bruxelles, Nouvelle Série, Astronomie, Tome I.) except those whose magnitude is there given as 6 or 6.7. Objects whose identification is doubtful are treated as explained in the preceding paragraph.

4. All stars in the Harvard Photometry south of —30° except H. P. 1273, which was probably erroneously identified by Behrmann. See these Annals, Volume XIV., pages 294 and 411.

The observing list was compiled from the several authorities above mentioned with the expectation that stars omitted in one might be inserted from another, so that no bright stars should be omitted in the final catalogue. Each of the stars was to be observed on at least three evenings. This number was increased to six when the star was brighter than 4.3 and fainter than 2.2 according to the Argentine General Catalogue, and to ten when brighter than 2.3. When an observation of a star was found to be discordant, three additional observations were made if possible, but in many cases the discordance was not discovered until too late.

As the proposed extension of the Durchmusterung to the south pole had not been published, an observing list of faint stars was selected from the Argentine General Catalogue and Zone Catalogue. From these works all the stars were taken which lie in a series of zones 20′ in width, and having the mean declinations —25°, —30°, —35°, —40°, —45°, —50°, —55°, —60°, —65°, —70°, —75°, and —80°. Also all stars whose magnitudes in these catalogues are brighter than 8.0 and which are within 10′ of the edges of these zones. In other words, the width of the zones was extended to 40′ for stars brighter than the magnitude 8.0. No stars which are south of —80° are contained in the Argentine Zone Catalogue. All stars between —80° and —90° in the Argentine General Catalogue were included in the list for observation. In selecting the stars, their positions for 1875.0 were employed. Each star was observed on two nights, and the number was increased, if possible, to five when a discordance was noticed.

Several other catalogues were examined, and all stars south of —30° were inserted for observation if they were not found in the lists above described. Among these stars may be mentioned all those whose positions are given in the Nautical Almanacs published in England, France, Germany, Spain, and the United States, and contained in the general list of such stars given in these Annals, Volume XVIII., page 3. A catalogue of 480 stars to be used as fundamental stars for observations of zones between 20° and 80° south declination, by Professor A. Auwers. (Monthly Notices, XLVII., 455.) Stars selected by Dr. Gill, in 1889, for comparison with the asteroid Victoria (12), and published in a circular entitled "Programme for observation of the minor planet Victoria." See also Astron. Nach. CXXX., 161. All known variable stars, and stars whose spectra are of the fourth or fifth type. Each star in the classes enumerated in this paragraph was observed on three evenings.

The measurements were all made by comparing each star in turn with σ *Octantis*, magnitude 5.5, the brightest star in the vicinity of the south pole. The position of this star for 1900 is in R. A. $18^h\ 59^m.8$ and in Dec. —89° 15′. So few observations had been made of its brightness when this work was undertaken, that its light could not safely be assumed to be constant. Moreover, all the stations occupied were so near the equator that σ *Octantis* had a large zenith distance, and its apparent brightness was liable to vary from night to night owing to the changes in the atmospheric absorption. Both of these difficulties were avoided by measuring every evening from ten to twenty stars of the Harvard Photometry. As different stars were ordinarily selected every evening, more than one half of the stars contained in that work were observed, and the method of reduction rendered the scales of the two catalogues nearly identical. Only those stars were used whose declination was contained between +60° and —30°. Stars further north were too low to be accurately measured in Peru, and those south of —30° were open to the same objection in Cambridge. To determine the atmospheric absorption north of the zenith, three stars were observed every evening near the northern horizon. They were selected from the one hundred circumpolar stars mentioned on page 50. At Pampa Central these stars were generally too low, and accordingly other stars north of +30° were also employed. In like manner at Arequipa stars north of +45° were used for determining the atmospheric absorption. The atmospheric absorption south of the zenith was similarly determined from the observations of σ *Octantis* and other stars within ten degrees of the south pole. At least one of these additional stars was observed each evening at upper culmination, and three at lower culmination. At Arequipa and Pampa Central, a few stars north of —80° were observed at lower culmination. The star σ *Octantis* was observed at the beginning, middle, and end of each series. The number of these various classes of standard stars actually observed in each series was sometimes greater and sometimes less, but all of them were used in determining the constants by which the measurements were reduced.

When a star was to be measured, four settings were made, turning the photometer circle into the four positions in which the images appeared to be equal. After the second setting the position of the images of the two stars was reversed, and the double-image prism was also turned 180°, so as to reverse the plane of polarization of the two images. This precaution seems necessary to eliminate the effect of possibly elliptical polarization, although the polarization of light reflected from silver is nearly circular. The same effect would be produced if a portion of the silver was removed. The complete record for each star consisted of its designation, a letter to indicate what catalogue it was taken from, and a number to indicate its place in the catalogue; the sidereal time; the collimation reading which gave the position of an index attached to a string by which the inclination of the mirror to the meridian was varied; the observed declination reading; the estimated magnitude; the four readings of the photometer circle; and, finally, any additional remarks such as the position of adjacent stars by which the identity of the object observed might be rendered certain. Its right ascension and declination could always be computed from the collimation and declination readings by comparison with the corresponding readings for adjacent stars. The difference between their true and observed declinations applied to the declination reading gave the required declination. To determine the corresponding right ascension it was first necessary to determine the collimation reading corresponding to an object on the meridian. One division of the collimation scale corresponded to the motion of an equatorial star during one minute of time. The hour angle of any known star is determined at the time of observation by subtracting the right ascension from the time of observation. Multiplying the difference by the cosine of the declination and subtracting the product from the observed collimation, gives the collimation reading which the star would have had if it had been observed on the meridian. This quantity is called the zero of collimation. As in a transit instrument it will be different for stars in different declinations, if the adjustments are not exact. Having determined the value of this zero, it is subtracted from the observed collimation and the difference is divided by the cosine of the declination. The quotient subtracted from the sidereal time of the observation gives the right ascension of the object observed. Whenever an observation proved to be discordant the position of the object observed was determined in this way. If it proved not to be the object intended, the object actually observed was looked for in the catalogues and if found was substituted for it.

CHAPTER III.

REDUCTION OF OBSERVATIONS.

THE first step in the reduction of the observations is to derive from the four readings of the photometer circle the difference in brightness of the two images compared, expressed in stellar magnitudes. The first of these readings was subtracted from the second and the third from the fourth and the sum of the differences was taken. It is shown in Volume XIV. of these Annals, page 8, that calling the sum of the differences S, the required difference in magnitude $M = 5 \log \tan \frac{1}{4} S$. Table I. in the same volume gives $M + 2$ directly, when S is known. Were there no errors of any kind, the two differences should be equal, the third reading should always exceed the first by 90°, and the fourth reading the second by the same amount. These conditions serve to detect a large error in any single reading.

If we knew the apparent magnitude of the comparison star σ *Oclantis* and the difference in the reflecting power of the two mirrors, the apparent magnitude of the star to be measured could be found by adding these two quantities to the difference in magnitude given in the preceding paragraph. It appeared better, however, to measure a number of stars of known brightness, and to subtract from the magnitude of each the difference in magnitude of the two images. The mean value of this difference may be called the constant of the series of observations, since, if added to the observed difference of the images, it will give the apparent brightness of the stars observed. A correction for atmospheric absorption must be applied, if the stars are not all near the zenith. Owing to the imperfect transparency of the air, stars appear to grow fainter as they approach the horizon. The loss of light expressed in stellar magnitudes will be proportional to the length of path traversed by the light in passing through the atmosphere of the Earth. If a represents the loss of light of a star in the zenith, that of a star at the zenith distance z will be $a \sec z$ provided that z is not large. Since, in general, we want to know the difference in light between a star in the zenith and one at a zenith distance z, we may write $a \sec z - a = a (\sec z - 1)$. For stars near the horizon the increase in absorption is less rapid, since owing to the curvature of the Earth the length of path is not infinite when $z = 90°$. Table XVI. of Volume XXIII. gives the length of path corresponding to all zenith distances less than 85° 13′, and Table XV. serves to extend this table to zenith distances of 88°. The quantity a, which equals the absorption in the zenith, may be called the coefficient of absorption and increases with the haziness of the air. Let D equal the difference found by subtracting from the true magnitude of a star the observed difference of brightness of its image from that of the comparison star; let C equal the constant of the series; a the coefficient of absorption, and p the length of path. Then $D = C + a\,p$, which gives an equation of condition for each star for determining the values of the constant and of the coefficient of absorption of the series. In reducing each series two normal equations were formed, one by taking the mean of the equations derived from the stars in the Harvard Photometry whose declinations lie between +60° and —30°. In these the value of p was small, since none of the stars were near the horizon. The second normal equation was found in the same way from the stars observed near the northern horizon. In this equation the value of p was large, and therefore served to determine a with accuracy. Solving these equations for each series gave approximate values of C and a. Before adopting these values it was necessary to look for individual cases of discordance. Residuals were therefore taken for each star by subtracting the value of $C + a\,p$, computed for each star, from the observed value D of the difference between the magnitude in the Harvard Photometry and the observed brightness. Whenever the residual exceeded six tenths of a magnitude the original record was examined. An inspection of the readings would generally show if one of them was in error, and the position of the object observed was compared with that of one or two adjacent stars by means of the observed declination and collimation readings, as described above. If an error was found the observation was rejected, except that when the position was in error, the star actually observed was looked for in the Harvard Photometry, and if found to be contained in that work, it was substituted for the star recorded.

In a few cases the computed value of the atmospheric absorption was negative. Its smallest value was —.16, except on January 17, 1890, when it was —.62. Its greatest values were +.52, +.51, and +.50 on January 25, February 13, and February 18, 1891, respectively. A negative value if real would indicate that a star near the horizon appeared brighter than when near the zenith. This might be caused by thin clouds which did not extend to the horizon. In most cases, it would be much more likely to be due to slight errors of observation. On January 17, 1890, only one star, H. P. 1819, was observed near the northern horizon. A large variation in the atmospheric absorption generally affected the value of the constant but little. Thus on this date changing the absorption from —.62 to .00 would only alter the constant from 3.4 to 3.5. Accordingly, when no stars were observed near the northern horizon the value of the constant could generally be determined within a tenth of a unit by assuming an average value of the coefficient of absorption. The values of the constants thus found were adopted provisionally, since, as will be shown below, a second approximation served to eliminate any remaining error which might be suspected.

The coefficient of absorption derived from the northern stars cannot safely be applied to the southern stars, since the absorption may not be the same on opposite sides of the zenith. As the magnitude of the southern stars is not known, the absorption must be determined by successive approximations. The star σ *Octantis* was generally observed three times in each series. Omitting the series in which the absorption could not be determined from the northern stars, 521 measures of σ *Octantis* were made in 202 series. These were all reduced by means of the constants and coefficients of absorption derived from the northern stars. The mean of all these measures gave the magnitude of σ *Octantis*, 5.52. Subtracting 5.5 from each observed measure of σ *Octantis* gave the observed absorption of this star. Dividing the sum of these for each series by the sum of the corresponding lengths of path gave a provisional value of the atmospheric absorption better adapted to reducing the southern stars than that derived from the northern stars, since it depended on the absorption of the air south of the zenith. This value of the atmospheric absorption was next used in reducing the observation of all stars south of —80°, which were observed at upper culmination, except σ *Octantis*. Since the length of path of each of these stars was less than that of σ, errors in the absorption were correspondingly reduced. A catalogue was thus formed giving the magnitude of all stars south of —80°. A few stars between —69° and —80° were included, provided that they were observed at lower culmination. From the magnitudes thus found the atmospheric absorption was derived from all the stars observed at lower culmination, from σ *Octantis*, and from the stars south of —80° observed at upper culmination. The value of the absorption finally adopted was found by dividing the sum of the results thus obtained by the sum of the corresponding lengths of path.

The observations of all the standard stars employed in the reduction described above are given in Table I. The first column gives the Julian day of observation, omitting the constant number 2,411,000. The second column gives the designation of the star. When this consists of a number only it refers to the Argentine General Catalogue. The letter H refers to the Harvard Photometry, and the letter Z to the Cordoba Zone Catalogues. In the latter case, the hour is given in the Remarks following the Table. The star σ *Octantis* is designated by the letter σ. When the combined light of two or more stars was observed, the number designating the first is placed in Italics. The observed brightness, found by means of Table I. of Volume XIV., is given in the third column, negative values being indicated by Italics. The excess of the length of path of the light of the star in traversing the Earth's atmosphere, over that of a star in the zenith, is given in the fourth column, and is found from Table XVI. of Volume XXIII. as described above. Negative values are used to indicate that the star culminates south of the zenith. The fifth column gives the residual found by subtracting the mean magnitude, after applying a correction for atmospheric absorption, from the observed magnitude. In the case of the southern polar stars, except σ, the magnitudes here used are those given in the second column of Table II. As in other tables in this volume negative residuals are indicated by Italics, and the letters **p** and **n** denote that the residuals exceed 9 numerically, and are positive or negative respectively. The exact values of these residuals will be found in the Remarks following the table. The letter A denotes that the absorption for northern stars depends on a single observation and that therefore no residual can be given. The letter F denotes that the star was seen but was too faint for measurement, the letter N that it was not seen. The letter T denotes that one or more of the four photometric measures made were in the wrong quadrant and accordingly the observation was rejected. These cases will be discussed on page 220. The letter R refers to the Remarks following the table. In general, residuals of Harvard Photometry stars greater than 7 and those of other stars greater than 8 were rejected for discordance. Exceptions to this rule are given in the Remarks.

TABLE I.

STANDARD STARS.

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
147	H 2002	1.2	0.0	5	148	700	3.3	5.4	0	151	32223	4.0	7.9	1	154	3451	5.2	6.3	2
"	H 2003	0.8	0.0	3	150	H 2012	2.3	0.0	1	"	32286	5.4	7.9	2	155	H 2004	2.6	1.2	6
"	H 2016	0.7	0.0	2	"	H 2014	0.7	0.1	5	"	32031	5.0	8.6	1	"	H 2005	2.1	0.8	3
"	H 2018	0.0	1.0	0	"	H 2025	2.1	0.1	1	152	H 2260	1.8	0.0	1	"	H 2007	2.4	1.0	1
"	H 2019	0.1	0.1	3	"	H 2038	1.2	0.1	2	"	H 2261	2.3	0.0	9	"	H 2008	1.1	0.1	6
"	H 2025	1.5	0.1	3	"	H 2039	2.2	0.9	4	"	H 2263	2.8	0.0	4	"	H 2017	1.2	0.1	1
"	H 2028	0.8	0.0	5	"	H 2044	1.0	0.0	2	"	H 2268	0.7	0.0	4	"	H 2023	1.7	0.1	3
"	H 2036	1.5	1.5	3	"	H 2046	2.4	0.7	0	"	H 2269	0.4	0.0	0	"	H 2022	0.5	0.2	3
"	H 2047	2.2	0.0	1	"	H 2049	0.8	0.0	2	"	H 2280	2.1	0.0	4	"	H 2026	2.1	0.1	1
"	H 2052	1.4	0.0	3	"	H 2066	1.6	0.0	6	"	H 2283	0.3	0.0	2	"	H 2027	1.4	0.5	4
"	H 2059	2.3	0.0	1	"	H 2073	1.7	0.0	2	"	H 2282	1.9	0.0	3	"	H 2030	2.3	0.1	1
"	H 2060	0.2	0.0	5	"	H 2078	1.4	0.0	0	"	H 2281	2.4	0.0	1	"	H 2031	2.2	0.4	1
"	H 2063	T	0.0	T	"	H 2085	2.1	0.0	3	"	H 2284	1.3	0.0	1	"	H 2034	2.5	0.6	1
"	H 2074	2.3	0.0	2	"	H 2088	0.2	0.0	0	"	H 2285	2.1	0.0	1	"	H 2043	2.3	1.8	2
"	17401	3.3	1.7	0	"	H 2090	0.7	0.0	3	"	H 2288	0.9	0.0	4	"	H 2044	1.2	0.0	0
"	19776	2.7	2.9	0	"	H 2209	2.5	3.0	1	"	H 2348	2.2	2.5	1	"	H 2107	3.0	3.0	3
"	σ	2.2	3.6	5	"	H 2250	3.0	4.8	1	"	H 2356	0.6	3.3	1	"	H 2124	1.9	5.3	0
"	σ	1.7	3.4	0	"	H 2279	2.0	2.3	2	"	H 2399	1.9	5.3	2	"	H 2197	1.6	3.5	2
"	147	1.6	5.9	6	"	17694	3.3	1.8	1	"	19284	0.3	2.1	4	"	17401	3.2	1.7	3
"	678	3.8	5.6	3	"	19197	1.2	1.7	1	"	20034	2.1	2.0	5	"	19197	1.3	1.7	0
"	700	3.4	5.4	3	"	19284	0.7	2.1	4	"	20104	1.8	2.0	2	"	19284	0.4	2.1	0
148	H 2009	1.6	0.0	2	"	20125	2.1	2.3	1	"	σ	1.9	3.6	1	"	19776	3.1	2.9	3
"	H 2012	2.6	0.0	4	"	σ	2.1	3.7	2	"	σ	1.6	3.4	1	"	20818	1.9	2.2	1
"	H 2021	2.3	0.1	1	"	σ	1.7	3.4	2	"	2081	4.6	10.4	0	"	σ	2.1	3.7	3
"	H 2024	1.3	0.0	2	"	32223	3.9	7.9	0	"	1926	5.1	10.6	0	"	σ	1.7	3.4	1
"	H 2029	2.5	0.0	2	"	32286	5.1	7.9	1	"	2141	5.8	9.0	1	"	782	4.6	5.3	0
"	H 2032	1.5	0.0	0	"	403	5.0	7.8	2	154	H 2036	1.3	1.5	1	"	782	4.2	5.3	4
"	H 2037	1.3	0.0	1	151	H 1951	0.1	0.1	6	"	H 2077	0.3	1.9	3	"	147	2.3	5.9	1
"	H 2042	1.9	0.0	3	"	H 1952	0.9	0.2	0	"	H 2452	0.4	0.1	0	157	H 2708	1.0	0.0	3
"	H 2050	1.4	0.0	1	"	H 1954	0.7	0.1	8	"	H 2454	0.9	0.1	1	"	H 2709	0.9	0.0	0
"	H 2057	0.2	0.1	3	"	H 1973	0.0	0.0	2	"	H 2455	1.2	0.1	2	"	H 2711	0.6	0.0	1
"	H 2061	1.6	0.0	3	"	H 1975	1.6	0.1	1	"	H 2456	1.6	0.0	0	"	H 2712	1.3	0.0	0
"	H 2062	1.7	0.1	2	"	H 1976	2.4	0.0	3	"	H 2457	0.1	0.0	2	"	H 2714	0.3	0.0	3
"	H 2197	1.2	3.5	4	"	H 1978	0.7	0.0	4	"	H 2459	0.4	0.3	3	"	H 2715	0.9	0.0	3
"	H 2209	2.5	3.0	3	"	H 1980	1.4	0.6	2	"	H 2480	1.3	0.0	1	"	H 2736	0.8	0.0	0
"	17694	3.1	1.8	2	"	H 1981	2.4	1.8	4	"	H 2479	1.2	0.0	1	"	H 2737	0.5	0.0	0
"	18321	2.2	2.4	4	"	H 1990	2.0	0.1	1	"	H 2499	0.5	0.0	2	"	H 2738	1.3	0.0	1
"	19197	1.4	1.7	4	"	H 2010	1.0	0.2	5	"	H 2569	0.7	2.1	1	"	H 2748	0.2	0.0	2
"	19284	0.3	2.1	1	"	H 2011	1.0	0.5	8	"	H 2593	2.2	3.1	2	"	H 2749	1.4	0.0	2
"	20034	1.4	2.0	3	"	H 2013	1.6	0.4	1	"	21419	3.6	2.2	4	"	H 2755	0.8	0.0	2
"	20104	1.4	2.0	3	"	H 2197	1.2	3.5	4	"	21419	4.1	2.2	1	"	H 2058	1.7	2.8	4
"	20818	1.7	2.2	1	"	H 2209	2.4	3.0	2	"	24176	1.6	2.9	0	"	H 2107	2.5	3.0	3
"	σ	1.5	3.7	3	"	H 2250	2.7	4.8	2	"	σ	2.2	3.7	3	"	H 2124	1.5	5.3	2
"	σ	1.7	3.4	0	"	17241	2.9	3.3	2	"	σ	1.6	3.5	3	"	16619	3.5	2.1	0
"	639	5.0	5.7	5	"	σ	1.9	3.7	1	"	3172	4.4	6.0	3	"	σ	2.0	3.7	0
"	678	4.1	5.6	2	"	σ	1.7	3.4	3	"	3378	4.8	5.9	3	"	σ	1.8	3.4	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
157	32223	4.2	*7.9*	2	162	H 2405	2.3	1.8	*1*	171	H 2823	3.1	1.6	2	173	20104	1.7	*2.0*	*1*
"	32286	5.2	*7.9*	*1*	"	H 2406				"	H 2824	1.0	0.1	*2*	"	22180	2.2	*2.6*	*2*
"	32031	5.0	*8.6*	0	"	H 2408	2.1	*0.0*	P	"	H 2825	1.5	0.0	2	"	σ	2.1	*3.6*	2
158	H 2539	*1.5*	0.0	1	"	H *2449*	R	0.1	T	"	H 2826	0.7	0.9	*3*	"	σ	1.8	3.4	*1*
"	H 2540	0.2	*0.1*	*2*	"	H 2451	1.9	0.2	*1*	"	H 2827	1.5	0.3	*2*	"	σ	1.9	*3.4*	0
"	H 2541	*1.1*	0.4	*3*	"	H 2468	*0.3*	0.0	2	"	H 2828	2.1	0.1	R	"	3172	3.7	*6.0*	*3*
"	H 2542	1.4	0.2	1	"	H 2469	1.4	*0.0*	*2*	"	H 2829	2.5	0.1	3	"	3378	5.3	*5.9*	2
"	H 2544	1.1	0.0	3	"	H 2463	0.9	*0.0*	1	"	H 2830	0.8	0.2	*2*	"	3451	5.8	*6.3*	4
"	H 2546	2.9	0.9	1	"	H 2460	2.2	2.5	1	"	H 2717	1.9	4.3	0	174	H 2868	*1.2*	*0.0*	1
"	H 2547	1.8	*0.0*	1	"	H 2510	0.5	3.6	*2*	"	H 2766	*1.2*	2.5	*2*	"	H 2867	1.4	0.0	*3*
"	H 2548	1.2	0.0	0	"	H 2569	*0.6*	2.1	1	"	H 2781	1.8	4.8	2	"	H 2869	1.8	0.5	2
"	H 2549	1.1	0.3	*3*	"	18321	1.6	*2.4*	*3*	"	23360	1.9	*1.8*	*2*	"	H 2870	2.4	0.6	0
"	H 2550	1.9	0.3	*2*	"	20818	1.9	*2.2*	0	"	σ	2.1	*3.6*	3	"	H 2872	1.1	0.7	*1*
"	H 2552	1.4	1.3	0	"	22775	3.5	*2.0*	2	"	σ	1.7	*3.4*	*1*	"	H 2873	3.0	0.2	7
"	H 2569	*0.6*	2.1	1	"	σ	2.0	*3.6*	1	"	5136	5.5	*7.6*	2	"	H 2874	1.7	0.1	1
"	H 2593	2.0	3.1	1	"	σ	1.7	*3.4*	*1*	"	5310	4.0	*8.6*	1	"	H 2875	2.6	0.0	*1*
"	H 2696	*0.2*	2.0	*3*	"	5274	4.2	7.0	2	"	5685	4.1	*7.8*	*4*	"	H 2877	0.6	*0.0*	*2*
"	20818	1.8	*2.2*	0	"	5264	4.2	*6.7*	2	172	H 2771	*0.3*	*0.0*	*1*	"	H 2878	*0.4*	3.4	1
"	σ	2.0	*3.6*	1	"	4546	4.5	*7.0*	*2*	"	H 2770	0.9	*0.0*	*3*	"	H 2964	1.3	4.7	1
"	σ	1.7	*3.4*	*2*	167	H 2409	0.7	0.5	0	"	H 2769	0.3	*0.0*	3	"	H 2955	1.4	2.5	*1*
"	4672	3.1	*5.9*	*2*	"	H 2410	0.9	0.0	*2*	"	H 2783	*1.4*	*0.0*	3	"	23843	3.4	*2.1*	*2*
"	4610	6.0	*6.0*	1	"	H 2411	1.3	0.1	2	"	H 2784	3.1	0.0	R	"	σ	2.2	*3.6*	3
"	4304	5.2	*6.4*	1	"	H 2412	2.0	0.0	0	"	H 2786	1.1	0.0	*1*	"	σ	1.7	*3.4*	*2*
160	H 2208	*1.3*	0.1	1	"	H 2413	0.5	0.1	*3*	"	H 2831	0.8	0.0	*2*	"	σ	1.5	*3.4*	*4*
"	H 2210	1.8	*0.0*	6	"	H 2414	2.3	0.6	4	"	H 2832	*0.2*	0.1	0	"	4546	4.4	*7.0*	*1*
"	H 2211	2.3	0.0	1	"	H 2415	2.8	0.3	1	"	H 2834	1.0	0.4	1	"	5274	4.1	*7.0*	3
"	H 2212	2.4	0.8	*4*	"	H 2416	2.8	0.0	2	"	H 2835	1.1	*0.0*	1	"	5264	4.1	*6.7*	3
"	H 2213	1.1	0.5	1	"	H 2417	0.5	*0.0*	*3*	"	H 2836	1.2	0.2	1	175	H 2154	1.0	*0.0*	1
"	H 2214	1.3	0.9	*1*	"	H 2418	2.0	0.0	*2*	"	H 2197	1.5	3.5	*1*	"	H *2155*	*1.1*	0.0	5
"	H 2215	2.2	0.2	5	"	H 2419	2.1	0.0	*1*	"	H 2209	2.2	3.0	0	"	H 2157	0.4	0.1	*3*
"	H 2216	1.2	0.2	*5*	"	H 2420	1.0	0.1	1	"	H 2250	3.0	4.8	2	"	H 2158	1.2	0.1	0
"	H 2218	0.8	0.3	3	"	H 2348	2.2	2.5	0	"	22775	3.0	*2.0*	*1*	"	H *2195*	*1.1*	0.6	2
"	H 2219	0.7	0.0	*1*	"	H 2356	0.9	3.3	0	"	σ	1.8	*3.6*	1	"	H 2198	1.7	1.5	2
"	H 2221	1.3	0.0	*2*	"	H 2399	1.7	5.3	0	"	σ	1.9	*3.4*	2	"	H 2199	1.6	0.9	*3*
"	H 2222	0.7	*0.0*	0	"	16952	2.9	*2.1*	0	"	782	4.8	*5.3*	0	"	H 2200	2.9	*0.0*	6
"	H 2223	1.3	0.1	*3*	"	17440	1.5	*2.3*	*1*	"	700	3.4	*5.4*	0	"	H 2201	0.1	0.2	*5*
"	H 2356	0.6	3.3	*1*	"	18321	1.7	*2.4*	*2*	"	678	4.3	*5.6*	*2*	"	H 2202	1.5	0.0	0
"	H 2399	1.7	5.3	1	"	20104	1.7	*2.0*	*1*	173	H *2590*	*0.1*	0.1	0	"	H 2203	1.6	0.0	*1*
"	18722	1.8	*2.0*	*1*	"	20125	2.5	*2.3*	5	"	H 2592	2.5	0.0	1	"	H 2226	0.2	0.2	2
"	σ	1.7	*3.6*	*3*	"	σ	1.4	*3.6*	*5*	"	H 2594	*2.1*	0.3	*4*	"	H 2228	2.1	0.6	1
"	σ	1.9	*3.6*	*1*	"	σ	1.9	*3.5*	0	"	H 2595	*0.6*	*0.0*	*4*	"	H 2229	1.5	0.6	*3*
"	σ	1.9	*3.4*	0	"	σ	2.0	*3.4*	2	"	H 2596	2.2	0.2	2	"	H 2230	2.3	*0.0*	0
"	1114	5.0	*7.3*	2	"	700	3.5	*5.4*	1	"	H 2597	1.3	0.1	1	"	H 2107	2.4	3.0	0
"	1075	5.7	*7.7*	1	"	782	4.7	*5.3*	*1*	"	H 2598	1.3	0.6	*1*	"	H 2124	1.7	5.3	0
"	839	5.3	*7.1*	0	"	38	4.2	*5.2*	2	"	H 2599	2.6	0.1	*2*	"	H 2197	1.5	3.5	0
162	H 2400	*4.1*	0.2	1	171	H 2818	T	*0.1*	T	"	H 2600	2.0	0.1	4	"	18868	3.1	*2.0*	0
"	H 2401	1.9	0.0	0	"	H 2819	2.4	0.1	3	"	H 2601	*0.2*	*0.0*	0	"	σ	1.7	*3.6*	0
"	H 2402	2.0	0.6	*1*	"	H 2820	0.9	1.8	*1*	"	H 2569	*0.7*	2.1	*3*	"	σ	1.5	*3.4*	*2*
"	H 2403	0.3	0.9	2	"	H 2821	0.6	0.0	1	"	H 2696	0.2	2.0	*1*	"	σ	1.5	*3.4*	*2*
"	H 2404	0.7	1.3	1	"	H 2822	1.4	0.1	*4*	"	H 2717	2.1	4.3	3	"	1114	4.7	*7.3*	4

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
175	1075	5.1	*7.7*	*1*	182	H 2880	*1.1*	0.2	*3*	185	σ	1.4	*3.5*	*2*	193	H 2728	1.2	0.0	*1*
"	839	5.1	*7.1*	2	"	H 2881	2.3	0.0	3	"	σ	1.5	*3.4*	*1*	"	H 2729	1.8	*0.0*	2
178	H 2979	*0.6*	0.0	*1*	"	H 2882	0.8	0.0	1	"	σ	1.8	*3.3*	2	"	H 2730	1.1	0.4	1
"	H 2980	2.1	0.6	*1*	"	H 2883	1.9	0.0	2	"	6584	5.1	*12.3*	1	"	H 2731	1.3	0.2	*2*
"	H 2981	1.3	0.2	*3*	"	H 2884	0.9	*0.0*	*2*	"	6388	4.2	*11.1*	1	"	H 2732	0.8	*0.0*	2
"	H 2982	1.7	0.2	0	"	H 2885	*0.9*	0.5	*2*	"	6928	4.8	*11.1*	0	"	H 2733	1.5	0.3	0
"	H 2983	2.3	1.0	3	"	H 2886	2.8	0.0	2	186	H 2425	0.9	0.2	*3*	"	H 2734	1.0	*0.1*	0
"	H 2984	1.1	0.3	0	"	H 2888	2.7	0.0	2	"	H 2426	0.5	1.3	5	"	H 2740	1.7	0.2	*2*
"	H 2987	1.4	0.3	0	"	H 2889	2.2	0.1	4	"	H 2427	1.0	*0.0*	2	"	H 2696	0.2	2.0	0
"	H 2988	2.0	0.2	4	"	H 2813	0.8	3.1	0	"	H 2428	0.3	0.0	*4*	"	H 2717	1.8	4.3	*1*
"	H 2989	0.9	1.2	0	"	H 2955	1.1	2.5	0	"	H 2429	0.7	0.0	n	"	19284	0.1	*2.1*	0
"	H 2990	1.6	0.0	*3*	"	23027	4.2	*2.8*	4	"	H 2430	2.0	0.0	4	"	19776	2.6	*2.9*	0
"	H 2569	*1.2*	2.1	*4*	"	σ	2.0	*3.6*	1	"	H 2431	3.8	*0.0*	2	"	20034	1.6	*2.0*	1
"	H 2593	1.5	3.1	*2*	"	σ	1.6	*3.4*	*3*	"	H 2432	1.1	1.1	*3*	"	20818	1.6	*2.2*	*1*
"	H 2781	1.4	4.8	5	"	σ	1.9	*3.3*	0	"	H 2433	*0.9*	0.4	*3*	"	21419	4.0	*2.2*	2
"	24819	1.4	*1.7*	*4*	"	2141	5.9	*9.0*	3	"	H 2434	1.9	0.3	2	"	σ	1.8	*3.5*	1
"	σ	1.5	*3.6*	*1*	"	2278	4.5	*9.0*	*6*	"	H 2399	1.4	5.3	2	"	σ	1.7	*3.3*	0
"	σ	1.8	*3.4*	2	"	2205	5.1	*8.7*	1	"	H 2460	2.1	2.5	1	"	2202	3.6	*6.2*	*2*
"	σ	1.5	*3.3*	*1*	183	H 2959	0.2	0.9	7	"	H 2510	0.4	3.6	*2*	"	2151	4.8	*5.9*	1
"	7601	3.4	*5.6*	3	"	H 2961	1.2	0.1	0	"	19284	0.1	*2.1*	*2*	"	2928	4.1	5.4	*2*
"	7097	2.9	*6.6*	3	"	H 2962	*1.3*	0.0	3	"	σ	1.6	*3.5*	*4*	196	H 3035	0.6	*0.0*	0
179	H 2186	0.5	0.0	*2*	"	H 2963	0.5	0.2	7	"	σ	2.0	*3.4*	1	"	H 3036	*1.0*	*0.1*	3
"	H 2187	1.5	0.0	*2*	"	H 2965	1.6	0.1	*1*	"	2205	5.7	*8.7*	4	"	H 3037	*0.1*	0.0	1
"	H 2190	2.2	0.4	1	"	H 2970	1.6	0.1	0	"	2278	5.3	*9.0*	*1*	"	H 3038	1.5	0.0	0
"	H 2253	0.8	1.1	*2*	"	H 2972	*0.1*	*0.0*	*5*	"	2647	5.6	*8.2*	3	"	H 3039	0.6	*0.0*	2
"	H 2254	1.7	0.5	*8*	"	H 2974	1.7	0.4	*4*	192	H 2855	1.8	0.0	2	"	H 3040	1.1	*0.0*	*5*
"	H 2255	0.9	0.6	*5*	"	H 2878	*0.9*	3.4	*2*	"	H 2856	2.1	0.2	4	"	H 3041	2.2	1.0	R
"	H 2256	1.9	0.0	4	"	H 2955	1.4	2.5	2	"	H 2857	1.2	0.0	*1*	"	H 3042	0.8	0.2	*3*
"	H 2257	1.6	0.0	2	"	H 2964	1.2	4.7	0	"	H 2858	1.7	0.5	1	"	H 3043	1.3	0.4	*5*
"	H 2421	2.0	0.3	3	"	23360	0.9	*1.8*	n	"	H 2859	0.4	0.1	*2*	"	H 3044	0.5	0.1	0
"	H 2422	1.2	*0.0*	1	"	σ	2.1	*3.5*	4	"	H 2860	2.0	0.0	1	"	H 3045	*0.2*	0.1	3
"	H 2423	1.4	0.1	7	"	σ	1.6	*3.4*	*1*	"	H 2861	0.9	0.2	*6*	"	H 3046	1.4	*0.1*	0
"	H 2424	2.3	*0.0*	*3*	"	σ	1.7	*3.3*	0	"	H 2862	2.1	0.8	1	"	H 2955	1.2	2.5	*1*
"	H 2878	*0.7*	3.4	*1*	"	5136	5.7	*7.6*	2	"	H 2863	1.8	1.1	*3*	"	H 2964	1.0	4.7	*2*
"	H 2955	1.1	2.5	*2*	"	5685	4.5	*7.8*	*1*	"	H 2864	1.9	0.0	3	"	H 3081	1.3	3.0	2
"	H 2964	1.3	4.7	1	"	5310	3.8	*8.6*	*3*	"	H 2865	1.0	1.5	0	"	20034	1.5	*2.0*	*1*
"	23696	2.0	*2.4*	5	185	H 2991	2.4	1.0	4	"	H 2813	0.7	3.1	*2*	"	20818	1.6	*2.2*	*1*
"	σ	2.0	*3.6*	2	"	H 2992	1.2	0.1	*1*	"	H 2878	*0.6*	3.4	1	"	21419	3.8	*2.2*	0
"	σ	1.4	*3.3*	*3*	"	H 2993	2.2	0.9	1	"	H 2955	1.3	2.5	1	"	22180	2.3	*2.6*	1
"	3172	4.5	*6.0*	5	"	H 2995	1.3	*0.0*	1	"	22858	3.7	*2.0*	3	"	24468	2.7	*2.3*	2
"	3378	5.1	*5.9*	1	"	H 2996	1.3	*0.0*	0	"	24176	1.3	*2.9*	*1*	"	σ	1.8	*3.5*	1
"	3451	5.2	*6.3*	*1*	"	H 2997	0.4	0.6	*4*	"	σ	1.6	*3.5*	*1*	"	σ	1.7	*3.4*	0
180	H 2510	0.7	3.6	A	"	H 2998	1.3	0.0	1	"	σ	1.7	*3.3*	0	"	σ	1.6	*3.3*	*1*
"	19809	4.2	*2.6*	2	"	H 2999	1.4	0.0	3	"	4672	3.1	*5.9*	2	"	7601	3.1	*5.6*	*2*
"	σ	2.0	*3.5*	1	"	H 3000	1.1	0.3	0	"	5310	3.6	*8.6*	*1*	"	7097	2.7	*6.6*	*1*
"	σ	1.5	*3.4*	*4*	"	H 3001	0.8	0.2	*4*	"	5685	3.9	*7.8*	*4*	"	6422	3.4	*7.5*	0
"	2202	3.9	*6.2*	*1*	"	H 2955	1.2	2.5	0	193	H 2723	1.4	0.5	0	197	H 2651	0.4	*0.0*	*2*
"	2151	4.8	*5.9*	*1*	"	H 2964	1.3	4.7	0	"	H 2725	2.0	0.6	*5*	"	H 2652	1.0	0.5	4
"	1800	2.8	*6.1*	4	"	H 3081	1.1	3.0	1	"	H 2726	*1.7*	0.0	*1*	"	H 2653	1.5	*0.0*	0
182	H 2879	*1.6*	0.1	*7*	"	23954	3.0	*1.9*	*1*	"	H 2727	3.9	0.1	5	"	H 2654	1.3	*0.0*	0

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
197	H 2655	0.0	*0.0*	*2*	202	H 3082	2.2	0.7	4	204	H 2878	*0.3*	3.4	3	204	σ	1.8	*3.3*	0
"	H 2656	1.6	*0.0*	2	"	H 3083	0.9	*0.0*	*5*	"	H 2955	1.4	2.5	1	"	σ	1.7	*3.3*	*1*
"	H 2658	0.6	0.7	2	"	H 3086	1.9	*0.0*	*3*	"	20152	4.0	*2.1*	0	"	5219	3.2	*10.8*	*4*
"	H 2669	1.7	0.7	1	"	H 3088	1.1	*0.0*	*5*	"	20423	4.3	*1.7*	*1*	"	5090	3.2	*13.8*	*8*
"	H 2670	0.7	*0.0*	0	"	H 3119	0.7	*0.0*	4	"	Z 2394	5.1	*1.7*	0	"	6105	2.7	*9.4*	*7*
"	H 2671	*1.2*	*0.0*	*2*	"	H 3128	1.2	*0.0*	*2*	"	20624	3.9	*1.7*	*4*	206	H 3258	*1.0*	*0.0*	*2*
"	H 2672	1.3	0.1	0	"	H 3130	1.9	*0.0*	5	"	21385	4.8	*3.3*	2	"	H 3257	1.8	*0.0*	1
"	H 2673	*0.2*	0.3	*2*	"	H 2569	*0.5*	2.1	3	"	21419	3.7	*2.2*	*1*	"	H 3256	1.4	0.0	1
"	H 2569	*0.5*	2.1	1	"	H 2593	1.5	3.1	*3*	"	21889	2.5	*2.0*	*5*	"	H 3252	*0.4*	*0.0*	0
"	H 2593	2.0	3.1	1	"	H 2813	0.9	3.1	0	"	21937	3.1	*1.9*	*2*	"	H 3260	*0.8*	0.0	*1*
"	H 2696	*0.1*	2.0	*3*	"	20818	1.9	*2.2*	2	"	21943	3.9	*2.1*	0	"	H 3261	1.8	*0.0*	3
"	20034	1.5	*2.0*	*2*	"	σ	1.7	*3.4*	0	"	21950	5.0	*2.1*	0	"	H 3263	1.2	*0.0*	0
"	20125	1.8	*2.3*	*1*	"	σ	1.8	*3.3*	1	"	22037	4.6	*2.1*	1	"	H 3270	*1.2*	*0.0*	0
"	21419	4.0	*2.2*	1	"	σ	1.8	*3.3*	1	"	22253	2.3	*2.1*	*1*	"	H 3277	1.2	0.0	2
"	22180	2.2	*2.6*	0	"	5090	3.8	*13.8*	1	"	22775	3.2	*2.0*	0	"	H 3278	0.9	*0.0*	*6*
"	25227	3.1	*2.1*	*1*	"	5219	3.3	*10.8*	0	"	22858	3.3	*2.0*	*1*	"	H 3081	1.3	3.0	2
"	σ	1.9	*3.5*	2	"	6105	2.8	*9.4*	*4*	"	22269	5.8	*1.9*	3	"	H 3126	1.1	3.3	0
"	σ	1.5	*3.4*	*2*	203	H 2554	1.9	0.4	6	"	22090	2.5	*2.8*	*1*	"	H 3307	*0.8*	4.0	*2*
"	σ	1.7	*3.3*	0	"	H 2556	2.3	0.0	2	"	23025	..	*2.8*	.	"	σ	1.8	*3.4*	1
"	4546	4.4	*7.0*	1	"	H 2557	0.9	0.0	*3*	"	23027	3.5	*2.8*	*2*	"	σ	1.7	*3.3*	0
"	4672	3.0	*5.9*	2	"	H 2558	2.0	0.6	1	"	23192	2.8	*2.0*	0	"	σ	1.6	*3.3*	*1*
"	5264	3.5	*6.7*	*1*	"	H *2559*	1.3	0.4	3	"	23360	1.8	*1.8*	*2*	"	6907	3.4	*13.6*	1
201	H 3087	1.3	0.2	*2*	"	H 2561	0.6	0.5	2	"	23429	4.0	*1.8*	3	"	7097	2.8	*6.6*	*1*
"	H 3089	1.1	0.0	1	"	H 2562	2.1	0.9	*1*	"	23615	3.8	*2.2*	0	"	8667	3.5	*13.2*	2
"	H 3090	*0.6*	0.0	0	"	H 2563	1.1	0.1	*4*	"	23696	2.7	*2.4*	2	207	H 3166	1.0	1.6	*1*
"	H 3091	1.1	0.2	3	"	H 2567	1.1	*0.0*	n	"	23843	3.7	*2.1*	4	"	H *3167*	0.9	0.6	5
"	H 3093	0.6	0.5	2	"	H 2568	1.1	0.5	n	"	23954	3.3	*1.9*	0	"	H *3169*	0.5	0.6	1
"	H 3151	0.5	0.0	*3*	"	H 2570	2.3	0.3	0	"	24153	2.4	*1.9*	1	"	H 3171	*0.1*	0.2	0
"	H 3154	0.6	0.0	*5*	"	H 2569	*0.7*	2.1	0	"	24176	1.6	*2.9*	1	"	H 3272	0.7	0.5	*3*
"	H 3156	1.7	*0.0*	0	"	" "	*0.7*	2.1	0	"	24354	6.0	*2.9*	0	"	H 3081	1.4	3.0	4
"	H 3157	*0.6*	*0.0*	1	"	H 2593	1.8	3.1	0	"	24456	4.2	*2.0*	4	"	H 3126	1.0	3.3	*1*
"	H 3159	1.1	*0.0*	*5*	"	H 2696	0.2	2.0	1	"	24468	2.6	*2.3*	0	"	H 3307	*0.5*	4.0	1
"	H 3164	2.0	0.0	2	"	20818	2.0	*2.2*	1	"	24595	3.2	*1.7*	0	"	24176	1.2	*2.9*	*2*
"	H 3165	2.1	0.0	3	"	σ	1.9	*3.4*	0	"	24819	1.9	*1.7*	1	"	σ	1.9	*3.4*	2
"	H 2460	2.3	2.5	0	"	σ	1.4	*3.3*	*5*	"	24659	4.3	*2.6*	2	"	σ	1.8	*3.3*	1
"	H 2510	0.9	3.6	0	"	σ	1.5	*3.3*	*4*	"	25045	4.7	*2.5*	4	"	5090	3.7	*13.8*	2
"	20034	1.8	*2.0*	0	"	7097	2.8	*6.6*	*1*	"	25077	2.2	*1.9*	0	"	5219	3.1	*10.8*	*1*
"	24176	1.4	*2.9*	*2*	"	8667	3.5	*13.2*	5	"	25047	5.6	*1.9*	1	"	6105	3.1	*9.4*	0
"	σ	1.9	*3.5*	0	"	8888	5.2	*12.7*	5	"	25227	3.2	*2.1*	1	208	H 2810	*0.6*	0.6	*3*
"	σ	1.7	*3.3*	*1*	204	H 2838	*1.1*	0.1	*1*	"	25167	3.9	*2.2*	2	"	H 2811	2.2	0.4	4
"	σ	1.7	*3.3*	*1*	"	H 2837	1.3	0.2	2	"	25370	2.8	*2.2*	2	"	H 2812	1.7	0.1	1
"	6105	2.8	*9.4*	0	"	H 2842	0.6	0.0	0	"	25721	3.6	*2.2*	1	"	H 2814	1.2	0.1	*3*
"	6907	3.5	*13.6*	5	"	H 2844	0.0	0.4	3	"	25412	3.5	*2.2*	*1*	"	H 2815	2.4	0.0	3
"	7097	2.8	*6.6*	*1*	"	H 2845	1.5	0.2	2	"	25992	4.1	*2.4*	1	"	H 2816	1.9	0.8	0
202	H 3062	*0.2*	*0.0*	1	"	H 2846	2.1	1.8	0	"	25868	3.9	*1.9*	2	"	H 2852	2.2	0.1	2
"	H 3063	1.0	*0.0*	*5*	"	H 2847	1.5	0.4	5	"	26386	4.2	*1.9*	2	"	H 2853	1.8	0.1	*3*
"	H 3064	2.1	0.4	6	"	H 2848	1.6	0.3	*1*	"	26415	2.4	*1.9*	*2*	"	H 2855	1.7	0.0	*2*
"	H 3065	0.5	0.4	0	"	H 2849	0.8	0.1	1	"	26929	2.2	*1.9*	*1*	"	H 2890	0.8	0.4	*1*
"	H 3067	2.2	0.7	*1*	"	H 2850	2.0	0.4	*6*	"	25488	2.7	*1.8*	0	"	H 2891	0.3	0.1	n
"	H 3084	*1.6*	*0.1*	0	"	H 2510	0.6	3.6	*3*	"	σ	1.8	*3.5*	0	"	H 2892	4.5	0.7	R

J. D.	Design.	Obs. Br.	Path.	Res.
208	H 2766	*1.3*	2.5	*2*
“	H 2781	1.5	4.8	3
“	H 2813	1.0	3.1	*2*
“	22180	2.1	*2.6*	*3*
“	σ	1.7	*3.4*	*1*
“	σ	1.8	*3.3*	0
“	σ	1.5	*3.3*	*3*
“	5090	3.5	*13.8*	5
“	5219	2.8	*10.8*	*1*
“	7097	3.0	*6.6*	1
210	H 3288	2.0	1.1	3
“	H 3289	1.1	1.7	*1*
“	H 3290	2.8	0.5	0
“	H 3291	0.2	0.6	*2*
“	H 3292	1.5	0.2	*4*
“	H 3293	1.1	0.1	*2*
“	H 3294	1.4	0.2	*2*
“	H 3300	0.7	0.2	2
“	H 3299	2.5	0.3	4
“	H 3298	1.4	0.1	2
“	H 3307	*0.6*	4.0	*1*
“	H 3389	1.1	5.0	0
“	H 3447	0.5	5.4	1
“	22180	2.2	*2.6*	*1*
“	σ	1.9	*3.4*	1
“	σ	1.7	*3.3*	*1*
“	σ	1.6	*3.3*	*2*
“	5219	3.4	*10.8*	1
“	5090	3.8	*13.8*	2
“	6105	3.5	*9.4*	3
213	H 2660	1.2	0.2	*3*
“	H 2661	1.6	1.7	0
“	H 2662	*0.2*	*0.0*	3
“	H 2663	2.4	0.1	*2*
“	H 2664	2.2	0.2	3
“	H 2665	1.0	0.8	*1*
“	H 2666	*0.4*	0.1	1
“	H 3315	0.9	0.0	2
“	H 3317	1.5	0.0	4
“	H 3319	*0.3*	*0.0*	3
“	H 3322	1.1	*0.0*	*5*
“	H 3325	1.5	0.0	0
“	H 2569	*1.0*	2.1	*2*
“	H 2593	1.8	3.1	0
“	H 3307	*0.6*	4.0	2
“	24176	1.5	*2.9*	1
“	σ	1.5	*3.4*	*2*
“	σ	1.5	*3.3*	*2*
“	6907	4.1	*13.6*	2
“	7097	3.1	*6.6*	0

J. D.	Design.	Obs. Br.	Path.	Res.
213	8667	4.1	*13.2*	2
217	H 3134	*0.5*	0.0	*4*
“	H 3133	1.1	0.0	*1*
“	H 3143	1.7	0.0	0
“	H 3144	1.6	*0.0*	*3*
“	H 3149	2.1	*0.0*	0
“	H 3148	2.4	0.7	2
“	H 3147	*3.7*	0.6	1
“	H 3146	1.4	0.4	2
“	H 3081	1.2	3.0	0
“	H 3126	1.1	3.3	*1*
“	22180	1.9	*2.6*	*4*
“	σ	1.7	*3.4*	*1*
“	σ	1.5	*3.4*	*3*
“	σ	1.8	*3.3*	0
“	5219	3.1	*10.8*	2
“	5090	3.5	*13.8*	5
218	H 2674	*1.5*	*0.0*	2
“	H 2676	1.5	*0.0*	1
“	H 2677	1.3	0.0	*1*
“	H 2684	0.8	*0.0*	*4*
“	H 2688	0.2	0.0	3
“	H 2689			
“	H *2690*	*1.7*	*0.0*	*4*
“	H 2695	2.2	0.0	0
“	H 2697	2.3	0.0	*1*
“	H 2698	0.0	*0.0*	1
“	H 2700	0.1	*0.0*	*3*
“	H 2699	2.1	*0.0*	1
“	H 2569	*0.8*	2.1	*2*
“	H 2593	1.9	3.1	*1*
“	H 2696	0.4	2.0	2
“	24176	1.5	*2.9*	0
“	σ	1.8	*3.4*	0
“	σ	1.6	*3.3*	*2*
“	σ	1.9	*3.4*	1
“	6907	3.4	*13.6*	1
“	7097	2.9	*6.6*	0
“	8667	3.4	*13.2*	2
220	H 3199	*2.2*	*0.0*	0
“	H 3198	1.0	*0.0*	4
“	H 3200	0.4	*0.0*	*3*
“	H 3196	0.4	*0.0*	*1*
“	H 3195	1.3	*0.0*	*2*
“	H 3126	0.8	3.3	*2*
“	H 3307	*0.5*	4.0	2
“	σ	1.7	*3.4*	1
“	σ	1.6	*3.3*	0
“	σ	1.7	*3.3*	1
“	8667	3.3	*13.2*	*3*

J. D.	Design.	Obs. Br.	Path.	Res.
220	8888	5.3	*12.7*	1
221	H 2667	1.3	0.6	0
“	H 2668	1.3	*0.0*	3
“	H 2679	1.3	0.5	*2*
“	H 2681	1.2	0.0	*4*
“	H 2685	1.2	0.4	3
“	H 2687	0.8	0.2	2
“	H 3002	1.6	*0.0*	2
“	H 3005	*1.4*	0.0	*5*
“	H 3006	0.2	*0.0*	0
“	H 3499	1.9	1.0	1
“	H 3500	1.1	0.2	2
“	H 2955	1.2	2.5	*1*
“	H 2964	1.3	4.7	0
“	H 3081	1.3	3.0	2
“	24176	1.1	*2.9*	*5*
“	σ	1.8	*3.4*	0
“	σ	1.7	*3.4*	*1*
“	σ	1.8	*3.4*	0
“	6105	3.9	*9.4*	5
“	6907	3.8	*13.6*	*1*
“	7097	3.3	*6.6*	2
222	H 2694	0.8	0.9	4
“	H 2693	1.4	1.4	*6*
“	H 2692	1.4	0.5	*2*
“	H 2893	0.5	0.5	*1*
“	H 2294	2.0	1.1	4
“	H 2898	1.5	0.6	*1*
“	H 2896	1.3	0.3	*2*
“	H 2696	0.0	2.0	0
“	H 2813	0.9	3.1	*1*
“	22180	2.4	*2.6*	2
“	σ	1.8	*3.4*	1
“	σ	1.9	*3.3*	2
“	5090	3.6	*13.8*	*1*
“	6105	2.9	*9.4*	*3*
223	H 2876	1.9	1.3	1
“	H 2895	*0.8*	*0.0*	*5*
“	H 2897	*0.4*	*0.0*	0
“	H 2899	*1.6*	*0.0*	*2*
“	H 2900	0.1	0.2	*3*
“	H 3048	*0.6*	0.3	1
“	H 3047	0.3	0.4	*4*
“	H 3049	1.0	0.3	5
“	H 3050			
“	H 3503	1.3	0.0	1
“	H 3514	*1.1*	0.0	3
“	H 2878	*0.4*	3.4	1
“	H 3498	1.3	3.0	*1*
“	H 3506	0.9	4.1	0

J. D.	Design.	Obs. Br.	Path.	Res.
223	24176	1.2	*2.9*	*2*
“	σ	1.9	*3.4*	1
“	σ	1.7	*3.3*	0
“	σ	1.7	*3.4*	*1*
“	6105	4.0	*9.4*	*1*
“	7097	3.9	*6.6*	4
“	11598	N	*13.6*	N
225	H 2902	0.9	0.3	0
“	H 2904	0.7	0.2	0
“	H 2905	1.1	0.4	2
“	H 2952	1.3	0.2	1
“	H 2966	1.1	0.2	*3*
“	H *2967*	1.7	0.0	5
“	H *3026*	0.2	0.2	2
“	H 3051	*0.2*	0.2	*1*
“	H 3033	1.0	0.2	5
“	H 3516	1.3	*0.0*	*1*
“	H 3521	0.8	0.0	*3*
“	H 3535	1.2	*0.0*	*2*
“	H 2878	*0.4*	3.4	2
“	H 2964	1.4	4.7	1
“	H 3506	0.6	4.1	*3*
“	24176	1.4	*2.9*	0
“	σ	1.9	*3.4*	2
“	σ	1.7	*3.3*	0
“	σ	1.8	*3.4*	1
“	6105	3.3	*9.4*	*2*
“	7097	3.3	*6.6*	2
“	11598	3.8	*13.6*	*3*
227	H 2929	0.8	0.0	*3*
“	H 2935	1.7	0.0	2
“	H 2936	1.5	0.3	2
“	H 2937	*1.3*	1.3	*2*
“	H 2939	2.0	0.2	*1*
“	H 3380	0.9	0.0	3
“	H 3381	0.2	0.0	2
“	H 3386	1.1	0.0	*2*
“	H 3390	1.9	*0.0*	0
“	H 3391	1.7	*0.0*	*2*
“	H 2878	*0.5*	3.4	0
“	H 2955	1.1	2.5	*3*
“	H 3389	1.3	5.0	2
“	24176	1.6	*2.9*	0
“	σ	1.6	*3.4*	*2*
“	σ	1.8	*3.3*	0
“	7097	3.3	*6.6*	2
“	8667	4.0	*13.2*	2
228	H 2976	*1.2*	0.3	*8*
“	H 2975	0.8	1.4	n
“	H 2977	0.2	0.2	n

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res	J. D.	Design.	Obs. Br.	Path.	Res.
228	H 2978	2.1	0.6	*2*	235	H 3510	2.5	0.4	3	241	H 3172	0.1	0.5	*1*	245	H 3896	2.5	0.0	p
"	H 3271	1.1	0.4	1	"	H 3513	1.4	0.5	6	"	H 3173	1.5	0.5	*3*	"	27498	2.3	*2.2*	*2*
"	H 3272	1.3	0.5	0	"	H 3529	1.2	0.5	*2*	"	H 3418	*1.7*	0.1	*4*	"	27666	5.2	*2.2*	*1*
"	H 3273	2.6	0.2	3	"	H 3668	0.7	0.3	0	"	H 3421	*0.8*	0.2	*4*	"	27799	3.6	*1.8*	*2*
"	H 3275	3.2	0.5	5	"	H 3667	2.1	0.3	0	"	H 3423	1.6	0.1	0	"	28067	..	*3.0*	.
"	H 3276	2.9	0.4	2	"	H 3676	0.7	0.3	*4*	"	H 3765	1.4	0.1	6	"	28467	..	*3.0*	.
"	H 3280	3.7	0.3	2	"	H 3679	1.1	0.1	*2*	"	H 3772	2.6	0.1	3	"	28199	4.6	*1.8*	*1*
"	H 3281	3.3	0.3	R	"	H 3680	1.2	0.1	*1*	"	H 3773	2.0	0.2	5	"	28217	3.8	*1.7*	1
"	H 2955	1.1	2.5	*3*	"	H 2955	1.4	2.5	*3*	"	H 3778	1.9	0.3	2	"	28264	3.7	*1.7*	*1*
"	H 2964	1.5	4.7	4	"	H 3447	1.2	5.4	3	"	H 3785	1.4	0.3	1	"	28468	4.5	*1.8*	*1*
"	σ	1.7	*3.4*	*2*	"	H 3498	1.8	3.0	*1*	"	H 2878	*0.1*	3.4	6	"	*28676*	3.5	*1.8*	0
"	σ	1.8	*3.3*	*1*	"	27836	1.7	*1.8*	*3*	"	H 3307	*0.9*	4.0	*2*	"	28622	3.9	*1.9*	*3*
"	σ	1.8	*3.3*	*1*	"	σ	2.0	*3.4*	1	"	H 3757	*1.7*	2.5	*3*	"	28573	5.5	*2.2*	0
"	6105	3.4	*9.4*	5	"	σ	1.9	*3.3*	0	"	27956	1.7	*1.9*	*1*	"	28704	5.3	*2.2*	2
"	7097	3.1	*6.6*	1	"	σ	1.5	*3.4*	*4*	"	σ	2.1	*3.4*	3	"	28756	3.9	*2.2*	1
230	H 2857	1.6	0.0	0	"	7097	3.2	*6.6*	1	"	σ	1.6	*3.3*	*2*	"	28938	3.5	*2.2*	*1*
"	H 2864	2.0	0.0	1	"	11598	4.1	*13.6*	6	"	σ	1.7	*3.4*	*1*	"	σ	1.8	*3.3*	1
"	H 2860	2.7	0.0	5	236	H 2807	*1.2*	0.4	*2*	"	8667	3.5	*13.2*	3	"	σ	1.4	*3.4*	*3*
"	H 3370	1.5	*0.0*	*3*	"	H 2810	*0.8*	0.6	*4*	"	11598	3.4	*13.6*	1	"	11598	3.7	*13.6*	p
"	H 3373	0.4	*0.0*	*2*	"	H 3114	3.2	0.3	4	"	12688	2.1	*6.2*	*1*	"	12688	2.3	*6.2*	7
"	H 3307	*1.2*	4.0	A	"	H 3115	2.4	0.3	3	244	H 2868	*1.5*	*0.0*	1	252	H 156	1.7	*0.0*	1
"	27836	1.5	*1.8*	*3*	"	H 3125	2.1	0.2	5	"	H 2867	1.2	0.0	*2*	"	H 157	2.9	*0.0*	*1*
"	27956	1.4	*1.9*	*3*	"	H 3113	1.5	0.3	*2*	"	H 2874	1.1	0.1	*2*	"	H 158	0.4	*0.1*	5
"	σ	1.9	*3.4*	4	"	H 3453	1.3	0.1	0	"	H 3068	1.8	*0.0*	*2*	"	H 225	0.8	*0.0*	*3*
"	σ	1.7	*3.4*	2	"	H 3454	1.3	0.1	*1*	"	H 3069	1.6	*0.0*	2	"	H 230	1.2	*0.0*	*4*
"	σ	1.7	*3.4*	2	"	H 3462	1.5	0.1	3	"	H 3701	1.0	0.9	5	"	H 236	1.2	*0.0*	3
231	H 2903	0.7	*0.0*	*5*	"	H 3599	0.2	0.5	*5*	"	H 3721	0.0	0.9	n	"	H 184	1.8	4.4	A
"	H 2909	0.0	*0.0*	*1*	"	H 3600	0.4	0.1	*2*	"	H *3717*	0.5	0.6	*4*	"	1738	2.0	*2.2*	0
"	H 2910	1.5	0.2	1	"	H 3126	0.7	3.3	*4*	"	H 3963	1.8	*0.0*	4	"	σ	2.1	*3.6*	4
"	H 2911	1.8	0.1	4	"	H 3307	*1.0*	4.0	*3*	"	H 3978	0.8	0.0	2	"	σ	1.7	*3.7*	0
"	H 3052	1.4	0.0	1	"	H 3594	0.0	2.6	*3*	"	H 3977	2.0	*0.0*	*4*	"	17440	2.1	*6.9*	1
"	H 3056	1.3	0.0	0	"	24176	1.7	*2.9*	1	"	H 3081	1.3	3.0	3	"	18321	1.9	*6.2*	*3*
"	H 3059	1.3	0.0	0	"	σ	2.0	*3.4*	2	"	H 3656	*0.5*	2.4	*1*	253	H 3353	2.2	0.1	1
"	H 3522	1.3	*0.0*	*3*	"	σ	1.7	*3.3*	*1*	"	H 3969	1.7	5.5	*2*	"	H 3357	0.4	0.2	*2*
"	H 3537	0.5	*0.0*	4	"	σ	1.6	*3.4*	*2*	"	29042	2.9	*3.4*	1	"	H 3359	1.3	0.1	*3*
"	H 3538	*0.7*	*0.0*	*1*	"	8667	3.3	*13.2*	1	"	σ	1.8	*3.4*	1	"	H 3356	1.9	0.0	3
"	H 2878	*0.3*	3.4	1	"	11598	3.2	*13.6*	*1*	"	σ	1.8	*3.3*	1	"	H 3456	1.1	*0.0*	2
"	H 2955	1.4	2.5	*1*	237	H 2859	0.9	0.1	2	"	σ	1.8	*3.4*	1	"	H 3459	0.7	*0.0*	*2*
"	27836	1.8	*1.8*	1	"	H 2861	1.3	0.2	*3*	"	σ	1.4	*3.4*	*3*	"	H 4093	*0.3*	*0.0*	2
"	27836	1.7	*1.8*	0	"	H 2862	2.2	0.8	2	"	7097	3.0	*6.6*	2	"	H 4094	1.9	*0.0*	*1*
"	σ	1.9	*3.4*	2	"	H 2878	*0.4*	3.4	3	"	12688	2.2	*6.2*	1	"	H 3498	1.5	3.0	1
"	σ	1.7	*3.3*	0	"	H 3126	0.7	3.3	*3*	245	H 3419	*0.6*	0.8	1	"	H 3757	*1.6*	2.5	*1*
"	σ	1.9	*3.4*	2	"	Z 695	4.7	*1.7*	0	"	H 3420	2.0	0.4	8	"	27836	1.7	*1.8*	*2*
"	7097	2.8	*6.6*	*3*	"	Z 1809	4.4	*1.7*	*1*	"	H 3424	1.2	0.2	0	"	27956	1.8	*1.9*	0
235	H 3007	0.0	0.3	1	"	σ	1.5	*3.4*	*2*	"	H 3433	1.4	0.2	2	"	σ	1.6	*3.3*	*2*
"	H 3010	0.4	0.3	*2*	"	σ	1.9	*3.3*	2	"	H 3884	1.6	0.0	*4*	"	σ	1.7	*3.4*	*1*
"	H 3016	1.8	0.5	*2*	"	σ	1.7	*3.3*	0	"	H 3885	1.3	0.1	7	"	σ	1.5	*3.5*	*3*
"	H 3024	1.6	0.4	*5*	"	6105	3.2	*9.4*	3	"	H 3886	1.9	0.1	1	"	8667	3.4	*13.2*	5
"	H 3032	2.0	0.4	*4*	"	7097	2.9	*6.6*	1	"	H 3891	1.9	0.1	*1*	"	12688	2.3	*6.2*	2
"	H 3504	1.6	0.5	1	241	H 2895	0.5	*0.0*	1	"	H 3899	*0.5*	0.0	1	260	H 3264	1.5	0.1	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
260	H 3265	2.4	0.2	5	272	H 261	0.1	0.7	*9*	275	5136	4.5	*2.2*	0	282	H 333	*1.7*	0.2	3
"	H 3266	2.4	0.1	2	"	H 264	1.0	0.5	*2*	"	5264	3.3	*2.3*	1	"	H 334	1.0	0.5	2
"	H 3267	1.6	0.3	*2*	"	H 654	1.6	0.0	0	"	5274	3.1	*2.3*	*1*	"	H 336	*0.7*	0.4	2
"	H 3284	1.2	0.0	*3*	"	H 660	0.6	*0.0*	2	"	5292	4.0	*2.7*	0	"	H 591	*0.9*	1.0	*1*
"	H 3285	2.6	0.0	0	"	H 653	*1.2*	*0.0*	0	"	5310	2.8	*2.1*	0	"	H 594	0.9	0.4	*1*
"	H 3655	0.7	0.5	*2*	"	H 1065	*0.2*	*0.0*	3	"	5685	3.8	*2.2*	2	"	H 595	1.6	0.2	2
"	H 3657	1.7	1.0	0	"	H 1068	*1.7*	0.0	3	"	*5720*	3.9	*1.8*	0	"	H 597	2.1	0.9	0
"	H 3658	2.2	0.1	*3*	"	H 219	*1.3*	2.1	2	"	5742	4.0	*1.7*	1	"	H 1251	0.1	*0.0*	*1*
"	H 3656	*0.3*	2.4	A	"	H 612	0.0	3.2	*2*	"	6276	3.7	*1.8*	0	"	H 1253	0.7	*0.0*	0
"	29624	1.3	*2.1*	R	"	H 876	*0.2*	2.2	*1*	"	6293	3.8	*1.7*	*1*	"	H 1254	0.9	*0.0*	*1*
"	σ	1.7	*3.3*	*1*	"	31530	2.1	*3.0*	4	"	6388	2.6	*1.9*	1	"	H 516	1.1	3.2	2
"	σ	1.9	*3.3*	1	"	32200	0.9	*2.0*	*2*	"	6422	2.7	*2.2*	*1*	"	H 607	1.4	6.2	6
"	σ	1.8	*3.4*	0	"	32303	1.2	*2.0*	*4*	"	6584	3.2	*1.8*	1	"	H 938	1.2	2.6	7
"	σ	1.8	*3.4*	0	"	78	1.0	*2.1*	*2*	"	6879	4.3	*1.8*	*1*	"	6105	1.9	*2.0*	*1*
262	H 3693	0.8	0.0	0	"	18374	3.4	*2.1*	0	"	6907	1.6	*1.8*	0	"	σ	1.8	*3.7*	1
"	H 3695	1.8	0.1	3	"	1800	1.5	*2.4*	*2*	"	6928	3.1	*1.9*	*1*	"	σ	1.7	*3.8*	0
"	H 3700	1.4	0.2	*1*	"	1869	2.0	*1.8*	*1*	"	6105	2.2	*2.0*	3	"	σ	1.7	*3.9*	0
"	H 3792	*0.3*	0.2	*5*	"	σ	2.1	*3.5*	4	"	5219	1.9	*1.9*	1	"	24176	1.6	*4.6*	0
"	H 3790	1.8	0.2	2	"	σ	1.8	*3.7*	1	"	5090	1.4	*1.7*	*2*	283	H 3431	2.1	*0.0*	1
"	H 3788	1.5	0.4	4	"	18321	2.4	*6.2*	2	"	6907	1.6	*1.8*	0	"	H 3446	0.5	*0.0*	*3*
"	29042	3.0	*3.4*	0	"	20818	2.1	*7.4*	*2*	"	σ	1.9	*3.8*	1	"	H 3451	0.4	*0.0*	*1*
"	σ	2.1	*3.4*	2	"	22180	2.7	*5.5*	2	"	σ	1.8	*3.8*	0	"	H 3467	1.8	0.0	1
"	σ	1.9	*3.4*	0	274	H 3703	2.5	0.1	1	"	σ	1.5	*3.9*	*3*	"	H 3952	0.5	0.3	*2*
"	12688	2.3	*6.2*	*3*	"	H 3709	1.6	0.0	*1*	277	H 295	*1.5*	0.2	*2*	"	H 3953	0.6	0.9	*1*
264	H 3495	1.9	0.1	*2*	"	H 3713	2.1	0.0	1	"	H 296	1.6	0.5	*2*	"	H 3956	2.1	0.2	3
"	H 3496	0.6	0.2	*4*	"	H 3710	2.1	0.0	*2*	"	H 297	1.3	0.5	*4*	"	H 361	0.2	0.4	2
"	H 3497	1.5	0.4	3	"	H 3726	0.9	0.1	3	"	H 303	0.9	0.2	1	"	H 360	0.6	0.4	*2*
"	H 3912	1.3	0.4	*1*	"	H 3727	2.3	0.1	6	"	H 691	1.2	0.2	*5*	"	H 369	1.5	1.1	1
"	H 3917	0.4	0.4	3	"	H 3	2.2	0.0	0	"	H 693	0.8	0.3	7	"	H 364	0.9	0.9	*2*
"	H 3907	*0.1*	0.2	3	"	H 4	1.7	0.0	*4*	"	H 700	2.0	0.2	*1*	"	H 621	2.0	*0.1*	4
"	H 3506	0.6	4.1	*1*	"	H 7	2.7	0.0	*5*	"	H 1153	0.4	0.1	4	"	H 3969	2.3	5.5	4
"	H 3903	0.6	2.9	2	"	H 3656	*0.3*	2.4	2	"	H 1150	1.7	0.2	2	"	H 4191	2.4	2.9	*5*
"	30358	1.1	*1.8*	0	"	H 3855	0.0	2.3	*4*	"	H 1142	1.6	0.0	3	"	H 384	0.8	3.8	1
"	σ	2.1	*3.3*	2	"	H 71	0.2	2.6	1	"	H 1147	2.3	0.1	8	"	30380	1.9	*2.7*	1
"	σ	1.6	*3.4*	*3*	"	30358	0.8	*1.8*	*2*	"	H 488	2.8	2.8	0	"	30879	0.4	*1.9*	1
"	σ	1.9	*3.4*	0	"	σ	1.8	*3.4*	2	"	H 705	2.4	2.4	*1*	"	30980	1.5	*1.8*	0
266	H 3705	0.8	0.9	0	"	σ	1.5	*3.5*	*1*	"	5219	1.9	*1.9*	0	"	31530	1.5	*3.0*	*2*
"	H 3708	1.5	0.6	*3*	"	σ	1.6	*3.6*	0	"	7097	2.2	*2.4*	*1*	"	32200	1.0	*2.0*	*1*
"	H 3718	0.5	0.6	*2*	"	12688	1.5	*6.2*	*3*	"	σ	1.7	*3.6*	*1*	"	32303	1.7	*2.0*	1
"	H 3852	1.9	0.1	2	"	17440	2.2	*6.9*	4	"	σ	1.7	*3.8*	*2*	"	78	1.1	*2.1*	*1*
"	H 3860	1.1	0.1	3	275	H 655	1.7	0.2	2	"	σ	1.8	*3.9*	*1*	"	1738	1.9	*2.2*	0
"	H 3757	*1.8*	2.5	*3*	"	H 658	2.5	0.2	1	"	18321	2.5	*6.2*	1	"	1800	1.7	*2.4*	0
"	H 3855	0.6	2.3	3	"	H 661	1.9	0.1	2	"	19284	1.8	*8.5*	6	"	1869	1.9	*1.8*	*2*
"	30380	1.9	*2.7*	*1*	"	H 750	*0.3*	0.1	*1*	"	22180	2.4	*5.5*	*3*	"	σ	1.8	*3.3*	1
"	σ	2.3	*3.4*	2	"	H 756	0.6	0.1	1	278	H 951	1.5	*0.0*	*1*	"	σ	1.8	*3.4*	1
"	σ	2.0	*3.5*	*1*	"	H 1069	1.9	*0.0*	3	"	H 955	1.7	*0.0*	*1*	"	σ	1.7	*3.6*	0
272	H 4210	2.4	0.0	1	"	H 1077	1.1	*0.0*	*3*	"	H 959	0.4	*0.0*	2	"	σ	1.8	*3.8*	1
"	H 4211	1.4	0.0	*7*	"	H 1080	1.4	*0.0*	*1*	"	H 960	1.2	*0.0*	1	"	17440	2.1	*6.9*	1
"	H 4212	1.3	*0.0*	*3*	"	H 705	1.8	2.4	A	"	σ	1.8	*3.8*	*1*	"	19776	2.8	*4.6*	0
"	H 259	0.8	0.6	1	"	5090	1.7	*1.7*	1	"	σ	1.9	*3.8*	0	"	19284	1.0	*8.5*	2

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
286	H 202	1.7	0.1	*1*	304	H 1270	2.1	4.1	7	304	7769	3.9	*1.9*	*1*	375	H 1296	2.9	0.0	4
“	H 204	1.8	0.1	*2*	“	3349	3.5	*1.7*	*2*	“	7845	3.2	*1.9*	1	“	H 1100	*1.0*	1.7	0
“	H 207	1.4	0.0	4	“	3378	4.2	*2.5*	0	“	7882	3.3	*2.0*	0	“	H 1261	2.8	6.0	0
“	H *644*	0.5	0.0	*2*	“	3172	2.9	*2.5*	*2*	“	7920	3.5	*1.9*	*2*	“	H 1295	0.4	0.8	1
“	H 646	0.4	*0.0*	*2*	“	3451	4.4	*2.4*	0	“	8331	4.4	*1.7*	*3*	“	6907	1.9	*0.9*	*1*
“	H 640	1.4	0.0	1	“	3400	4.0	*2.6*	1	“	8350	4.4	*1.7*	0	“	σ	1.8	*1.6*	*1*
“	H 184	1.8	4.4	2	“	2928	3.7	*2.6*	1	“	8667	1.8	*1.8*	5	“	σ	2.2	*1.6*	3
“	H 705	1.5	2.4	*2*	“	3466	3.5	*1.9*	2	“	8888	3.0	*1.8*	0	“	24176	1.6	*1.8*	*1*
“	1738	1.9	*2.2*	*1*	“	3774	4.2	*1.8*	1	“	Z 2550	4.5	*1.7*	*2*	377	H 576	0.1	0.0	*1*
“	1800	1.7	*2.4*	0	“	3782	5.1	*1.8*	1	“	8919	4.5	*1.7*	*2*	“	H 577	2.5	0.5	2
“	σ	1.7	*3.6*	*1*	“	4075	3.5	*1.8*	1	“	9088	3.7	*1.8*	0	“	H 751	2.0	0.4	*3*
“	σ	1.7	*3.7*	*1*	“	*4272*	3.7	*1.8*	2	“	9653	4.0	*1.8*	*1*	“	H 758	1.5	0.1	*3*
“	σ	1.7	*3.8*	*1*	“	3715	4.4	*3.2*	1	“	9418	3.2	*2.2*	*1*	“	H 994	*0.7*	0.0	*2*
“	18321	2.5	*6.2*	3	“	3149	3.7	*3.2*	*1*	“	9075	3.2	*2.2*	*3*	“	H 1029	*1.6*	0.1	1
“	20818	2.7	*7.4*	4	“	3951	3.8	*2.0*	0	“	8942	3.2	*2.0*	*1*	“	H 1231	1.1	0.2	3
“	22180	2.4	*5.5*	*2*	“	3984	3.5	*2.1*	*2*	“	σ	1.7	*3.7*	3	“	H 1232	1.7	0.0	*5*
295	H 4084	0.7	0.1	3	“	3780	3.2	*2.2*	*1*	“	σ	1.3	*3.8*	*1*	“	H 1235	0.7	*0.0*	0
“	H 4092	1.9	0.0	6	“	4304	3.7	*2.4*	*2*	“	σ	1.6	*3.9*	2	“	H 1239	1.8	0.6	6
“	H 4095	1.0	0.1	*2*	“	*4359*	3.9	*1.7*	3	“	20125	2.7	*7.1*	6	“	H 600	0.2	0.7	*1*
“	H 28	0.7	0.2	0	“	4546	3.4	*2.3*	*2*	“	24176	1.5	*4.6*	2	“	H 755	1.9	0.8	*1*
“	H 30	*0.1*	*0.0*	*5*	“	4610	4.7	*2.5*	*1*	311	H 3965	*0.5*	0.0	*1*	“	H 753	2.1	0.8	2
“	H 32	2.0	0.1	1	“	4672	2.1	*2.5*	*1*	“	H 3966	1.1	0.6	3	“	5090	1.8	*0.9*	*2*
“	H 251	*0.7*	1.0	*4*	“	4871	3.5	*1.8*	*1*	“	H 3989	0.4	0.6	1	“	7097	2.5	*1.1*	0
“	H 254	0.9	0.8	*1*	“	Z 20	4.6	*1.7*	*1*	“	H 3994	*1.3*	0.0	*1*	“	σ	1.8	*1.6*	0
“	H 256	2.1	0.1	2	“	5090	1.5	*1.7*	2	“	H 3993	0.3	*0.0*	*5*	“	σ	1.7	*1.6*	*1*
“	H 265	0.5	0.0	0	“	5136	4.1	*2.2*	0	“	H 5	*3.0*	0.3	2	“	20818	1.6	*2.3*	*3*
“	H 271	*0.6*	*0.0*	0	“	5685	2.9	*2.2*	*3*	“	H 6	0.7	*0.0*	*3*	“	22180	2.8	*2.0*	5
“	H 4037	*0.2*	3.4	*2*	“	5310	2.5	*2.1*	0	“	H 4009	0.3	2.7	A	378	H 665	0.1	0.1	*2*
“	H 71	0.4	2.6	0	“	5292	3.7	*2.7*	0	“	30879	*0.8*	*1.9*	1	“	H 664	1.6	0.1	*2*
“	H 219	*0.9*	2.1	1	“	5274	3.0	*2.3*	1	“	30980	0.2	*1.8*	*1*	“	H 663	2.3	*0.0*	2
“	31530	1.8	*3.0*	0	“	5264	2.7	*2.3*	*2*	“	78	*0.1*	*2.1*	*1*	“	H 1130	1.1	0.0	*1*
“	σ	1.8	*3.4*	1	“	5219	1.3	*1.9*	*2*	“	σ	0.4	*3.4*	*1*	“	H 1133	1.6	0.1	1
“	σ	1.7	*3.5*	0	“	Z 1345	5.4	*1.7*	1	“	σ	0.3	*3.5*	*2*	“	H 1134	0.9	0.0	0
“	σ	1.6	*3.6*	*1*	“	*5720*	3.5	*1.8*	*1*	“	σ	0.5	*3.6*	0	“	H 1136	1.7	0.0	0
“	17440	2.1	*6.9*	1	“	5742	3.2	*1.7*	*4*	“	13840	1.9	*11.1*	5	“	H 1137	2.0	*0.0*	1
“	18321	2.1	*6.2*	*1*	“	6276	3.4	*1.8*	0	312	H 10	1.7	0.1	*1*	“	H 638	*0.5*	0.7	A
304	H 495	0.0	1.1	1	“	6293	3.6	*1.7*	0	“	H 11	1.8	*0.0*	5	“	σ	1.7	*1.6*	0
“	H 498	0.0	0.8	3	“	6388	2.3	*1.9*	1	“	H 13	1.4	0.8	3	“	σ	1.6	*1.6*	*1*
“	H 497	0.7	0.0	*4*	“	6584	2.8	*1.8*	0	“	H 272	0.3	0.1	*2*	379	H 830	*0.1*	0.1	*5*
“	H 975	*0.5*	0.0	5	“	6928	3.1	*1.9*	2	“	H 273	0.7	0.0	n	“	H 829	1.7	0.2	0
“	H 976	1.9	*0.0*	0	“	6105	1.9	*2.0*	3	“	H 274	1.1	*0.0*	*2*	“	H 828	1.6	0.0	*1*
“	H 978	T	0.3	T	“	6422	2.6	*2.2*	2	“	H 276	1.8	0.5	*4*	“	H 1160	*0.2*	0.4	1
“	H 979	T	0.1	T	“	6907	1.2	*1.8*	*1*	“	H 9	*1.0*	2.0	3	“	H 1161	0.9	0.7	2
“	H 1340	0.6	*0.0*	p	“	6879	4.2	*1.8*	1	“	H 287	*0.4*	2.7	*4*	“	H 1162	1.6	0.4	3
“	H 1341	1.3	0.4	*4*	“	7097	2.3	*2.4*	3	“	σ	2.0	*3.5*	0	“	H 1146	2.1	0.8	*2*
“	H 1342	1.5	*0.0*	*1*	“	Z 2286	4.9	*1.7*	0	“	σ	1.9	*3.7*	*1*	“	H 1154	3.1	1.0	2
“	H 1344	1.8	0.0	6	“	Z 241	4.6	*1.7*	*2*	“	18321	2.4	*6.2*	0	“	σ	2.4	*1.6*	1
“	H 1349	0.0	0.4	*2*	“	7601	2.7	*2.6*	1	375	H 1086	0.3	0.0	*1*	“	σ	2.1	*1.6*	*2*
“	H 456	1.5	2.4	*2*	“	7754	2.9	*1.8*	*1*	“	H 1085	1.3	0.0	*1*	381	H 554	0.3	0.2	0
“	H 980	1.4	2.7	*5*	“	7835	4.5	*1.8*	0	“	H 1263	*0.3*	0.5	0	“	H 948	0.0	0.0	*1*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
381	H 1663	1.0	*0.0*	*3*	383	H 1507	1.1	0.2	*2*	388	H 729	4.3	2.4	1	391	H 1458	2.1	*0.0*	*1*
"	H 1662	2.4	0.0	4	"	6105	2.1	*1.0*	*2*	"	σ	2.2	*1.6*	1	"	H 1693	0.8	*0.0*	*5*
"	H 1661	1.9	0.4	1	"	σ	2.1	*1.6*	1	"	σ	2.3	*1.6*	2	"	H 1694	1.9	0.1	*3*
"	H 555	1.4	2.3	*3*	"	σ	1.9	*1.6*	*1*	"	22180	2.6	*2.0*	*2*	"	H 1697	2.3	*0.0*	*1*
"	H 551	1.7	6.0	0	"	σ	2.2	*1.6*	2	"	31530	2.2	*1.8*	*1*	"	H 707	1.5	1.2	0
"	H 553	1.9	5.2	*3*	"	σ	2.0	*1.6*	0	389	H 634	2.8	0.2	4	"	H 908	2.5	1.9	2
"	H 583	3.4	10.2	0	"	24176	1.7	1.8	*1*	"	H 636	2.6	0.3	2	"	H 921	2.9	3.0	*2*
"	H 876	1.5	6.7	*3*	385	H 581	0.4	0.1	*5*	"	H 635	2.1	0.1	0	"	H 937	3.4	4.9	*1*
"	H 938	3.9	9.6	0	"	H 582	2.0	0.0	2	"	H 1474	*0.4*	*0.0*	*2*	"	H 1756	1.5	3.5	1
"	H 980	4.1	10.2	1	"	H 584	3.0	0.4	2	"	H 1473	1.4	0.0	7	"	H 1767	2.8	4.9	*2*
"	H 949	1.7	0.8	0	"	H 875	0.9	0.1	*3*	"	H 1472	1.0	*0.0*	*1*	"	13246	1.8	*0.9*	1
"	H 946	2.3	0.8	4	"	H 874	2.7	0.0	6	"	H 1471	2.3	0.0	5	"	13048	1.7	*0.8*	*1*
"	H 1656	1.3	2.8	*1*	"	H 872	2.3	0.5	0	"	H 1746	1.2	*0.0*	*1*	"	σ	2.0	*1.6*	*1*
"	H 1669	3.8	8.7	6	"	H 1613	1.0	0.1	2	"	H 1743	1.5	*0.0*	2	"	σ	2.2	*1.6*	1
"	H 1701	2.8	11.6	6	"	H 1618	1.8	*0.0*	*6*	"	H 1741	1.2	0.0	2	"	σ	2.0	*1.6*	*1*
"	6105	2.1	*1.0*	*3*	"	H 1619	1.8	0.8	A	"	H 1748	2.3	0.2	*1*	"	23362	3.9	*11.8*	2
"	σ	1.9	*1.6*	*1*	"	6105	2.4	*1.0*	0	"	H 631	2.9	4.7	3	"	29670	4.1	*9.0*	3
"	σ	2.1	*1.6*	1	"	σ	1.8	*1.6*	*2*	"	H 624	2.3	1.6	*1*	"	29533	0.5	*3.9*	*2*
"	σ	2.1	*1.6*	1	"	σ	2.1	*1.6*	1	"	H 642	1.9	2.0	*1*	392	H 714	1.3	0.0	*1*
"	20818	2.1	*2.3*	*1*	"	σ	2.0	*1.6*	0	"	σ	1.9	*1.6*	*2*	"	H 716	0.9	0.2	1
"	24176	1.9	*1.8*	1	386	H 579	0.8	0.0	2	"	σ	2.3	*1.6*	2	"	H 712	1.3	0.2	*2*
382	H 550	0.0	0.2	*1*	"	H 580	2.0	0.0	*2*	"	σ	2.1	*1.6*	0	"	H 1005	*1.1*	0.1	0
"	H 548	2.2	0.2	*3*	"	H 581	0.8	0.1	0	"	21881	1.0	*3.7*	*5*	"	H 1007	1.2	0.0	0
"	H 547	2.8	0.4	R	"	H 1163	2.6	0.3	5	"	21663	3.5	*8.2*	5	"	H 1022	3.0	*0.0*	3
"	H 542	1.6	0.4	1	"	H 1164	1.8	0.3	0	390	H 687	2.0	*0.0*	0	"	H 1092	2.2	0.1	*2*
"	H 854	0.8	0.0	4	"	H 1152	1.6	0.3	2	"	H 695	1.7	0.0	*2*	"	σ	2.2	*1.6*	1
"	H 851	3.5	*0.0*	6	"	H 1492	0.4	0.0	*3*	"	H 696	1.8	0.0	*5*	"	σ	2.1	*1.6*	0
"	H 855	1.3	0.1	*6*	"	H 1484	2.0	0.0	0	"	H 701	0.4	0.0	*2*	393	H 740	0.5	*0.0*	p
"	H 857	0.1	0.1	0	"	H 1483	2.2	0.1	1	"	H 1380	1.2	*0.0*	*1*	"	H 741	2.3	*0.0*	0
"	H 1654	1.3	0.1	*5*	"	H 1481	1.6	0.6	2	"	H 1381	0.7	*0.0*	*1*	"	H 744	2.6	0.0	1
"	H 1652	3.2	*0.0*	4	"	7097	2.7	*1.1*	0	"	H 1383	1.7	*0.0*	*2*	"	H 1203	0.2	*0.0*	*1*
"	H 1666	2.4	*0.0*	0	"	σ	2.2	*1.6*	2	"	H 1554	0.5	0.1	1	"	H 1204	1.4	0.0	*3*
"	H 1657	1.8	0.7	A	"	σ	2.0	*1.6*	0	"	H 1553	1.8	0.2	2	"	H 1205	2.4	0.2	1
"	5090	2.0	*0.9*	0	"	σ	1.9	*1.6*	*1*	"	H 1552	3.3	0.5	5	"	H 1501	1.1	0.0	3
"	11598	1.9	*0.9*	*1*	"	24176	1.8	*1.8*	0	"	H 1551	2.3	0.6	2	"	H 1503	1.0	0.1	*1*
"	σ	2.0	*1.6*	0	"	27836	2.0	*2.8*	*3*	"	H 879	0.2	1.3	*4*	"	H 1502	2.1	0.1	3
"	σ	2.0	*1.6*	0	"	27956	2.3	*2.8*	1	"	H 885	2.2	5.5	1	"	H 1213	2.6	1.9	*1*
"	σ	2.0	*1.6*	0	388	H 627	1.8	*0.0*	5	"	H 891	2.0	2.7	4	"	H 1237	3.2	4.4	1
"	22180	2.6	*2.0*	0	"	H 628	2.9	0.4	3	"	H 1581	2.4	3.2	0	"	H 1244	2.3	1.2	1
"	24176	1.7	*1.8*	*1*	"	H 629	1.8	0.5	*3*	"	H 1591	2.0	1.8	*3*	"	H 1479	2.9	2.0	*1*
383	H 558	1.9	*0.0*	*4*	"	H 633	3.4	0.4	p	"	σ	2.1	*1.6*	*1*	"	H 1495	4.0	4.7	1
"	H 561	2.1	0.0	1	"	H 1918	0.5	0.0	*1*	"	σ	2.1	*1.6*	*1*	"	σ	1.8	*1.6*	*2*
"	H 562	2.5	0.0	1	"	H 1920	1.9	0.0	*8*	"	σ	2.0	*1.6*	*2*	"	σ	2.1	*1.6*	1
"	H 901	*0.2*	0.0	3	"	H 1921	1.3	0.1	*2*	"	23362	4.4	*11.8*	6	"	σ	2.1	*1.6*	1
"	H 902	2.0	*0.0*	*3*	"	H 1922	1.6	0.2	0	"	26980	2.9	*7.4*	*1*	"	25083	3.0	*6.1*	*1*
"	H 906	1.5	0.1	1	"	H 1924	1.1	0.1	*4*	"	27956	2.5	*2.8*	*1*	"	25383	1.7	*9.0*	*1*
"	H 1157	1.5	0.0	3	"	H 734	3.6	5.9	*1*	391	H 698	2.3	0.0	1	"	27225	1.6	*6.9*	2
"	H 1158	2.2	*0.0*	1	"	H 719	1.6	2.4	0	"	H 706	2.4	0.0	4	395	H 721	0.7	0.0	*2*
"	H 1170	0.1	0.0	*1*	"	H 723	2.3	2.4	*3*	"	H 1452	0.3	0.0	*3*	"	H 722	1.3	0.4	2
"	H 1504	0.7	0.1	*1*	"	H 728	4.5	2.4	0	"	H 1454	3.3	*0.0*	5	"	H 725	2.0	0.4	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
395	H 732	2.0	0.4	1	395	9075	4.5	*1.0*	1	396	7769	4.8	*0.9*	0	397	H 1376	2.6	1.7	3
"	H 1518	0.8	0.0	2	"	9418	4.2	*1.0*	0	"	7845	4.0	*0.9*	1	"	H 1378	3.0	3.8	6
"	H 1517	2.4	0.5	1	"	9088	4.6	*0.9*	1	"	7882	4.2	*0.9*	1	"	H 1785	2.7	3.4	*1*
"	H 1516	0.6	0.1	*3*	"	9653	5.1	*0.9*	2	"	7920	4.7	*0.9*	2	"	6907	2.1	*0.9*	1
"	H 1515	*0.8*	*0.0*	*1*	"	9819	4.1	*1.1*	*2*	"	8331	4.6	*0.8*	1	"	9770	2.9	*1.3*	0
"	H 1688	1.3	0.0	0	"	9770	3.0	*1.3*	0	"	8350	5.3	*0.9*	1	"	9819	4.3	*1.1*	1
"	H 1690	0.9	*0.0*	*4*	"	10477	4.0	*0.9*	*1*	"	8667	2.1	*0.9*	0	"	10477	4.2	*0.9*	2
"	H 1691	2.9	0.5	0	"	10508	4.5	*0.9*	1	"	8888	4.2	*0.9*	4	"	10508	4.3	*0.9*	0
"	H 1692	0.9	0.6	*2*	"	10578	4.3	*0.9*	*1*	"	9075	4.4	*1.0*	1	"	10578	4.4	*0.9*	1
"	H 735	1.5	1.8	*2*	"	10637	3.5	*0.9*	0	"	8942	4.4	*1.0*	3	"	10637	3.5	*0.9*	1
"	H 730	3.5	4.1	4	"	10681	5.6	*0.9*	0	"	9418	4.2	*1.0*	1	"	10681	5.5	*0.9*	0
"	H 1509	1.7	2.7	0	"	10936	4.2	*1.2*	0	"	9088	4.4	*0.9*	*1*	"	10936	5.0	*1.2*	*1*
"	H 1510	3.3	5.3	*2*	"	10948	5.0	*1.0*	0	"	9653	5.0	*0.9*	1	"	10948	4.9	*1.0*	1
"	H 1696	2.1	1.8	*3*	"	σ	2.0	*1.6*	*2*	"	9770	2.9	*1.3*	*1*	"	11013	4.3	*1.4*	0
"	4546	4.4	*1.1*	0	"	σ	2.0	*1.6*	*2*	"	9819	4.1	*1.1*	*2*	"	11196	4.8	*0.9*	*1*
"	4610	5.8	*1.2*	2	"	σ	2.0	*1.6*	*2*	"	10477	4.0	*0.9*	*1*	"	11273	5.8	*0.9*	*1*
"	4672	3.1	*1.2*	1	"	22393	1.2	*4.1*	*1*	"	10508	4.3	*0.9*	*1*	"	11598	2.0	*0.9*	0
"	4871	4.7	*0.9*	3	"	27836	2.5	*2.8*	*1*	"	10578	4.3	*0.9*	*1*	"	Z 1710	5.9	*0.8*	1
"	5136	5.0	*1.0*	0	"	28171	3.7	*4.9*	0	"	10637	3.4	*0.9*	*1*	"	Z 1524	6.1	*0.8*	*1*
"	5310	3.2	*1.0*	*2*	"	29533	0.4	*3.9*	*4*	"	10681	5.5	*0.9*	*1*	"	11964	3.0	*0.9*	*3*
"	5274	3.7	*1.1*	0	"	29336	4.5	*11.8*	8	"	10936	5.0	*1.2*	*2*	"	11982	3.4	*1.2*	*1*
"	5264	3.8	*1.1*	1	396	H 787	1.2	0.1	0	"	10948	4.8	*1.0*	*1*	"	13048	1.9	*0.8*	2
"	5292	4.6	*1.2*	1	"	H 788	2.3	0.1	*1*	"	11013	4.5	*1.4*	1	"	13246	1.5	*0.9*	*1*
"	5310	3.4	*1.0*	0	"	H 789	1.2	0.3	1	"	11196	5.1	*0.9*	1	"	13840	2.0	*0.9*	0
"	5685	4.0	*1.0*	*1*	"	H 790	2.4	0.6	5	"	11273	6.1	*0.9*	1	"	σ	2.1	*1.6*	0
"	5720	4.6	*0.9*	2	"	H 1283	1.5	0.0	3	"	11598	2.1	*0.9*	0	"	σ	2.0	*1.6*	*1*
"	5721				"	H 1282	2.0	0.0	2	"	Z 1710	5.8	*0.8*	*1*	"	σ	2.0	*1.6*	*1*
"	5742	T	*0.8*	T	"	H 1284	0.6	0.1	*5*	"	Z 1524	6.5	*0.8*	2	"	23362	4.4	*11.8*	*1*
"	6105	2.3	*1.0*	*2*	"	H 1714	1.2	0.1	3	"	11964	3.1	*0.9*	*3*	"	26980	3.4	*7.4*	0
"	6276	4.2	*0.9*	0	"	H 1718	3.1	*0.0*	3	"	11982	3.4	*1.2*	*2*	"	30500	3.6	*7.3*	3
"	6293	4.5	*0.8*	1	"	H 1712	1.3	0.2	*4*	"	σ	2.1	*1.6*	*1*	398	H 1089	0.6	0.4	*1*
"	6388	2.9	*0.9*	*1*	"	H 1711	1.2	0.2	*3*	"	σ	2.1	*1.6*	*1*	"	H 1090	2.3	0.4	4
"	6584	3.7	*0.9*	1	"	H 877	*0.6*	1.5	*2*	"	σ	2.3	*1.6*	1	"	H 1091	*3.5*	0.2	*5*
"	6928	3.8	*0.9*	1	"	H 856	1.4	3.1	4	"	23362	3.9	*11.8*	*8*	"	H 1087	2.4	0.0	5
"	6422	3.2	*1.1*	*1*	"	H 896	*0.2*	1.3	1	"	27225	1.4	*6.9*	*6*	"	H 1595	1.1	*0.0*	2
"	7097	2.6	*1.1*	*2*	"	H 1285	1.8	0.8	*3*	"	29336	4.8	*11.8*	3	"	H 1596	1.0	0.0	0
"	7601	3.2	*1.2*	*2*	"	H 1271	1.9	2.2	1	397	H 910	*0.9*	0.1	0	"	H 1597	1.3	0.4	4
"	7754	3.8	*0.9*	0	"	H 1264	2.2	4.6	2	"	H 912	2.0	0.2	4	"	H 1837	*0.2*	0.0	*3*
"	7835	5.2	*0.9*	*1*	"	H 1709	*0.3*	2.8	0	"	H 914	1.2	0.3	1	"	H 1836	1.9	0.0	*1*
"	7769	4.9	*0.9*	1	"	H 1719	1.2	1 2	*2*	"	H 920	1.4	0.3	*2*	"	H 1835	1.9	0.2	*4*
"	7845	3.9	*0.9*	0	"	4672	3.2	*1.2*	2	"	H 1374	1.0	0.0	1	"	H 1842	0.4	*0.0*	*1*
"	7882	4.1	*0.9*	0	"	4610	5.6	*1.2*	0	"	H 1375	0.6	*0.0*	*5*	"	H 1102	0.7	1.8	*3*
"	7920	4.7	*0.9*	2	"	4546	4.5	*1.1*	1	"	H 1372	1.7	0.0	3	"	H 1104	*0.9*	1.0	1
"	8331	5.6	*0.8*	1	"	4304	5.0	*1.1*	3	"	H 1373	0.0	0.3	1	"	H 1834	1.5	0.9	2
"	8350	5.2	*0.9*	0	"	4871	4.4	*0.9*	0	"	H 1800	0.0	0.0	*1*	"	6105	2.5	*1.0*	3
"	8667	2.1	*0.9*	0	"	5742	3.6	*0.8*	2	"	H 1797	*2.3*	0.2	0	"	6907	2.1	*0.9*	2
"	Z 2550	5.7	*0.8*	2	"	6879	4.9	*0.9*	0	"	H 1796	0.8	0.1	1	"	7097	2.6	*1.1*	0
"	8919	5.5	*0.8*	0	"	7601	3.4	*1.2*	0	"	H 922	1.4	1.1	0	"	11196	4.7	*0.9*	*1*
"	8888	3.6	*0.9*	*2*	"	7754	4.0	*0.9*	2	"	H 932	*3.4*	1.8	*3*	"	11273	5.8	*0.9*	0
"	8942	4.1	*1.0*	*1*	"	7835	5.5	*0.9*	2	"	H 937	3.5	4.9	*3*	"	11013	4.1	*1.4*	*2*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
398	11964	3.8	*0.9*	6	403	H 1072	1.0	1.0	*6*	405	H 865	0.5	0.2	*2*	407	H 1057	0.0	0.0	*1*
"	11982	3.6	*1.2*	2	"	H 1806	2.8	0.8	*2*	"	H 1408	2.0	0.0	0	"	H 1059	2.3	0.2	2
"	12688	1.9	*1.1*	0	"	H 1810	0.1	1.5	1	"	H 1407	2.0	0.2	3	"	H 1060	2.1	0.3	3
"	σ	2.0	*1.6*	0	"	H 1838	3.2	2.3	4	"	H 1406	0.6	0.2	*4*	"	H 1061	2.2	0.3	2
"	σ	2.1	*1.6*	1	"	5090	2.3	*0.9*	1	"	H 1410	2.1	0.0	3	"	H 1621	0.2	*0.0*	*4*
"	σ	2.0	*1.6*	0	"	5219	2.4	*0.9*	0	"	H 1759	0.4	0.0	*3*	"	H 1623	2.0	0.0	2
"	24821	3.1	*5.3*	*1*	"	6105	2.4	*1.0*	*1*	"	H 1758	2.4	0.1	1	"	H 1629	*0.6*	0.1	*2*
"	30350	2.6	*3.8*	*4*	"	6907	2.1	*0.9*	*1*	"	H 1757	2.1	0.5	3	"	H 1630	1.5	0.2	*5*
"	30532	4.8	*9.9*	*5*	"	7097	2.9	*1.1*	1	"	H 801	1.9	3.0	*3*	"	H 1634	1.6	0.3	1
399	H 917	0.7	0.0	0	"	11598	2.3	*0.9*	1	"	H 852	2.9	1.6	2	"	H 1073	0.3	1.2	*3*
"	H 915	1.6	0.1	*1*	"	12688	2.0	*1.1*	*1*	"	H 1754	3.0	1.2	*1*	"	H 1097	2.5	2.4	0
"	H 923	2.3	0.1	0	"	σ	2.2	*1.6*	0	"	H 1753	1.5	6.1	4	"	H 1631	2.0	0.8	1
"	H 924	2.2	0.1	0	"	σ	2.3	*1.6*	1	"	Z 1345	6.1	*0.8*	0	"	H 1636	*0.2*	2.2	1
"	H 1555	2.1	0.0	3	"	σ	2.2	*1.6*	0	"	Z 2286	5.8	*0.8*	1	"	H 1641	0.4	1.4	*2*
"	H 1556	1.6	*0.0*	*2*	"	24483	3.0	*4.8*	1	"	Z 241	5.8	*0.8*	2	"	σ	2.1	*1.6*	0
"	H 1563	3.1	*0.0*	4	"	24570	3.9	*6.4*	3	"	8667	2.2	*0.9*	0	"	σ	2.0	*1.6*	*1*
"	H 1788	2.0	*0.0*	0	"	30500	3.2	*7.3*	0	"	11598	2.0	*0.9*	*2*	"	σ	1.9	*1.6*	*2*
"	H 1789	1.0	0.0	0	"	30350	2.6	*3.8*	*2*	"	12688	2.1	*1.1*	0	"	24570	3.8	*6.4*	3
"	H 1793	0.0	0.3	1	404	H 838	1.8	0.0	*4*	"	13048	1.9	*0.8*	1	"	28706	2.3	*4.1*	1
"	H 1795	0.6	0.2	*3*	"	H 839	2.5	0.1	*2*	"	13246	1.8	*0.9*	0	"	28851	3.2	*6.5*	*2*
"	H 932	*3.6*	1.8	*3*	"	H 840	*0.3*	0.2	0	"	σ	2.1	*1.6*	*1*	409	H *1045*	*1.6*	0.1	1
"	H 947	2.0	1.3	3	"	H 842	1.7	0.3	1	"	σ	2.1	*1.6*	*1*	"	H 1047	1.8	0.1	3
"	H 1798	2.3	1.1	*2*	"	H 1156	2.2	*0.0*	0	"	σ	2.0	*1.6*	*2*	"	H 1029	*1.8*	0.1	0
"	H 1785	2.7	3.4	3	"	H 1165	2.5	0.1	5	"	27225	1.7	*6.9*	1	"	H 1030	0.5	0.2	*3*
"	5090	2.1	*0.9*	0	"	H 1173	2.6	0.1	2	"	26980	3.4	*7.4*	2	"	H 1032	*0.6*	0.4	*1*
"	5219	2.6	*0.9*	3	"	H 1805	2.7	*0.0*	1	"	29533	0.5	*3.9*	*4*	"	H 1867	2.8	*0.0*	3
"	6907	2.2	*0.9*	1	"	H 1815	1.7	0.0	*1*	406	H 1039	0.5	0.1	2	"	H 1868	3.4	*0.0*	2
"	8667	2.2	*0.9*	1	"	H 1820	2.1	*0.0*	2	"	H 1038	2.7	*0.0*	4	"	H 1869	1.2	0.0	*6*
"	12688	1.9	*1.1*	*2*	"	H 1822	2.5	0.0	*1*	"	H 1040	1.1	0.1	0	"	H 1879	3.1	0.1	5
"	13048	1.8	*0.8*	0	"	H 843	2.3	1.4	1	"	H 1044	1.5	0.3	0	"	H 1884	1.6	0.5	0
"	13246	2.0	*0.9*	3	"	H 848	2.9	3.6	1	"	H 1564	3.2	*0.0*	2	"	H 1033	2.0	0.7	*2*
"	σ	2.3	*1.6*	1	"	H 1819	3.6	3.4	1	"	H 1565	2.9	0.0	1	"	H 1079	2.1	3.8	*1*
"	σ	2.1	*1.6*	*1*	"	H 1818	2.8	2.2	*2*	"	H 1568	3.2	*0.0*	2	"	H 1106	2.5	3.0	*1*
"	σ	2.2	*1.6*	0	"	5219	2.3	*0.9*	*1*	"	H 1782	0.9	0.2	7	"	H 1882	2.2	1.9	1
"	24483	3.4	*4.8*	3	"	6105	2.6	*1.0*	1	"	H 1781	2.2	*0.0*	*5*	"	H 1881	3.4	4.9	2
"	24570	3.7	*6.4*	*2*	"	8667	2.1	*0.9*	*1*	"	H 1784	2.3	0.4	1	"	σ	2.2	*1.6*	*2*
"	30358	1.7	*2.9*	*5*	"	11598	2.1	*0.9*	*1*	"	H 1052	2.7	2.4	6	"	σ	2.0	*1.6*	*4*
403	H 883	1.4	*0.0*	1	"	12688	2.0	*1.1*	*1*	"	H 1051	3.2	4.0	4	"	σ	2.2	*1.6*	*2*
"	H 866	2.2	0.0	1	"	13048	2.0	*0.8*	2	"	H 1783	1.9	0.8	7	"	24570	3.7	*6.4*	*6*
"	H 867	2.2	0.0	1	"	13246	1.9	*0.9*	1	"	H 1774	2.6	4.6	1	"	24483	3.3	*4.8*	*1*
"	H 871	2.6	*0.0*	*2*	"	σ	2.0	*1.6*	*2*	"	H 1827	*0.7*	1.4	*5*	"	30980	2.4	*3.0*	*4*
"	H 1609	2.4	*0.0*	2	"	σ	2.1	*1.6*	*1*	"	12688	2.0	*1.1*	*3*	"	30879	3.1	*2.7*	R
"	H 1610	0.6	*0.0*	*2*	"	σ	2.0	*1.6*	*2*	"	13048	1.8	*0.8*	*2*	410	H 1054	2.2	0.0	0
"	H 1611	1.7	0.1	2	"	23362	4.3	*11.8*	3	"	13246	1.6	*0.9*	*3*	"	H 1055	2.3	0.0	*2*
"	H 1612	2.7	0.0	*2*	"	30350	2.7	*3.8*	0	"	σ	2.1	*1.6*	*2*	"	H 1053	2.4	0.0	*1*
"	H 1801	2.0	0.0	*2*	"	30500	2.9	*7.3*	*1*	"	σ	2.0	*1.6*	*3*	"	H 1056	2.6	0.1	*1*
"	H 1803	2.6	*0.0*	1	405	H 806	1.7	0.1	0	"	σ	1.9	*1.6*	*4*	"	H 1064	1.9	0.3	2
"	H 1802	2.1	0.1	*3*	"	H 805	0.9	0.2	2	"	24483	3.6	*4.8*	7	"	H 1084	1.2	0.6	1
"	H 1808	1.9	0.7	1	"	H 804	3.3	0.4	p	"	30532	4.7	*9.9*	8	"	H 1790	3.2	*0.0*	1
"	H 1063	1.2	1.2	2	"	H 803	2.0	0.1	2	"	30500	3.2	*7.3*	2	"	H 1112	2.9	2.4	3

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
410	H 1129	2.7	5.6	6	413	30520	3.2	2.1	3	417	H 1202	2.8	0.2	5	459	σ	1.6	3.7	2
"	H 1777	2.2	0.7	2	"	30500	2.7	7.3	4	"	H 1687	1.1	0.0	1	"	σ	1.5	3.6	1
"	H 1783	1.9	0.8	6	414	H 1200	0.9	0.1	0	"	H 1686	2.0	0.0	2	"	σ	1.5	3.5	1
"	H 1792	1.1	0.9	0	"	H 1226	1.4	0.0	4	"	H 1704	1.0	0.1	2	"	32200	1.9	9.4	6
"	σ	2.0	1.6	2	"	H 1224	1.7	0.2	3	"	H 1710	0.8	0.5	0	"	32303	2.9	9.1	0
"	σ	2.4	1.6	2	"	H 1220	0.6	0.0	2	"	H 1193	1.8	2.3	1	460	H 1768	0.2	0.0	1
"	σ	2.1	1.6	1	"	H 1214	1.6	0.1	1	"	H 1198	3.1	4.1	4	"	H 1769	0.3	0.0	4
"	24821	2.8	5.3	2	"	H 1670	2.1	0.0	2	"	H 1685	0.5	0.9	4	"	H 1770	0.7	0.1	1
"	24570	3.8	6.4	4	"	H 1672	2.3	0.0	1	"	H 1727	2.2	1.3	3	"	H 1775	0.1	0.1	0
"	30358	1.8	2.9	3	"	H 1673	2.6	0.0	0	"	σ	2.1	1.6	1	"	H 2002	0.2	0.0	3
412	H 1177	1.5	0.0	2	"	H 1676	0.6	0.1	2	"	σ	2.4	1.6	2	"	H 2003	0.9	0.0	2
"	H 1179	2.3	0.0	1	"	H 1677	1.8	0.3	3	"	29533	0.8	3.9	2	"	H 2009	0.4	0.0	0
"	H 1183	1.2	0.0	4	"	H 1197	2.3	5.2	4	"	29670	4.7	9.0	R	"	H 2169	1.3	0.0	4
"	H 1184	1.3	0.0	9	"	H 1223	2.6	0.8	0	"	29624	1.0	2.5	n	"	H 2168	1.2	0.1	5
"	H 1185	2.4	0.3	3	"	H 1247	1.4	1.4	5	418	H 1188	2.0	0.0	3	"	H 2170	0.6	0.0	1
"	H 1187	3.1	0.7	5	"	H 1267	2.8	3.9	3	"	H 1190	2.2	0.0	2	"	H 2180	1.0	0.0	0
"	H 1762	1.8	0.0	0	"	H 1678	2.8	2.0	5	"	H 1208	2.3	0.1	1	"	H 1807	1.8	3.4	1
"	H 1761	2.5	0.1	0	"	H 1675	1.9	3.4	1	"	H 1216	0.7	0.4	0	"	H 1829	1.1	3.5	1
"	H 1764	2.6	0.0	2	"	H 1681	0.4	1.0	0	"	H 1248	2.7	0.6	5	"	H 2015	1.6	4.0	1
"	H 1779	3.9	0.4	8	"	σ	2.3	1.6	1	"	H 1708	1.7	0.0	6	"	13840	1.1	1.9	2
"	H 1182	2.4	3.1	1	"	σ	2.0	1.6	2	"	H 1716	2.2	0.0	1	"	13840	0.8	1.9	1
"	H 1167	3.4	1.9	1	"	25527	3.9	7.0	2	"	H 1720	1.4	0.0	4	"	15189	1.7	2.2	1
"	H 1783	2.6	0.8	0	"	25383	1.6	9.0	2	"	H 1721	2.4	0.0	0	"	σ	1.3	3.8	0
"	σ	2.3	1.6	2	416	H 1228	2.5	0.0	3	"	H 1821	1.3	0.4	4	"	σ	1.2	3.7	1
"	σ	2.1	1.6	0	"	H 1535	2.3	0.0	2	"	H 1828	3.1	0.3	2	"	σ	1.4	3.6	2
"	25383	1.9	9.0	6	"	H 1557	2.1	0.2	0	"	H 1211	2.4	0.7	5	"	30358	2.7	12.5	4
"	30034	2.8	4.4	1	"	H 1561	2.7	0.5	2	"	H 1255	1.6	1.6	5	"	30380	2.0	5.2	1
"	30350	1.9	3.8	6	"	H 1567	2.3	0.5	1	"	H 1289	3.1	6.1	1	467	H 1453	0.8	0.3	2
413	H 1140	1.6	0.0	3	"	H 1850	1.5	0.1	1	"	H 1844	2.2	4.2	1	"	H 1456	0.5	0.3	3
"	H 1131	2.5	0.0	2	"	H 1853	2.6	0.0	3	"	H 1873	2.8	1.1	2	"	H 1457	1.8	0.2	3
"	H 1127	1.9	0.1	2	"	H 1859	0.7	0.2	2	"	σ	2.3	1.6	0	"	H 1461	0.6	0.0	4
"	H 1125	1.5	0.0	1	"	H 1570	2.7	1.1	0	"	σ	2.2	1.6	1	"	H 1462	1.0	0.0	0
"	H 1122	1.2	0.4	1	"	H 1585	2.8	3.0	4	"	σ	2.1	1.6	2	"	H 1667	0.7	0.0	3
"	H 1120	2.7	0.2	4	"	H 1845	2.6	1.2	0	"	25383	2.2	9.0	2	"	H 1680	0.5	0.0	2
"	H 1633	1.5	0.0	3	"	H 1852	2.6	0.8	2	"	24821	2.9	5.3	1	"	H 1902	1.0	0.5	1
"	H 1648	2.6	0.0	2	"	H 1860	2.4	0.9	2	"	30879	0.8	2.7	5	"	H 1904	0.3	0.0	4
"	H 1833	2.6	0.1	3	"	H 1866	3.3	1.0	3	"	31127	4.8	10.5	4	"	H 1905	0.4	0.0	4
"	H 1826	3.0	0.1	4	"	H 1871	2.9	3.4	1	459	H 1956	0.3	0.0	2	"	H 1638	1.0	4.3	1
"	H 1825	3.3	0.1	3	"	H 1896	3.5	6.4	1	"	H 1955	1.3	1.1	0	"	H 1658	0.7	2.9	2
"	H 1823	1.5	0.4	2	"	σ	2.1	1.6	1	"	H 1959	0.8	0.4	3	"	H 1926	2.3	2.6	1
"	H 1123	2.0	1.1	2	"	σ	2.0	1.6	2	"	H 1991	0.1	0.0	1	"	12688	1.2	2.4	2
"	H 1139	2.8	2.2	5	"	σ	2.2	1.6	0	"	H 2231	0.3	0.0	2	"	σ	1.6	3.8	1
"	H 1840	0.7	1.0	2	"	28162	3.0	4.5	0	"	H 2232	0.5	0.3	0	"	σ	1.6	3.8	1
"	H 1857	1.1	1.3	6	"	30358	2.0	2.9	0	"	H 2233	0.6	0.1	1	"	σ	1.5	3.7	1
"	H 1861	2.4	4.8	2	"	30350	2.8	3.8	2	"	H 2236	0.4	0.0	4	"	29624	2.7	7.4	1
"	σ	2.2	1.6	0	417	H 1172	2.1	0.1	2	"	H 2240	0.4	0.0	0	"	30358	3.6	12.5	2
"	σ	2.0	1.6	2	"	H 1181	3.3	0.0	5	"	H 1988	0.3	5.3	2	"	30980	4.2	13.3	2
"	σ	2.0	1.6	2	"	H 1186	2.0	0.0	6	"	H 2015	1.4	4.0	1	472	H 1647	1.0	0.0	3
"	25527	4.2	7.0	3	"	H 1189	0.9	0.1	5	"	H 2250	2.8	4.8	5	"	H 1659	0.5	0.1	4
"	25383	2.1	9.0	1	"	H 1194	0.6	0.4	2	"	18321	1.3	2.4	0	"	H 1660	1.1	0.3	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
472	H 1665	1.1	*0.0*	2	499	H 3639	1.0	*0.0*	2	502	32200	3.2	*9.4*	2	514	17696	3.2	*2.8*	3
"	H 1941	*1.7*	0.8	*1*	"	H 3307	*0.9*	4.0	*1*	"	1800	1.5	*6.1*	*9*	"	17714	3.2	*2.0*	*1*
"	H 1949	*2.4*	0.2	*3*	"	H 3594	0.0	2.6	0	513	H 2931	0.7	0.0	*3*	"	17753	4.1	*2.0*	2
"	H 1948	0.6	0.0	0	"	H 3656	*0.8*	2.4	0	"	H 2927	*0.1*	*0.0*	*4*	"	17875	4.7	*2.2*	*1*
"	H 1947	1.2	*0.0*	*1*	"	σ	1.5	*3.3*	0	"	H 2933	*1.5*	0.3	n	"	18097	3.8	*1.3*	1
"	H 1942	0.4	*0.0*	*1*	"	σ	1.6	*3.4*	1	"	H 3076	*0.4*	*0.0*	*5*	"	18369	4.6	*1.7*	*2*
"	H 2053	0.7	0.5	*2*	"	11598	4.7	*13.6*	0	"	H 3085	0.8	0.1	*3*	"	18321	1.4	*2.4*	0
"	H 2054	0.5	0.8	1	"	12688	2.2	*6.2*	*2*	"	H 3097	0.9	0.3	5	"	18212	3.0	*2.4*	1
"	H 2055	1.0	0.2	2	501	H 2161	0.3	*0.0*	*5*	"	H 3099	1.8	0.1	5	"	18240	3.8	*2.6*	0
"	H 2060	*0.7*	*0.0*	*1*	"	H 2160	2.1	*0.0*	2	"	H 3403	0.3	*0.0*	*1*	"	18500	4.4	*2.8*	*1*
"	H 1658	0.5	2.9	*1*	"	H 2165	0.4	0.1	1	"	H 3402	*0.2*	0.1	0	"	19007	3.0	*2.2*	4
"	H 1669	0.9	2.5	0	"	H 2166	0.6	0.1	*2*	"	H 3406	0.5	0.1	*3*	"	20125	1.6	*2.3*	1
"	H 1966	2.0	3.2	2	"	H 2167	*0.2*	0.1	*4*	"	H 3409	1.4	0.4	2	"	19284	*0.2*	*2.1*	1
"	12688	1.4	*2.4*	2	"	H 2442	*0.3*	0.3	2	"	H 3861	0.9	0.3	5	"	19424	2.5	*2.2*	*4*
"	σ	1.4	*3.8*	*2*	"	H 2439	1.4	*0.0*	1	"	H 3863	1.5	0.2	5	"	19532	3.9	*2.6*	2
"	σ	1.6	*3.6*	0	"	H 2461	1.0	0.0	*2*	"	H 3864	0.3	*0.0*	*3*	"	19809	3.5	*2.6*	*1*
"	31530	1.4	*4.4*	*5*	"	H 2464	0.9	*0.0*	*1*	"	H 2878	0.6	3.4	p	"	19776	2.1	*2.9*	*3*
"	32303	3.6	*9.1*	4	"	H 2757	0.0	0.1	4	"	H 2955	0.3	2.5	*5*	"	19742	4.3	*2.2*	*1*
"	78	2.8	*9.0*	1	"	H 2758	0.1	*0.0*	2	"	H 3594	0.0	2.6	2	"	20125	1.5	*2.3*	0
497	H 3121	0.7	*0.0*	*3*	"	H 2761	0.2	0.0	*1*	"	H 3855	0.3	2.3	3	"	20818	1.1	*2.2*	*3*
"	H 3124	0.5	*0.0*	0	"	H 2767	0.5	0.0	0	"	27956	1.4	*1.9*	*1*	"	20104	1.1	*2.0*	*1*
"	H 3123	0.6	0.0	*2*	"	H 2124	1.9	5.3	*3*	"	σ	1.4	*3.4*	*2*	"	20152	3.8	*2.1*	2
"	H 3127	1.6	0.1	6	"	H 2107	2.5	3.0	2	"	σ	1.5	*3.4*	*1*	"	20624	3.9	*1.7*	0
"	H 3131	1.5	0.2	2	"	H 2460	2.1	2.5	0	"	6105	3.9	*9.4*	6	"	Z 2394	4.7	*1.7*	0
"	H 3132	1.3	0.4	5	"	17440	0.7	*2.3*	*4*	"	12688	2.0	*6.2*	*2*	"	20423	4.0	*1.7*	0
"	H 3174	*0.6*	0.0	*3*	"	σ	1.6	*3.6*	0	514	H 2051	0.1	0.1	6	"	21385	4.2	*3.3*	*1*
"	H 3624	*0.8*	0.1	*1*	"	σ	1.4	*3.5*	*2*	"	H 2064	1.8	0.1	4	"	σ	1.6	*3.7*	0
"	H 3622	1.3	0.1	1	"	σ	1.5	*3.4*	0	"	H 2065	1.0	0.3	1	"	σ	1.4	*3.6*	*1*
"	H 3618	0.1	*0.0*	*5*	"	5090	5.5	*13.8*	4	"	H 2068	0.6	0.3	*5*	"	σ	1.3	*3.4*	*2*
"	H 3126	0.9	3.3	*2*	"	5219	4.2	*10.8*	*1*	"	H 2071	0.8	0.1	*1*	"	78	3.4	*9.0*	8
"	H 3307	*0.5*	4.0	0	502	H 1963	*1.2*	*0.0*	2	"	H 2489	*0.3*	0.2	0	516	H 2078	*1.8*	*0.0*	2
"	H 3594	0.3	2.6	1	"	H 1965	*0.6*	0.1	6	"	H 2491	1.6	0.1	*3*	"	H 2079	0.7	0.1	4
"	H 3650	1.8	3.6	1	"	H 1970	0.3	0.0	1	"	H 2492	0.8	0.0	*2*	"	H 2091	0.8	*0.0*	1
"	σ	1.5	*3.3*	*1*	"	H 2091	0.3	*0.0*	1	"	H 2490	0.0	*0.0*	*8*	"	H 2137	0.2	0.2	*1*
"	σ	1.4	*3.4*	*2*	"	H 2095	0.2	*0.0*	1	"	H 2636	*0.9*	0.2	*2*	"	H 2142	1.0	0.0	*1*
"	8667	4.4	*13.2*	3	"	H 2094	*0.2*	0.2	2	"	H 2638	*1.0*	0.0	4	"	H 2143	0.9	0.2	0
"	11598	4.3	*13.6*	1	"	H 2099	1.8	*0.0*	1	"	H 2640	*0.2*	*0.0*	*1*	"	H 2149	1.7	0.7	2
499	H 3218	*1.5*	*0.0*	0	"	H 2100	0.6	*0.0*	0	"	H 2107	2.0	3.0	*1*	"	H 2164	0.2	0.9	*9*
"	H 3219	0.1	0.0	0	"	H 2378	*2.7*	*0.0*	*9*	"	H 2124	1.7	5.3	1	"	H 2058	2.2	2.8	A
"	H 3220	0.5	0.2	*4*	"	H 2380	0.1	0.0	*3*	"	H 2510	0.6	3.6	*1*	"	14829	0	*1.7*	*1*
"	H 3222	0.8	0.0	R	"	H 2385	*0.7*	0.3	*3*	"	Z 549	3.5	*1.7*	0	"	19197	0.4	*1.7*	*1*
"	H 3237	*2.2*	*0.1*	*1*	"	H 2388	*0.8*	0.0	*5*	"	Z 649	4.1	*1.7*	*1*	"	19284	*0.4*	*2.1*	*1*
"	H 3238	0.8	*0.0*	1	"	H 2058	1.8	2.8	3	"	16619	3.1	*2.1*	1	"	σ	1.6	*3.7*	2
"	H 3240	*1.0*	0.0	0	"	H 2107	2.2	3.0	5	"	16952	2.1	*2.1*	*2*	"	σ	1.5	*3.6*	1
"	H 3246	0.2	0.3	*4*	"	H 2356	*0.5*	3.3	*7*	"	16438	1.5	*2.4*	*1*	"	σ	1.5	*3.5*	1
"	H 3602	*0.1*	0.0	*4*	"	19197	0.4	*1.7*	1	"	16529	3.9	*2.4*	0	517	H 2095	0.0	*0.0*	*4*
"	H 3605	*1.1*	0.1	3	"	σ	1.4	*3.7*	*1*	"	16859	2.0	*2.5*	0	"	H 2099	2.0	*0.0*	0
"	H 3626	1.0	0.1	*3*	"	σ	1.5	*3.6*	1	"	16709	2.6	*3.0*	0	"	H 2100	0.7	*0.0*	*2*
"	H 3635	*0.1*	0.1	3	"	σ	1.5	*3.5*	1	"	14444	3.7	*3.3*	2	"	H 2104	1.2	0.0	2
"	H 3638	*0.6*	*0.0*	1	"	78	3.2	*9.0*	2	"	17440	1.2	*2.3*	1	"	H 2105	1.1	*0.0*	*4*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Pr.	Path.	Res.
517	H 2115	1.8	*0.0*	*2*	525	H 2146	1.1	0.0	*3*	526	H 2571	0.9	0.0	5	533	σ	1.4	*3.4*	*1*
"	H 2120	*1.7*	*0.0*	2	"	H 2134	*2.0*	*0.0*	*1*	"	H 2572	*0.5*	0.3	3	"	σ	1.4	*3.3*	*1*
"	H 2121	0.6	*0.0*	*4*	"	H 2139	1.8	0.0	*2*	"	H 2573	1.0	*0.0*	*1*	"	6105	2.9	*9.4*	0
"	H 2358	0.3	0.0	0	"	H 2140	2.1	0.0	3	"	H 2710	0.0	0.5	*6*	"	7097	2.8	*6.6*	1
"	H 2359	1.6	0.0	2	"	H 2148	1.3	*0.0*	0	"	H 2716	0.9	0.0	1	534	H 3060	1.4	0.1	1
"	H 2366	0.3	*0.0*	2	"	H *2706*	0.6	0.1	5	"	H 2728	0.8	0.0	*2*	"	H 3061	1.2	0.5	0
"	H 2369	0.9	*0.0*	0	"	H 2705	0.9	0.1	*2*	"	H 2718	1.5	0.1	3	"	H 3075	1.6	0.0	2
"	H 2589	*1.0*	*0.0*	0	"	H 2704	1.5	0.2	*2*	"	H 2569	*0.8*	2.1	1	"	H 3080	1.7	0.2	5
"	H 2587	0.2	0.0	2	"	H 2703	0.9	0.1	0	"	H 2593	1.8	3.1	*1*	"	H 3552	*0.1*	*0.0*	1
"	H 2586	*0.3*	0.0	*2*	"	H 2702	1.4	*0.0*	5	"	H 2717	1.7	4.3	1	"	H 3554	*1.8*	*0.0*	*3*
"	H 2585	0.2	*0.0*	*1*	"	H 2701	0.7	*0.0*	*4*	"	14829	0.2	*1.7*	*1*	"	H 3553	1.3	*0.0*	R
"	H 2582	0.8	0.0	0	"	H 2124	1.3	5.3	*3*	"	15189	2.1	*2.2*	1	"	H 3555	1.0	0.1	*3*
"	H 2107	2.2	3.0	1	"	H 2717	1.7	4.3	2	"	σ	1.5	*3.7*	*1*	"	H 3723	*0.1*	0.0	2
"	H 2124	1.6	5.3	*2*	"	H 2766	*1.3*	2.5	2	"	σ	1.5	*3.4*	0	"	H 3724	1.5	0.3	8
"	H 2593	1.7	3.1	*1*	"	18722	1.5	*2.0*	0	"	σ	1.6	*3.4*	1	"	H 3732	*1.2*	0.3	1
"	H 2696	*0.2*	2.0	0	"	18868	2.6	*2.0*	*2*	"	31530	1.7	*4.4*	*1*	"	H 3734	1.2	*0.0*	*3*
"	20034	1.2	*2.0*	0	"	18374	3.0	*2.1*	1	"	5090	4.0	*13.8*	2	"	H 3743	0.7	*0.0*	2
"	20818	1.5	*2.2*	2	"	19007	2.5	*2.2*	*1*	"	5219	3.3	*10.8*	*1*	"	H 3081	1.2	3.0	1
"	σ	1.4	*3.7*	*1*	"	18500	4.6	*2.8*	0	531	H 2360	*2.2*	0.2	*1*	"	H 3594	0.3	2.6	1
"	σ	1.6	*3.5*	1	"	17401	3.2	*1.7*	4	"	H 2363	1.3	0.4	*2*	"	H 3757	*1.6*	2.5	*1*
"	σ	1.5	*3.4*	0	"	17694	3.0	*1.8*	0	"	H 2365	0.2	0.3	0	"	σ	1.7	*3.3*	1
"	78	2.5	*9.0*	*2*	"	18097	3.6	*1.3*	*3*	"	H 2361	1.7	0.0	*3*	"	σ	1.6	3.4	0
"	32303	3.1	*9.1*	0	"	18369	5.1	*1.7*	2	"	H 2531	0.1	*0.0*	2	"	σ	1.6	*3.4*	0
"	1800	2.2	*6.1*	*1*	"	17753	4.2	*2.0*	2	"	H 2525	3.0	0.2	p	"	7097	3.2	*6.6*	0
522	H 2057	*0.2*	0.1	2	"	17714	3.5	*2.0*	1	"	H 2524	1.9	0.1	7	"	6907	4.5	*13.6*	*1*
"	H 2059	1.9	0.0	2	"	17696	3.0	*2.8*	0	"	H 2522	0.4	*0.0*	0	"	11598	4.7	*13.6*	1
"	H 2063	*1.6*	*0.0*	0	"	18240	3.7	*2.6*	*1*	"	H 2877	*0.7*	*0.0*	*4*	"	13048	4.2	*14.2*	*3*
"	H 2069	1.1	0.2	2	"	18321	1.6	*2.4*	1	"	H 2880	*1.7*	0.2	0	535	H 2428	0.1	0.0	*2*
"	H 2081	0.3	0.2	*2*	"	17875	5.1	*2.2*	3	"	H 2881	1.5	0.0	4	"	H 2429	0.4	0.0	*9*
"	H 2083	1.0	0.3	0	"	18802	5.0	*2.3*	2	"	H 3053	0.5	0.2	3	"	H 2433	*1.4*	0.4	*5*
"	H 2338	*2.3*	1.1	2	"	19017	3.1	*1.7*	*3*	"	H 3054	0.9	0.5	2	"	H 2538	1.0	0.0	2
"	H 2339	1.9	0.7	*3*	"	19098	4.2	*3.2*	0	"	H 3058	0.2	*0.0*	*1*	"	H 2537	0.6	0.3	*1*
"	H 2318	1.7	0.7	*2*	"	19424	2.9	*2.2*	0	"	H 2813	0.7	3.1	1	"	H 2715	0.3	0.0	1
"	H 2343	*0.7*	0.1	*1*	"	19809	3.3	*2.6*	*3*	"	H 2878	*1.0*	3.4	0	"	H 2718	1.7	0.1	4
"	H 2344	0.2	0.2	*1*	"	19532	3.4	*2.6*	*3*	"	σ	1.6	*3.5*	1	"	H 3073	1.4	0.6	0
"	H 2352	0.1	0.5	*2*	"	19742	4.3	*2.2*	0	"	σ	1.6	*3.4*	1	"	H 3079	1.1	0.7	3
"	H 2364	1.6	0.0	3	"	20152	3.6	*2.1*	*1*	"	σ	1.4	*3.3*	*1*	"	H 3096	1.2	0.3	2
"	H 2107	2.3	3.0	0	"	20423	4.1	*1.7*	0	"	7097	3.0	*6.6*	*1*	"	H 3102	*0.1*	0.0	*5*
"	H 2399	1.7	5.3	*1*	"	20624	4.3	*1.7*	3	533	H 2631	0.7	0.0	*1*	"	H 2399	1.6	5.3	1
"	20034	1.2	*2.0*	*1*	"	Z 2394	4.8	*1.7*	0	"	H 2632	*0.7*	0.1	1	"	H 3081	0.8	3.0	0
"	σ	1.4	*3.7*	*1*	"	σ	1.3	*3.7*	*2*	"	H 2633	*0.3*	0.1	*1*	"	H 3126	0.8	3.3	*1*
"	σ	1.5	*3.5*	1	"	σ	1.6	*3.4*	1	"	H 2635	0.9	0.0	0	"	σ	1.3	*3.5*	*3*
"	32200	2.0	*9.4*	*1*	"	5090	3.7	*13.8*	0	"	H 2832	0.2	0.1	4	"	σ	1.5	*3.4*	*1*
"	32303	2.6	*9.1*	1	"	5219	2.9	*10.8*	*4*	"	H 2831	0.5	0.0	*5*	"	σ	1.6	*3.3*	0
"	1800	2.1	*6.1*	1	526	H 1957	1.7	0.0	4	"	H 2842	0.1	0.0	*3*	"	1800	2.4	*6.1*	2
"	1738	2.8	*8.0*	2	"	H 1958	0.4	0.0	*3*	"	H 2947	*1.1*	*0.0*	*2*	"	7097	2.7	*6.6*	*2*
525	H 2128	*0.2*	*0.0*	1	"	H 1961	*1.1*	0.4	*3*	"	H 2948	1.8	0.2	5	"	6907	4.1	*13.6*	4
"	H 2129	1.1	*0.0*	1	"	H 1968	0.5	*0.0*	2	"	H 2949	*0.2*	0.0	*3*	536	H 2181	*0.6*	0.3	n
"	H 2131	1.0	0.0	1	"	H 1984	1.3	*0.0*	3	"	H 2878	*0.3*	3.4	0	"	H 2178	1.0	0.3	*4*
"	H 2145	1.8	0.0	2	"	H 1983	1.1	0.1	*2*	"	H 2955	1.3	2.5	*1*	"	H 2179	1.1	0.6	*3*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
536	H 2501	1.1	0.0	1	539	H 3183	1.6	0.2	0	542	H 3081	1.0	3.0	1	544	Z 2394	4.9	1.7	1
"	H 2502	1.3	0.1	1	"	H 3184	1.6	0.4	2	"	σ	1.7	3.6	1	"	21889	2.7	2.0	0
"	H 2505	1.5	0.0	2	"	H 3185	1.3	0.2	2	"	σ	1.4	3.4	1	"	21937	3.0	1.9	0
"	H 2750	0.3	0.4	3	"	H 3186	1.7	0.0	0	"	σ	1.4	3.3	1	"	21943	3.5	2.1	1
"	H 2753	1.8	0.4	2	"	H 3192	0.6	0.4	1	"	6105	3.0	9.4	1	"	21950	4.8	2.1	1
"	H 2754	1.4	0.1	3	"	H 2791	1.9	0.1	2	"	6907	3.7	13.6	1	"	22037	4.3	2.1	1
"	H 2918	0.2	0.0	2	"	H 2813	1.0	3.1	0	"	7097	3.0	6.6	1	"	Z 1809	4.2	1.7	1
"	H 2920	1.5	0.1	1	"	H 3126	1.0	3.3	0	543	H 2244	0.7	0.1	4	"	Z 695	4.3	1.7	0
"	H 3105	0.0	0.0	3	"	σ	1.7	3.4	1	"	H 2246	0.3	0.1	1	"	22090	2.4	2.8	1
"	H 3107	0.7	0.2	0	"	σ	1.8	3.3	0	"	H 2247	0.3	0.0	3	"	22253	2.2	2.1	1
"	H 3108	1.3	0.1	1	"	5090	4.4	13.8	2	"	H 2249	1.6	0.0	2	"	22269	5.1	1.9	1
"	H 3139	1.0	0.1	3	"	8667	4.0	13.2	1	"	H 2390	0.7	0.0	2	"	22858	3.0	2.0	1
"	H 2197	1.1	3.5	1	540	H 2144	0.8	0.0	0	"	H 2392	1.1	0.1	4	"	23025	3.4	2.8	4
"	H 2510	0.7	3.6	0	"	H 2127	2.3	0.0	4	"	H 2398	0.6	0.0	0	"	23027	3.3	2.8	1
"	H 3126	1.1	3.3	2	"	H 2125	1.1	0.3	2	"	H 2762	0.1	0.0	1	"	23192	2.5	2.0	0
"	σ	1.7	3.6	0	"	H 2152	1.0	0.2	3	"	H 2764	3.9	0.0	2	"	23429	3.5	1.8	2
"	σ	1.6	3.4	0	"	H 2193	0.9	0.0	1	"	H 2768	1.5	0.0	2	"	23696	2.5	2.4	3
"	σ	1.4	3.3	2	"	H 2408	0.3	0.0	2	"	H 3090	1.4	0.0	0	"	23615	3.4	2.2	1
"	5090	3.9	13.8	0	"	H 2410	0.3	0.0	2	"	H 3091	0.1	0.2	1	"	23843	3.1	2.1	1
"	5219	3.7	10.8	2	"	H 2645	0.9	0.0	1	"	H 3099	1.3	0.1	2	"	23954	3.0	1.9	0
"	7097	2.9	6.6	1	"	H 2643	0.0	0.3	0	"	H 3102	0.2	0.0	4	"	24153	1.9	1.9	1
"	8667	3.6	13.2	2	"	H 2650	0.3	0.0	0	"	H 2250	2.7	4.8	2	"	24456	3.4	2.0	1
537	H 2150	0.2	0.0	2	"	H 2916	0.2	0.1	1	"	H 2399	1.5	5.3	3	"	24468	2.2	2.3	1
"	H 2184	0.4	0.2	1	"	H 2919	1.5	0.0	1	"	H 3126	1.0	3.3	0	"	24595	2.9	1.7	0
"	H 2185	2.1	0.1	4	"	H 2921	0.4	0.0	1	"	σ	1.5	3.6	0	"	24819	1.5	1.7	0
"	H 2514	1.7	0.0	2	"	H 2922	1.0	0.2	3	"	σ	1.4	3.4	0	"	24659	3.9	2.6	0
"	H 2512	0.0	0.0	1	"	H 2197	1.5	3.5	2	"	σ	1.7	3.3	3	"	25045	4.2	2.5	2
"	H 2721	0.5	0.0	4	"	H 2696	0.3	2.0	2	"	1869	4.1	13.2	0	"	25047	5.2	1.9	0
"	H 2722	0.9	0.0	1	"	H 2964	1.1	4.7	0	"	1800	2.1	6.1	0	"	25077	2.0	1.9	1
"	H 2719	1.1	0.2	4	"	H 2955	1.0	2.5	1	"	5090	3.4	13.8	3	"	25167	3.3	2.2	1
"	H 2868	1.8	0.0	3	"	σ	1.5	3.6	1	"	7097	2.9	6.6	1	"	25227	2.9	2.1	1
"	H 2869	0.9	0.5	0	"	σ	1.6	3.4	1	544	H 2497	0.7	0.0	3	"	25370	2.2	2.2	1
"	H 2870	1.7	0.6	1	"	σ	1.4	3.3	1	"	H 2496	0.8	0.0	1	"	25412	3.5	2.2	2
"	H 2872	0.5	0.7	1	"	6105	3.1	9.4	1	"	H 2494	2.0	0.1	0	"	25992	3.7	2.4	0
"	H 2873	1.8	0.2	2	"	6907	4.0	13.6	2	"	H 2797	0.2	0.0	1	"	25721	3.0	2.2	2
"	H 2209	1.9	3.0	2	542	H 2224	0.3	0.0	1	"	H 2800	1.0	0.0	2	"	25488	2.3	1.8	0
"	H 2717	1.9	4.3	0	"	H 2238	1.1	0.1	0	"	H 3084	2.1	0.1	0	"	25868	3.3	1.9	1
"	H 2878	0.3	3.4	1	"	H 2245	0.7	0.1	3	"	H 3090	1.3	0.0	2	"	26386	4.2	1.9	5
"	σ	1.6	3.6	0	"	H 2614	0.7	0.5	4	"	H 3091	0.0	0.2	0	"	26415	2.4	1.9	1
"	σ	1.5	3.4	0	"	H 2619	1.3	0.1	1	"	H 3093	0.3	0.5	1	"	26929	2.0	1.9	0
"	σ	1.6	3.4	1	"	H 2621	0.1	0.2	1	"	H 2510	0.7	3.6	1	"	σ	1.6	3.5	0
"	5090	3.9	13.8	0	"	H 2620	0.7	0.1	2	"	H 2781	1.6	4.8	3	"	σ	1.6	3.3	0
"	5219	3.1	10.8	4	"	H 2618	0.2	0.0	6	"	H 3126	0.8	3.3	2	"	5090	3.9	13.8	8
"	6105	3.5	9.4	2	"	H 3101	0.7	0.2	4	"	19424	3.1	2.2	2	"	5219	3.5	10.8	5
539	H 2788	1.9	0.0	3	"	H 3110	0.8	0.6	4	"	19532	3.3	2.6	5	"	7097	2.8	6.6	4
"	H 2790	1.6	0.0	0	"	H 3111	2.1	0.0	6	"	19809	3.8	2.6	1	545	H 2258	0.8	0.0	0
"	H 2791	1.8	0.1	1	"	H 3112	0.8	0.0	2	"	19742	4.4	2.2	0	"	H 2266	1.3	0.2	0
"	H 2798	2.6	0.0	4	"	H 3118	1.4	0.1	3	"	21385	4.3	3.3	1	"	H 2271	0.5	0.1	0
"	H 2799	1.4	0.0	1	"	H 2569	1.0	2.1	1	"	20818	1.6	2.2	2	"	H 2279	1.5	2.3	A
"	H 3178	0.1	0.2	2	"	H 2593	1.7	3.1	1	"	21419	3.4	2.2	1	"	σ	1.7	3.5	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
545	σ	1.4	*3.4*	*1*	553	18802	4.6	*2.3*	*2*	556	H 2956	*1.0*	*0.0*	*6*	561	H 2460	2.4	2.5	3
552	H 2360	*1.5*	0.2	2	"	19017	3.7	*1.7*	2	"	H 2962	*2.4*	0.0	*5*	"	H 2955	1.2	2.5	0
"	H 2373	0.0	0.0	2	"	19098	4.0	*3.2*	*1*	"	H 2961	0.8	0.1	*1*	"	H 2964	1.4	4.7	0
"	H 2372	1.6	0.1	3	"	19532	3.5	*2.6*	*3*	"	H 3181	0.2	*0.0*	*5*	"	H 3307	*0.6*	4.0	*1*
"	H 2467	*2.1*	0.3	*1*	"	19809	3.5	*2.6*	*2*	"	H 3186	1.5	*0.0*	2	"	19532	4.1	*2.6*	2
"	H 2466	0.0	0.1	*2*	"	21385	4.4	*3.3*	1	"	H 3194	1.8	0.1	6	"	19809	3.9	*2.6*	1
"	H 2465	1.2	0.0	2	"	21889	2.6	*2.0*	*1*	"	H 2878	*0.5*	3.4	0	"	21385	4.4	*3.3*	*1*
"	H 2801	1.6	0.1	3	"	21943	3.8	*2.1*	1	"	H 3307	*0.3*	4.0	1	"	21646	5.5	*2.0*	1
"	H 2804	1.0	0.0	*3*	"	21950	4.6	*2.1*	*2*	"	σ	1.4	*3.5*	*2*	"	21943	3.7	*2.1*	0
"	H 3111	*1.8*	*0.0*	*3*	"	22037	4.2	*2.1*	*1*	"	σ	1.6	*3.4*	0	"	22269	5.2	*1.9*	*1*
"	H 3109	1.2	*0.1*	*2*	"	21937	3.3	*1.9*	3	"	σ	1.5	*3.3*	*1*	"	23025	3.8	*2.8*	*1*
"	H 3296	0.1	*0.0*	*2*	"	22090	2.4	*2.8*	1	"	6105	3.7	*9.4*	2	"	σ	1.7	*3.5*	0
"	H 3295	0.8	0.0	0	"	22253	2.1	*2.1*	*1*	559	H 3398	1.0	0.0	2	"	σ	1.5	*3.4*	*2*
"	H 3297	1.4	0.3	*2*	"	23025	3.8	*2.8*	0	"	H 3399	*0.3*	0.1	1	"	σ	1.7	*3.3*	0
"	H 3304	*0.1*	0.5	1	"	23192	2.5	*2.0*	0	"	H 3438	1.3	0.2	1	"	6105	3.1	*9.4*	*5*
"	H 2356	0.6	3.3	0	"	23429	3.3	*1.8*	*1*	"	H 3950	*0.7*	0.0	*1*	"	8667	5.0	*13.2*	7
"	H 2510	0.7	3.6	0	"	23615	3.7	*2.2*	1	"	H 3949	0.3	*0.0*	*4*	562	H 3512	1.9	0.2	3
"	H 3307	*0.9*	4.0	*1*	"	23696	2.1	*2.4*	*1*	"	H 4139	*0.9*	*0.0*	*3*	"	H 3507	1.7	0.1	3
"	21419	3.5	*2.2*	*1*	"	23843	2.9	*2.1*	*2*	"	H 4140	0.5	0.1	0	"	H 3505	1.7	0.1	*1*
"	σ	1.7	*3.5*	1	"	24153	2.1	*1.9*	1	"	H 4142	1.4	0.4	R	"	H 3514	*1.3*	0.0	*1*
"	σ	1.6	*3.3*	0	"	24456	3.3	*2.0*	*2*	"	H 3447	0.6	5.4	0	"	H 3901	*0.2*	*0.0*	1
"	σ	1.5	*3.3*	*1*	"	24595	3.0	*1.7*	0	"	H 4037	*0.2*	3.4	0	"	H 3908	0.1	*0.1*	2
"	1738	2.9	*8.0*	0	"	24819	1.8	*1.7*	2	"	σ	1.7	*3.3*	1	"	H 3913	*0.9*	0.0	*1*
"	8667	3.7	*13.2*	1	"	24659	3.8	*2.6*	*1*	"	σ	1.5	*3.5*	*1*	"	H 3910	1.6	0.2	5
553	H 2374	0.7	*0.0*	*3*	"	25045	3.9	*2.5*	*2*	"	σ	1.7	*3.5*	1	"	H 4259	0.0	0.0	0
"	H 2375	1.7	0.3	2	"	25077	2.0	*1.9*	1	"	15189	3.2	*7.5*	*1*	"	H 4260	0.9	0.1	*3*
"	H 2384	0.2	*0.0*	*3*	"	25167	3.5	*2.2*	0	560	H 2507	1.3	*0.0*	4	"	H 23	*1.3*	0.1	3
"	H 2702	1.1	*0.0*	2	"	25227	2.9	*2.1*	0	"	H 2509	0.9	0.0	*2*	"	H 42	0.1	0.5	0
"	H 2712	1.2	*0.0*	4	"	25370	2.3	*2.2*	*1*	"	H 2515	0.2	0.7	**p**	"	H 44	1.3	0.4	0
"	H 2714	*0.7*	*0.0*	*2*	"	25412	3.4	*2.2*	0	"	H 2700	*0.8*	*0.0*	*6*	"	H 45	*1.2*	0.0	*2*
"	H 2944	*2.3*	0.1	2	"	25992	3.7	*2.4*	0	"	H 2698	*0.8*	*0.0*	*1*	"	H 3506	0.7	4.1	*1*
"	H 2942	1.4	0.1	2	"	25868	3.5	*1.9*	1	"	H 2695	2.0	0.0	4	"	H 3903	0.7	2.9	3
"	H 3203	1.4	*0.0*	2	"	25721	3.3	*2.2*	0	"	H 3134	*1.7*	0.0	*9*	"	H 4256	1.9	3.7	0
"	H 3207	1.3	0.5	6	"	25488	2.5	*1.8*	1	"	H 3142	0.7	*0.0*	*3*	"	78	1.2	*2.1*	1
"	H 3321	*0.3*	*0.0*	*3*	"	26386	3.5	*1.9*	*2*	"	H 3145	1.4	0.1	*2*	"	σ	1.7	*3.4*	0
"	H 3327	1.9	0.1	3	"	26415	2.5	*1.9*	2	"	H 3147	*4.2*	0.6	4	"	σ	1.9	*3.4*	2
"	H 3332	0.6	*0.0*	*6*	"	26920	2.1	*1.9*	1	"	H 3126	0.4	3.3	A	"	σ	1.7	*3.6*	0
"	H 2399	1.6	5.3	*2*	"	27498	2.2	*2.2*	1	"	σ	1.8	*3.4*	1	"	11598	4.2	*13.6*	1
"	H 2878	*0.6*	3.4	1	"	σ	1.7	*3.5*	1	"	σ	1.6	*3.3*	*1*	"	13840	3.4	*11.1*	*2*
"	H 3389	1.4	5.0	3	"	σ	1.6	*3.4*	1	561	H 2457	*0.6*	0.0	2	"	17440	2.3	*6.9*	*1*
"	18212	3.2	*2.4*	2	"	σ	1.5	*3.3*	0	"	H 2454	0.5	0.1	2	563	H 2473	1.1	*0.0*	0
"	18097	4.1	*1.3*	2	"	1869	4.6	*13.2*	3	"	H 2459	0.6	0.3	3	"	H 2474	1.1	*0.0*	3
"	18369	4.9	*1.7*	*1*	"	6105	3.0	*9.4*	*3*	"	H 2944	*2.4*	0.1	1	"	H 2475	2.6	0.1	6
"	19007	2.7	*2.2*	0	"	8667	3.9	*13.2*	1	"	H 2947	*1.2*	*0.0*	*2*	"	H 2478	2.3	0.1	*1*
"	18374	3.2	*2.1*	0	556	H 2378	*1.3*	*0.0*	0	"	H 2949	0.0	0.0	0	"	H 2479	0.6	*0.0*	*1*
"	17875	4.5	*2.2*	*4*	"	H 2380	0.7	0.0	*2*	"	H 3306	0.3	0.0	*4*	"	H 2480	*1.8*	*0.0*	*2*
"	18240	3.9	*2.6*	0	"	H 2520	0.0	0.3	2	"	H 3305	0.7	0.1	3	"	H 2627	*2.0*	0.1	*1*
"	18500	4.6	*2.8*	0	"	H 2527	0.6	0.3	3	"	H 3310	1.6	0.1	0	"	H 2623	0.8	*0.0*	*1*
"	18722	1.6	*2.0*	1	"	H 2868	*1.7*	*0.0*	5	"	H 3319	*0.7*	*0.0*	1	"	H 3296	0.2	*0.0*	*1*
"	18868	3.0	*2.0*	2	"	H 2864	1.7	0.0	6	"	H 3322	1.2	*0.0*	*2*	"	H 3300	0.3	0.2	2

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
563	H 3575	0.1	*0.0*	*3*	564	8667	4.4	*13.2*	*1*	567	H 4007	*0.4*	*0.0*	2	570	σ	1.6	*3.3*	*1*
"	H 3574	0.6	*0.0*	0	"	11598	4.5	*13.6*	*1*	"	H 3991	0.5	*0.0*	0	"	σ	1.4	*3.6*	*3*
"	H 3568	1.5	0.0	0	565	H 2531	0.1	*0.0*	*1*	"	H 3999	0.6	0.0	*2*	"	15189	3.3	*7.5*	0
"	H 3564	*2.3*	0.6	*1*	"	H 2534	1.9	0.6	0	"	H 4013	*1.0*	0.1	1	"	17440	2.5	*6.9*	1
"	H 2510	0.9	3.6	*1*	"	H 2533	1.9	0.2	2	"	H 4016	1.2	0.1	*3*	571	H 3608	*0.1*	0.0	1
"	H 2696	0.0	2.0	0	"	H 2532	1.2	0.2	*2*	"	H 4018	0.0	*0.0*	*1*	"	H 3620	0.5	0.1	0
"	H 3650	1.7	3.6	0	"	H 2775	0.0	*0.0*	0	"	H 3506	0.6	4.1	*2*	"	H 3618	0.6	*0.0*	*1*
"	20125	1.7	*2.3*	0	"	H 2778	1.0	0.0	2	"	H 4037	*0.1*	3.4	2	"	H 3649	0.0	0.0	0
"	Z 49	5.8	*1.7*	0	"	H 2780	0.3	0.1	0	"	30980	1.3	*1.8*	0	"	H 3648	*1.9*	0.4	*1*
"	19532	4.0	*2.6*	1	"	H 3575	0.1	*0.0*	*2*	"	σ	1.8	*3.4*	1	"	H 3631	*2.9*	0.8	1
"	19809	3.8	*2.6*	0	"	H 3574	0.5	*0.0*	0	"	σ	1.6	*3.5*	*1*	"	H 68	0.8	*0.0*	2
"	21385	4.3	*3.3*	1	"	H 3576	1.7	0.0	2	"	15189	3.4	*7.5*	*1*	"	H 67	1.2	0.0	*4*
"	21646	5.3	*2.0*	*1*	"	H 3580	0.2	0.0	*3*	569	H 3687	*0.3*	0.6	1	"	H 63	1.9	*0.0*	1
"	21943	3.8	*2.1*	0	"	H 3592	*0.3*	0.1	3	"	H 3688	1.1	0.1	1	"	H 62	0.2	*0.1*	0
"	23025	4.2	*2.8*	3	"	H 2569	*0.8*	2.1	*1*	"	H 3681	1.1	0.0	0	"	H 58	1.3	0.0	1
"	σ	1.8	*3.5*	1	"	H 2781	1.9	4.8	2	"	H 4031	*0.5*	*0.0*	0	"	H 3656	*0.6*	2.4	1
"	σ	1.5	*3.3*	*1*	"	H 3594	0.3	2.6	*1*	"	H 4028	1.4	*0.0*	4	"	H 9	*2.0*	2.0	*1*
"	σ	1.4	*3.4*	*2*	"	20034	1.5	*2.0*	0	"	H 4040	*0.8*	0.0	0	"	78	1.2	*2.1*	1
"	5090	4.6	*13.8*	6	"	20104	1.4	*2.0*	*1*	"	H 4034	*0.7*	0.2	2	"	σ	1.6	*3.4*	*1*
"	5219	3.4	*10.8*	*2*	"	21385	4.4	*3.3*	*2*	"	H 103	*2.5*	*0.0*	0	"	σ	1.8	*3.6*	0
"	11598	3.8	*13.6*	*2*	"	23025	4.1	*2.8*	1	"	H 106	1.3	*0.0*	*5*	"	11598	4.3	*13.6*	*1*
564	H 2539	*2.0*	0.0	1	"	σ	1.7	*3.5*	*1*	"	H 123	1.2	0.0	1	"	17440	2.6	*6.9*	1
"	H 2535	1.0	0.0	4	"	σ	1.7	*3.3*	*1*	"	H 107	0.3	1.0	1	572	H 3818	*0.9*	*0.0*	*1*
"	H 2536	0.7	*0.0*	*3*	"	σ	1.7	*3.4*	*1*	"	H 3656	*0.7*	2.4	*2*	"	H 3809	0.2	*0.0*	3
"	H 2775	*0.3*	*0.0*	*2*	"	5219	4.5	*10.8*	2	"	H 4009	1.3	2.7	2	"	H 3811	0.1	0.0	*1*
"	H 2773	*0.6*	0.0	2	"	5090	5.6	*13.8*	6	"	H 142	*1.8*	2.2	1	"	H 3802	1.3	*0.0*	0
"	H 2774	*2.2*	0.2	*3*	"	11598	4.8	*13.6*	*2*	"	29624	1.4	*2.1*	0	"	H 3836	*2.3*	0.1	*1*
"	H 3270	*2.0*	*0.0*	*3*	566	H 2804	1.2	0.0	1	"	32303	1.3	*2.0*	*2*	"	H 18	0.6	*0.0*	*3*
"	H 3263	0.6	*0.0*	*1*	"	H 2807	*1.4*	0.4	2	"	32200	1.0	*2.0*	0	"	H 17	0.4	*0.0*	1
"	H 3277	0.7	0.0	2	"	H 2806	1.4	0.3	0	"	σ	1.5	*3.4*	*3*	"	H 16	1.3	*0.0*	0
"	H 3565	1.1	*0.0*	*2*	"	H 2808	1.3	0.3	2	"	σ	1.9	*3.6*	1	"	H 15	1.0	0.0	*3*
"	H 3561	2.0	0.0	p	"	H 3174	*0.7*	0.0	*3*	"	12688	2.8	*6.2*	3	"	H 23	*1.5*	0.1	1
"	H 3575	0.1	*0.0*	*1*	"	H 3157	*1.4*	*0.0*	1	"	15189	3.6	*7.5*	0	"	H 3798	0.1	5.4	*2*
"	H 3574	0.4	*0.0*	0	"	H 3154	0.0	0.0	*3*	"	17440	2.7	*6.9*	1	"	H 9	*1.6*	2.0	1
"	H 3560	0.9	0.2	2	"	H 3537	*0.4*	*0.0*	*1*	570	H 3427	0.9	0.0	*1*	"	32200	1.1	*2.0*	1
"	H 3564	*2.4*	0.6	*1*	"	H 3538	*1.1*	*0.0*	*1*	"	H 3422	1.5	0.0	*2*	"	32303	1.7	*2.0*	2
"	H 2569	*0.8*	2.1	*1*	"	H 3540	0.8	0.2	0	"	H 3429	*3.5*	0.1	1	"	σ	1.6	*3.4*	*1*
"	H 3650	1.8	3.6	0	"	H 3544	0.9	0.6	0	"	H 4020	*1.5*	0.3	*1*	"	σ	1.6	*3.6*	*2*
"	Z 49	5.6	*1.7*	*1*	"	H 2813	1.7	3.1	5	"	H 4022	0.5	0.7	*2*	"	13246	3.8	*13.8*	*1*
"	19532	4.1	*2.6*	3	"	H 3506	1.0	4.1	*1*	"	H 4018	0.3	*0.0*	1	"	17440	2.4	*6.9*	*1*
"	19809	3.7	*2.6*	0	"	H 3498	1.1	3.0	*5*	"	H 4047	*1.2*	*0.0*	0	573	H 3805	1.5	0.0	3
"	20104	1.3	*2.0*	*1*	"	22180	2.1	*2.6*	1	"	H 4050	1.2	0.0	0	"	H 3806	1.3	*0.0*	1
"	21385	4.5	*3.3*	1	"	σ	1.2	*3.4*	*4*	"	H 4067	0.9	*0.0*	*1*	"	H 3817	0.6	0.0	*2*
"	21943	3.6	*2.1*	*1*	"	σ	2.0	*3.3*	4	"	H 4247	0.1	0.0	1	"	H 3836	*2.1*	0.1	1
"	23025	4.2	*2.8*	3	"	σ	1.4	*3.4*	*2*	"	H 4245	0.9	0.0	4	"	H 3818	*0.6*	*0.0*	2
"	σ	1.8	*3.5*	1	"	5219	4.1	*10.8*	2	"	H 4259	0.1	0.0	1	"	H 147	0.5	0.0	*5*
"	σ	1.5	*3.3*	*1*	"	11598	4.5	*13.6*	0	"	H 3447	0.7	5.4	0	"	H 135	0.5	0.0	*2*
"	σ	1.7	*3.4*	0	567	H 3514	*1.0*	0.0	3	"	H 4037	0.0	3.4	2	"	H 146	1.2	0.0	*2*
"	5219	4.0	*10.8*	0	"	H 3525	0.7	0.3	0	"	H 4256	2.0	3.7	*1*	"	H 148	*0.4*	0.5	1
"	5090	4.6	*13.8*	*1*	"	H 3522	1.1	*0.0*	*2*	"	27836	1.8	*1.8*	2	"	H 162	*0.3*	0.1	*2*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D	Design.	Obs. Br.	Path.	Res.
573	H 3855	0.5	2.3	*1*	574	H 3940	*0.3*	0.0	0	576	H 4057	*3.4*	*0.1*	*1*	576	18321	2.5	*6.2*	*1*
"	H 184	2.0	4.4	0	"	H 3946	0.8	0.0	0	"	H 4052	*0.4*	*0.1*	*2*	"	19197	3.5	*13.8*	*2*
"	29624	1.2	*2.1*	*2*	"	H 3945	1.2	0.0	*1*	"	H 4056	1.6	0.0	*3*	579	H 4152	1.7	0.0	1
"	29060	2.5	*2.4*	0	"	H 3757	*1.1*	2.5	A	"	H 4063	T	0.0	T	"	H 4151	*0.1*	0.1	0
"	29187	4.9	*2.5*	*3*	"	29624	1.4	*2.1*	0	"	H 4080	*2.0*	0.1	0	"	H 4156	2.1	0.0	1
"	29222	5.5	*2.4*	1	"	29060	2.4	*2.4*	*1*	"	H 4073	*0.6*	0.7	1	"	H 4157	0.0	*0.0*	0
"	28929	3.3	*1.8*	1	"	29187	5.2	*2.5*	0	"	H 220	*0.8*	0.0	0	"	H 4167	1.9	0.0	1
"	29062	3.3	*1.8*	*2*	"	29062	3.6	*1.8*	1	"	H 239	*0.9*	0.1	0	"	H 4162	0.3	0.4	*3*
"	29170	3.9	*1.8*	*1*	"	29234	2.9	*1.7*	*3*	"	H 236	0.7	*0.0*	2	"	H 4180	*0.4*	0.0	0
"	29234	3.4	*1.7*	2	"	29316	2.5	*1.8*	0	"	H 237	0.3	0.0	*3*	"	H 162	*0.3*	0.1	*1*
"	29316	2.5	*1.8*	0	"	29170	4.0	*1.8*	0	"	H 247	1.8	0.1	5	"	H 166	1.6	0.0	3
"	29847	3.3	*1.7*	0	"	29210	3.1	*2.2*	1	"	H 249	0.7	*0.0*	*2*	"	H 171	1.9	0.0	R
"	*29235*	2.5	*2.1*	1	"	*29235*	2.3	*2.1*	*1*	"	H 271	*0.8*	*0.0*	2	"	H 183	*1.2*	0.0	*1*
"	29210	3.1	*2.2*	1	"	29605	3.1	*7.3*	*2*	"	H 4127	1.0	4.1	0	"	H 185	*2.4*	0.5	0
"	28938	3.2	*2.2*	*1*	"	29677	5.0	*2.1*	1	"	H 287	*0.6*	2.7	*1*	"	H 192	1.7	0.0	*1*
"	29605	2.9	*2.1*	0	"	30045	3.4	*2.2*	1	"	30358	1.1	*1.8*	2	"	H 197	*0.2*	0.3	*3*
"	29677	4.7	*2.1*	*2*	"	29568	2.7	*2.5*	0	"	30380	1.7	*2.7*	0	"	H 220	*0.9*	0.0	0
"	30045	3.1	*2.2*	*2*	"	29222	5.4	*2.4*	0	"	30400	4.1	*2.2*	1	"	H 4191	2.4	2.9	*4*
"	29300	3.6	*2.0*	1	"	29300	3.6	*2.0*	1	"	30693	4.1	*2.1*	1	"	H 184	1.6	4.4	1
"	*29431*	3.9	*2.6*	1	"	*29431*	3.7	*2.6*	*1*	"	30701	2.5	*2.2*	*1*	"	H 219	*1.2*	2.1	3
"	29568	2.7	*2.5*	0	"	29562	3.7	*2.3*	1	"	30816	3.9	*2.3*	0	"	30879	0.1	*1.9*	1
"	29562	3.6	*2.3*	0	"	29629	5.3	*3.1*	2	"	31096	4.3	*1.7*	1	"	30980	1.1	*1.8*	*1*
"	29823	4.0	*2.8*	*2*	"	29823	4.4	*2.8*	2	"	31360	1.9	*1.7*	0	"	31530	1.2	*3.0*	*3*
"	29629	4.9	*3.1*	*2*	"	29847	3.0	*1.7*	*3*	"	31518	3.5	*1.7*	*1*	"	78	0.9	*2.1*	0
"	Z 1107	4.4	*1.7*	0	"	Z 1107	4.3	*1.7*	*1*	"	31548	2.0	*1.7*	0	"	32200	0.8	*2.0*	0
"	*30373*	4.8	*1.8*	0	"	*30373*	4.8	*1.8*	0	"	32184	3.7	*1.7*	0	"	32303	1.4	*2.0*	1
"	30816	3.8	*2.3*	0	"	30400	4.0	*2.2*	0	"	32229	4.3	*1.8*	1	"	1738	1.6	*2.2*	0
"	30701	2.8	*2.2*	2	"	30701	2.6	*2.2*	0	"	32410	3.7	*1.8*	1	"	1800	1.4	*2.4*	0
"	30400	3.9	*2.2*	*1*	"	30816	3.6	*2.3*	*2*	"	32286	4.0	*2.2*	0	"	1869	1.7	*1.8*	*1*
"	30925	6.0	*2.5*	2	"	30693	3.9	*2.1*	*1*	"	32223	2.6	*2.2*	*1*	"	σ	1.4	*3.5*	*1*
"	31023	6.0	*2.5*	0	"	30632	5.2	*3.1*	0	"	32031	3.6	*2.1*	0	"	σ	1.5	*3.6*	0
"	31376	5.3	*2.5*	*1*	"	31376	5.4	*2.5*	0	"	31201	3.6	*2.1*	*1*	"	15189	3.4	*7.5*	4
"	*31195*	5.0	*2.4*	*2*	"	31413	6.0	*2.4*	2	"	*31343*	5.3	*2.1*	0	"	18321	2.2	*6.2*	0
"	31413	5.6	*2.4*	*2*	"	*31195*	5.2	*2.4*	0	"	31522	4.0	*1.8*	0	"	19197	3.1	*13.8*	0
"	32286	3.8	*2.2*	*2*	"	31023	5.9	*2.5*	*1*	"	31512	4.7	*1.8*	0	580	H 2956	*0.3*	*0.0*	1
"	32223	2.7	*2.2*	0	"	30925	5.7	*2.5*	*1*	"	31494	4.0	*1.8*	1	"	H 2959	*0.7*	0.9	0
"	32031	3.6	*2.1*	0	"	31201	3.5	*2.1*	*2*	"	31440	5.3	*1.8*	2	"	H 2962	*1.8*	0.0	1
"	31201	3.9	*2.1*	2	"	*31343*	5.3	*2.1*	0	"	31417	2.2	*1.9*	*2*	"	H 2976	*1.3*	0.3	*1*
"	*31343*	5.3	*2.1*	0	"	32031	3.4	*2.1*	*2*	"	31793	3.3	*1.9*	0	"	H 2979	*0.6*	0.0	4
"	31575	5.9	*3.0*	0	"	32223	2.7	*2.2*	0	"	31376	5.4	*2.5*	0	"	H 2990	1.1	0.0	*3*
"	31322	4.7	*3.0*	1	"	32286	4.3	*2.2*	3	"	31023	6.0	*2.5*	0	"	H 3414	0.3	*0.0*	0
"	σ	1.8	*3.4*	1	"	31575	5.9	*3.0*	0	"	30925	5.6	*2.5*	*2*	"	H 3421	*0.6*	0.2	5
"	σ	1.6	*3.6*	*1*	"	31322	4.6	*3.0*	0	"	*31195*	5.2	*2.4*	0	"	H 3429	*3.4*	0.1	4
"	13048	4.3	*14.2*	3	"	31129	4.7	*3.1*	1	"	31413	5.8	*2.4*	0	"	H 3427	0.9	0.0	1
"	17440	2.6	*6.9*	2	"	31079	5.0	*2.8*	*2*	"	31575	5.9	*3.0*	0	"	H 3951	0.3	0.1	0
574	H 3723	*0.1*	0.0	*1*	"	31876	4.1	*2.8*	2	"	31322	4.6	*3.0*	0	"	H *3970*	*1.1*	0.0	*1*
"	H 3732	*1.3*	0.3	*3*	"	σ	1.5	*3.4*	*2*	"	31129	4.8	*3.1*	2	"	H 3958	0.9	*0.0*	*3*
"	H 3739	*0.4*	0.0	1	"	σ	1.6	*3.5*	*1*	"	σ	1.8	*3.4*	1	"	H 2964	1.3	4.7	1
"	H 3738	0.8	*0.0*	*1*	"	12688	2.2	*6.2*	*1*	"	σ	1.8	*3.6*	0	"	H 3389	1.0	5.0	*1*
"	H 3741	*0.1*	0.5	4	"	13048	5.6	*14.2*	P	"	15189	3.2	*7.5*	*2*	"	H 3969	2.3	5.5	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs Br.	Path.	Res.	J. D.	Design.	Obs Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path	Res.
580	27836	1.5	*1.8*	1	582	H 2955	1.1	2.5	0	585	H 3501	2.6	0.0	4	586	29187	5.4	*2.5*	2
"	27956	1.4	*1.9*	1	"	H 3307	*0.8*	4.0	*1*	"	H 3514	*1.4*	0.0	0	"	29222	5.4	*2.4*	0
"	29042	2.6	*3.4*	0	"	H 3594	0.4	2.6	2	"	H 3525	0.6	0.3	0	"	28756	3.4	*2.2*	*2*
"	29624	1.2	*2.1*	0	"	23843	3.0	*2.1*	*1*	"	H 3527	0.4	0.9	0	"	28938	3.4	*2.2*	0
"	30358	1.0	*1.8*	3	"	24456	3.1	*2.0*	*5*	"	H 3528	*1.0*	0.9	*3*	"	28704	4.8	*2.2*	*1*
"	30380	1.6	*2.7*	1	"	25045	4.2	*2.5*	1	"	H 3543	0.7	*0.0*	*1*	"	28573	5.3	*2.2*	0
"	σ	1.3	*3.4*	*2*	"	23429	3.4	*1.8*	*1*	"	H 3745	*0.1*	0.6	2	"	28684	3.7	*2.0*	0
"	σ	1.6	*3.3*	1	"	26386	3.9	*1.9*	1	"	H 3744	1.3	0.0	3	"	28922	4.2	*2.0*	2
"	σ	1.3	*3.4*	*2*	"	27498	2.1	*2.2*	0	"	H 2964	1.4	4.7	*1*	"	*28818*	3.5	*2.4*	0
"	7097	3.0	*6.6*	1	"	σ	1.3	*3.4*	*3*	"	H 3594	0.4	2.6	1	"	29170	4.0	*1.8*	*1*
"	13840	3.1	*11.1*	*3*	"	σ	1.7	*3.3*	1	"	σ	1.6	*3.4*	*1*	"	29210	2.9	*2.2*	*2*
581	H 3343	*1.1*	0.0	2	"	σ	1.5	*3.4*	*1*	"	σ	1.6	*3.4*	*1*	"	*29235*	2.3	*2.1*	*1*
"	H 3340	0.4	0.1	*1*	"	6105	3.3	*9.4*	1	"	6907	4.8	*13.6*	1	"	29605	2.8	*2.1*	*1*
"	H 3349	0.1	0.0	1	"	6907	3.9	*13.6*	2	"	7097	3.4	*6.6*	1	"	29677	4.9	*2.1*	0
"	H 3360	0.1	0.0	*3*	"	8667	3.9	*13.2*	3	"	11598	4.9	*13.6*	2	"	30045	3.5	*2.2*	1
"	H 3368	*0.2*	0.1	*1*	"	11598	3.9	*13.6*	2	586	H 2949	0.2	0.0	0	"	29234	3.3	*1.7*	0
"	H 3372	0.3	0.2	0	584	H 2888	1.8	0.0	0	"	H 2947	*0.9*	*0.0*	*1*	"	29316	2.6	*1.8*	0
"	H 3978	0.0	0.0	0	"	H 2899	*1.3*	*0.0*	1	"	H 2944	*2.3*	0.1	0	"	29847	3.5	*1.7*	1
"	H 3991	0.5	*0.0*	1	"	H 2895	*0.4*	*0.0*	*1*	"	H 2943	1.5	0.7	*1*	"	29300	3.4	*2.0*	*1*
"	H 3994	*0.5*	0.0	1	"	H 2889	1.2	0.1	1	"	H 3421	*0.7*	0.2	0	"	*29431*	3.9	*2.6*	1
"	H 4026	*0.7*	0.2	*2*	"	H 2890	0.2	0.4	0	"	H 3430	1.5	0.0	*3*	"	29562	3.5	*2.3*	*2*
"	H 4023	1.7	0.2	0	"	H 3090	*1.3*	0.0	1	"	H 3432	0.7	0.1	0	"	29568	2.8	*2.5*	1
"	H 4020	*1.6*	0.3	0	"	H 3091	0.1	0.2	1	"	H 3445	1.1	0.0	0	"	29629	5.2	*3.1*	0
"	H 3307	*0.5*	4.0	*1*	"	H 3402	*0.1*	0.1	3	"	H 3809	0.3	*0.0*	3	"	29823	4.2	*2.8*	*1*
"	H 3389	1.3	5.0	*1*	"	H 3414	0.0	*0.0*	*3*	"	H 3811	0.3	0.0	0	"	σ	1.9	*3.4*	2
"	H 4009	1.4	2.7	2	"	H 3418	*1.9*	0.1	1	"	H 3818	*0.9*	*0.0*	*2*	"	σ	1.8	*3.4*	1
"	27836	1.5	*1.8*	1	"	H 3429	*3.9*	0.1	*1*	"	H 3836	*2.1*	0.1	0	"	σ	1.7	*3.4*	0
"	27956	1.6	*1.9*	2	"	H 3958	0.7	*0.0*	*5*	"	H 2964	1.7	4.7	0	"	7097	3.3	*6.6*	2
"	29042	2.6	*3.4*	0	"	H 3960	*0.1*	0.0	1	"	H 3447	0.8	5.4	*1*	"	6907	4.9	*13.6*	R
"	29624	1.2	*2.1*	0	"	H 3963	1.0	*0.0*	2	"	H 3798	0.5	5.4	1	"	13246	3.9	*13.8*	3
"	30358	0.8	*1.8*	1	"	H 3978	0.3	0.0	3	"	23843	3.3	*2.1*	1	587	H 3154	0.2	0.0	*2*
"	30380	1.6	*2.7*	0	"	H 2964	1.2	4.7	0	"	24456	3.8	*2.0*	1	"	H 3157	*1.4*	*0.0*	0
"	σ	1.4	*3.3*	*1*	"	H 3447	0.6	5.4	3	"	24354	5.9	*2.9*	0	"	H 3174	*0.5*	0.0	*2*
"	σ	1.4	*3.5*	*2*	"	H 3969	2.0	5.5	*2*	"	25045	4.4	*2.5*	2	"	H 3171	0.0	0.2	4
"	13840	3.5	*11.1*	*1*	"	27836	1.4	*1.8*	0	"	25047	5.3	*1.9*	*1*	"	H 3706	0.3	*0.0*	*2*
"	15189	3.5	*7.5*	2	"	27956	1.5	*1.9*	1	"	26386	3.7	*1.9*	*2*	"	H 3707	1.1	0.0	0
582	H 2909	*0.5*	*0.0*	*4*	"	29042	2.6	*3.4*	0	"	27666	5.1	*2.2*	0	"	H 3712	*0.3*	*0.0*	1
"	H 2910	1.2	0.2	0	"	29624	0.9	*2.1*	*3*	"	27799	3.5	*1.8*	0	"	H 3715	*0.2*	*0.0*	*1*
"	H 2912	1.9	0.1	4	"	30358	0.8	*1.8*	1	"	28199	4.3	*1.8*	*1*	"	H 3720	0.7	*0.0*	1
"	H *2914*	*0.2*	0.5	2	"	30380	1.6	*2.7*	0	"	28264	3.6	*1.7*	1	"	H 3739	*0.6*	0.0	0
"	H 2917	2.1	0.6	2	"	σ	1.5	*3.4*	0	"	28217	3.6	*1.7*	2	"	H 3741	*0.7*	0.5	*1*
"	H 2923	1.6	0.5	1	"	σ	1.6	*3.3*	1	"	28622	4.1	*1.9*	2	"	H 3126	1.2	3.3	*1*
"	H 2924	*2.0*	*0.1*	*2*	"	σ	1.6	*3.4*	1	"	*28676*	2.9	*1.8*	*3*	"	H 3757	*1.3*	2.5	0
"	H 3210	*0.2*	0.5	*2*	"	6105	3.6	*9.4*	1	"	28468	4.2	*1.8*	*1*	"	23429	3.3	*1.8*	*2*
"	H 3212	1.8	0.0	4	"	8667	4.1	*13.2*	0	"	28929	3.3	*1.8*	0	"	23843	3.0	*2.1*	*2*
"	H 3213	0.4	*0.0*	0	"	13840	3.8	*11.1*	2	"	29062	3.5	*1.8*	*1*	"	24456	3.8	*2.0*	1
"	H 3231	*0.6*	0.1	*1*	585	H 2960	0.4	*0.0*	2	"	28663	3.0	*2.5*	1	"	25045	4.1	*2.5*	*1*
"	H 3575	0.1	*0.0*	*3*	"	H 2956	*0.5*	*0.0*	*1*	"	28714	3.3	*2.6*	0	"	26386	3.7	*1.9*	*1*
"	H 3574	0.6	*0.0*	0	"	H 2976	*1.4*	0.3	*2*	"	28728	3.6	*2.4*	*1*	"	27666	5.0	*2.2*	0
"	H 3564	*2.0*	0.6	2	"	H 2979	*0.9*	0.0	1	"	29060	2.5	*2.4*	0	"	27799	3.4	*1.8*	0

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
587	28199	4.3	*1.8*	0	588	12688	2.0	*6.2*	*5*	590	1754	3.4	*1.8*	*1*	591	31512	4.6	*1.8*	0
"	28264	3.4	*1.7*	0	590	H 4213	0.7	*0.0*	1	"	1768	3.7	*1.7*	1	"	31793	3.1	*1.9*	0
"	28217	3.1	*1.7*	*2*	"	H 4214	1.3	0.1	0	"	1799	4.2	*1.7*	0	"	32229	4.1	*1.8*	0
"	27838	3.1	*2.4*	0	"	H 4235	0.2	0.0	*1*	"	1757	3.1	*2.2*	*2*	"	32410	3.5	*1.8*	0
"	*28676*	3.3	*1.8*	2	"	H 386	1.1	*0.0*	3	"	1893	4.0	*2.1*	*1*	"	31876	3.8	*2.8*	*1*
"	28468	4.3	*1.8*	1	"	H 389	*0.3*	0.1	0	"	2205	3.7	*2.1*	0	"	31672	3.6	*2.6*	1
"	28622	3.8	*1.9*	0	"	H 399	0.7	0.0	*2*	"	2647	3.6	*2.1*	*1*	"	32195	3.7	*2.7*	*1*
"	28756	3.5	*2.2*	0	"	H 478	1.1	0.0	4	"	1926	3.2	*1.9*	*1*	"	32098	3.7	*2.3*	0
"	28704	4.8	*2.2*	0	"	H 477	0.0	0.1	1	"	2081	2.8	*1.9*	0	"	32200	0.9	*2.0*	1
"	28573	5.2	*2.2*	0	"	H 482	*2.3*	0.0	*3*	"	2141	4.3	*2.1*	1	"	32303	1.5	*2.0*	2
"	28663	2.9	*2.5*	0	"	H 486	0.6	0.0	*1*	"	2278	3.8	*2.1*	1	"	78	1.2	*2.1*	2
"	28684	2.8	*2.0*	1	"	H 4256	2.0	3.7	*1*	"	2982	3.3	*2.0*	0	"	104	2.6	*1.8*	*3*
"	28922	3.8	*2.0*	*2*	"	H 456	1.6	2.4	1	"	2948	3.6	*1.7*	2	"	182	2.3	*1.7*	0
"	28929	3.1	*1.8*	*1*	"	31360	1.8	*1.7*	0	"	Z 1048	4.4	*1.7*	1	"	782	4.2	*2.7*	1
"	*28818*	3.5	*2.4*	0	"	31518	3.6	*1.7*	1	"	2202	3.0	*2.4*	*1*	"	700	2.8	*2.6*	1
"	28714	3.6	*2.6*	3	"	31548	2.0	*1.7*	1	"	2151	3.9	*2.5*	*1*	"	678	3.7	*2.6*	0
"	28728	4.0	*2.4*	3	"	32184	3.6	*1.7*	0	"	σ	1.8	*3.5*	1	"	639	3.9	*2.5*	0
"	σ	1.8	*3.3*	1	"	31417	2.4	*1.9*	1	"	σ	1.8	*3.7*	0	"	147	1.9	*2.5*	2
"	σ	1.8	*3.4*	0	"	31440	5.0	*1.8*	*1*	"	15189	3.4	*7.5*	*1*	"	38	3.5	*2.7*	2
"	8667	4.4	*13.2*	*2*	"	31494	4.0	*1.8*	1	"	20125	3.4	*7.1*	5	"	222	3.4	*3.2*	0
"	12688	2.4	*6.2*	*1*	"	31512	4.6	*1.8*	*1*	"	19776	3.3	*4.6*	3	"	403	3.8	*2.2*	*1*
588	H 3038	1.2	0.0	1	"	31522	4.0	*1.8*	0	591	H 18	0.6	*0.0*	0	"	646	5.1	*2.2*	0
"	H 3045	*0.8*	0.1	1	"	31793	3.1	*1.9*	*1*	"	H 23	*1.9*	0.1	0	"	1075	3.9	*2.2*	*1*
"	H 3095	*2.5*	*0.1*	1	"	32229	4.0	*1.8*	*2*	"	H 30	*0.2*	*0.0*	1	"	1114	3.3	*2.3*	1
"	H 3090	*1.3*	0.0	0	"	32410	3.6	*1.8*	0	"	H 45	*1.3*	0.0	0	"	635	3.6	*1.8*	*1*
"	H 3752	1.4	0.0	2	"	31672	3.7	*2.6*	1	"	H 289	*1.2*	0.3	0	"	839	3.7	*2.3*	*1*
"	H 3756	*0.3*	*0.0*	0	"	32195	3.9	*2.7*	0	"	H *291*	*0.4*	0.2	1	"	1304	3.7	*2.0*	*1*
"	H 3761	*0.6*	0.2	*3*	"	38	3.4	*2.7*	0	"	H 294	*0.2*	0.0	0	"	1110	3.5	*2.0*	0
"	H 3777	0.8	0.0	*3*	"	782	4.2	*2.7*	0	"	H 309	1.0	0.0	1	"	*1714*	2.9	*2.1*	*1*
"	H 3779	*0.8*	*0.0*	1	"	700	2.6	*2.6*	*2*	"	H 478	0.1	0.0	*4*	"	1738	1.6	*2.2*	*1*
"	H 3795	*1.7*	0.0	*1*	"	678	3.6	*2.6*	*2*	"	H 482	*2.4*	0.0	*2*	"	1757	3.2	*2.2*	0
"	H 3126	1.3	3.3	0	"	639	3.9	*2.5*	0	"	H 71	0.2	2.6	*1*	"	1893	4.1	*2.1*	0
"	H 3798	0.2	5.4	*1*	"	147	2.0	*2.5*	3	"	H 304	1.8	5.6	*1*	"	1869	1.8	*1.8*	0
"	23429	3.3	*1.8*	*2*	"	31876	3.9	*2.8*	0	"	H 488	2.1	2.8	1	"	1768	3.4	*1.7*	*1*
"	23843	3.3	*2.1*	1	"	31079	5.5	*2.8*	3	"	*30373*	4.6	*1.8*	*1*	"	1754	3.3	*1.8*	*1*
"	24456	3.8	*2.0*	2	"	32098	3.8	*2.3*	0	"	30693	3.6	*2.1*	*3*	"	1799	4.0	*1.7*	*1*
"	25045	4.3	*2.5*	1	"	182	2.3	*1.7*	*1*	"	31530	1.8	*3.0*	2	"	1597	3.0	*1.7*	2
"	26386	3.7	*1.9*	*1*	"	104	3.1	*1.8*	1	"	31129	4.4	*3.1*	*2*	"	1440	4.1	*1.7*	0
"	27838	3.2	*2.4*	2	"	222	3.5	*3.2*	1	"	30632	5.2	*3.1*	*1*	"	1800	1.7	*2.4*	3
"	28663	3.0	*2.5*	1	"	635	3.6	*1.8*	*2*	"	30879	*0.1*	*1.9*	*1*	"	1926	3.3	*1.9*	1
"	28728	3.6	*2.4*	0	"	403	4.0	*2.2*	0	"	30980	1.2	*1.8*	0	"	2081	2.6	*1.9*	*1*
"	28714	3.3	*2.6*	*3*	"	646	5.2	*2.2*	0	"	31096	3.8	*1.7*	*2*	"	2141	4.1	*2.1*	*1*
"	28622	3.7	*1.9*	*1*	"	1075	3.9	*2.2*	*2*	"	31360	1.8	*1.7*	1	"	2205	3.7	*2.1*	0
"	28684	3.8	*2.0*	2	"	1114	3.1	*2.3*	*2*	"	31518	3.4	*1.7*	0	"	2278	3.6	*2.1*	*1*
"	*28818*	3.5	*2.4*	1	"	839	3.9	*2.3*	0	"	31548	1.9	*1.7*	1	"	2647	3.7	*2.1*	0
"	28922	4.0	*2.0*	1	"	1110	3.5	*2.0*	*1*	"	32184	3.6	*1.7*	1	"	2982	3.2	*2.0*	0
"	σ	1.8	*3.3*	1	"	1304	3.8	*2.0*	*1*	"	31417	2.2	*1.9*	0	"	2202	3.0	*2.4*	0
"	σ	1.8	*3.4*	1	"	*1714*	3.1	*2.1*	1	"	31440	4.8	*1.8*	*2*	"	2151	4.2	*2.5*	2
"	7097	3.2	*6.6*	*1*	"	1440	4.2	*1.7*	0	"	31494	3.7	*1.8*	*1*	"	2928	3.7	*2.6*	0
"	8667	4.4	*13.2*	*1*	"	1597	2.8	*1.7*	*1*	"	31522	4.0	*1.8*	1	"	3400	4.0	*2.6*	0

J. D.	Design.	Obs. Br.	Path.	Res.
591	3451	4.6	*2.4*	2
“	3172	3.1	*2.5*	*1*
“	2948	3.4	*1.7*	1
“	3349	3.6	*1.7*	0
“	z 1048	4.1	*1.7*	*1*
“	3149	4.0	*3.2*	0
“	3715	4.3	*3.2*	*2*
“	3378	4.2	*2.5*	*1*
“	3451	4.3	*2.4*	*1*
“	3466	3.4	*1.9*	1
“	3774	3.9	*1.8*	*2*
“	3782	4.8	*1.8*	*2*
“	4075	3.3	*1.8*	*1*
“	*4272*	3.5	*1.8*	0
“	σ	1.5	*3.5*	*2*
“	σ	1.7	*3.7*	0
“	17440	3.1	*6.9*	5
“	18321	2.8	*6.2*	1
“	19197	4.7	*13.8*	3
592	H 52	1.6	*0.0*	0
“	H 68	0.3	*0.0*	1
“	H 75	0.7	0.0	4
“	H 83	*0.2*	0.4	3
“	H 375	0.6	0.0	*2*
“	H 376	0.5	0.0	*1*
“	H 380	0.2	*0.0*	*2*
“	H 385	0.1	*0.0*	2
“	H 505	*0.4*	0.2	0
“	H 508	0.8	0.0	*5*
“	H 510	0.3	0.0	3
“	H 512	T	*0.0*	T
“	H 142	*1.8*	2.2	2
“	H 384	0.8	3.8	*1*
“	H 488	1.8	2.8	0
“	31530	1.5	*3.0*	*1*
“	31129	4.4	*3.1*	*2*
“	30632	5.1	*3.1*	*1*
“	31096	4.0	*1.7*	0
“	31876	3.7	*2.8*	*2*
“	31672	3.3	*2.6*	*2*
“	32195	4.0	*2.7*	2
“	32098	3.6	*2.3*	*1*
“	700	2.7	*2.6*	0
“	782	4.2	*2.7*	1
“	678	3.7	*2.6*	0
“	639	4.0	*2.5*	1
“	147	1.7	*2.5*	0
“	38	T	*2.7*	T
“	104	3.0	*1.8*	2
“	182	2.5	*1.7*	2

J. D.	Design.	Obs. Br.	Path.	Res
592	635	3.7	*1.8*	*3*
“	222	3.2	*3.2*	*2*
“	403	3.8	*2.2*	*1*
“	646	4.9	*2.2*	*2*
“	1075	4.2	*2.2*	2
“	1114	3.3	*2.3*	1
“	839	3.8	*2.3*	0
“	32200	1.1	*2.0*	3
“	32303	1.4	*2.0*	1
“	78	1.4	*2.1*	5
“	1110	3.6	*2.0*	1
“	1304	4.0	*2.0*	2
“	*1714*	2.9	*2.1*	0
“	1597	2.7	*1.7*	*1*
“	1440	4.1	*1.7*	0
“	1768	3.5	*1.7*	0
“	1754	3.5	*1.8*	2
“	1799	4.2	*1.7*	1
“	1869	1.7	*1.8*	0
“	1757	3.2	*2.2*	0
“	1738	1.7	*2.2*	0
“	1893	4.0	*2.1*	0
“	1800	1.5	*2.4*	1
“	2202	3.1	*2.4*	1
“	2151	3.8	*2.5*	*2*
“	2081	2.8	*1.9*	1
“	1926	3.2	*1.9*	0
“	2141	4.2	*2.1*	1
“	2278	3.6	*2.1*	0
“	2205	3.6	*2.1*	0
“	2647	3.6	*2.1*	0
“	2982	3.2	*2.0*	0
“	2948	3.2	*1.7*	*1*
“	3349	3.7	*1.7*	1
“	2928	3.5	*2.6*	*2*
“	3400	4.0	*2.6*	0
“	3149	4.0	*3.2*	0
“	3715	4.4	*3.2*	*1*
“	3172	3.3	*2.5*	1
“	3378	4.4	*2.5*	1
“	3451	4.4	*2.4*	0
“	4672	2.1	*2.5*	*2*
“	4304	4.0	*2.4*	1
“	3780	3.4	*2.2*	0
“	3951	3.7	*2.0*	*1*
“	3984	3.8	*2.1*	1
“	3466	3.1	*1.9*	*2*
“	3774	4.0	*1.8*	0
“	3782	4.9	*1.8*	0
“	4075	3.2	*1.8*	*1*

J. D.	Design.	Obs. Br.	Path.	Res.
592	*4272*	3.3	*1.8*	*1*
“	*4359*	3.0	*1.7*	*5*
“	σ	1.7	*3.5*	0
“	σ	1.8	*3.7*	0
“	17440	2.7	*6.9*	*1*
“	19776	3.0	*4.6*	*1*
“	20034	4.4	*9.1*	6
593	H 4238	*0.3*	0.1	0
“	H 4241	2.2	0.0	*2*
“	H 4245	0.9	0.0	3
“	H 4247	0.1	0.0	0
“	H 404	0.5	*0.0*	2
“	H 408	1.3	0.1	*1*
“	H 409	0.4	0.0	0
“	H 418	*0.5*	0.0	*1*
“	H 453	0.2	*0.0*	*1*
“	H 464	*0.8*	0.0	*3*
“	H 9	*1.1*	2.0	4
“	H 384	1.0	3.8	*3*
“	H 456	1.7	2.4	*2*
“	30980	1.3	*1.8*	*1*
“	38	3.3	*2.7*	*2*
“	3172	3.4	*2.5*	0
“	3780	3.7	*2.2*	1
“	3984	3.8	*2.1*	*2*
“	3951	4.1	*2.0*	0
“	4304	4.1	*2.4*	*1*
“	*4359*	3.9	*1.7*	1
“	z 20	5.0	*1.7*	1
“	σ	1.8	*3.5*	0
“	σ	1.8	*3.7*	*1*
“	15189	3.5	*7.5*	0
“	19197	4.4	*13.8*	6
“	19284	1.7	*8.5*	1
596	H 3252	*0.8*	*0.0*	0
“	H 3277	1.1	0.0	5
“	H 3321	0.1	*0.0*	1
“	H 3332	0.7	*0.0*	*5*
“	H 3331	0.6	*0.0*	2
“	H 3333	1.0	*0.0*	*1*
“	27838	2.9	*2.4*	*2*
“	28622	4.1	*1.9*	2
“	σ	1.5	*3.3*	*3*
“	σ	1.9	*3.4*	1
“	9770	3.2	*5.0*	1
597	H 4185	1.4	*0.0*	*1*
“	H 4186	0.9	*0.0*	*2*
“	H 4187	0.2	*0.0*	0
“	H 4198	0.3	0.0	*3*
“	H 4212	1.1	*0.0*	*1*

J. D.	Design.	Obs. Br.	Path.	Res.
597	H 518	1.9	*0.0*	5
“	H 519	0.3	0.0	1
“	H 523	1.5	0.0	0
“	H 520	1.7	0.0	3
“	H 533	*1.1*	*0.0*	*3*
“	H 541	*2.6*	1.1	*3*
“	H 4191	3.8	2.9	4
“	H 516	1.2	3.2	*2*
“	H 583	1.3	2.7	*3*
“	σ	1.7	*3.5*	*1*
“	σ	1.8	*3.8*	*1*
“	15189	3.6	*7.5*	1
“	20104	3.5	*9.6*	1
“	20818	2.7	*7.4*	*2*
598	H 4205	0.3	*0.0*	3
“	H 4203	1.2	0.0	1
“	H 4225	1.3	0.0	*1*
“	H 4227	1.7	0.1	2
“	H 4255	0.6	0.0	2
“	H 267	1.3	*0.0*	0
“	H 270	0.5	0.0	*3*
“	H 277	1.5	0.1	5
“	H 275	1.9	0.1	0
“	H 525	0.8	0.0	*3*
“	H 527	1.3	*0.0*	1
“	H 529	0.3	0.0	*1*
“	H 530	0.3	*0.0*	*1*
“	H 4256	2.0	3.7	*1*
“	H 287	*0.4*	2.7	0
“	H 516	1.2	3.2	2
“	31548	1.9	*1.7*	*1*
“	31360	1.9	*1.7*	0
“	147	1.6	*2.5*	*2*
“	σ	1.9	*3.5*	2
“	σ	1.8	*3.7*	0
“	σ	1.9	*3.8*	1
“	15189	3.5	*7.5*	1
“	19197	3.6	*13.8*	*1*
“	20818	3.0	*7.4*	1
599	H 4251	2.1	0.1	3
“	H 4252	*0.2*	*0.0*	0
“	H 4254	1.0	*0.0*	0
“	H 4255	0.1	0.0	*3*
“	H 4259	*0.2*	0.0	0
“	H 302	0.4	*0.0*	0
“	H 315	*0.8*	*0.0*	2
“	H 313	0.7	*0.0*	*3*
“	H *320*	*0.7*	0.0	1
“	H 4256	2.2	3.7	1
“	H 304	1.4	5.6	*1*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
599	σ	1.7	*3.5*	0	605	H 122	1.6	0.1	1	619	H 89	2.2	0.0	0	620	σ	1.7	*3.7*	*1*
"	σ	1.8	*3.7*	0	"	H 124	1.1	*0.0*	1	"	H 76	1.7	0.0	4	"	σ	1.7	*3.8*	*1*
"	σ	1.8	*3.7*	0	"	H 126	0.4	0.1	*4*	"	H 93	0.9	0.2	1	"	17440	2.7	*6.9*	1
"	16438	4.1	6.4	p	"	H 127	0.2	0.6	1	"	H 96	0.8	0.6	*2*	"	20104	3.6	*9.6*	1
"	19284	2.0	*8.5*	1	"	H 463	0.8	0.0	1	"	H 115	0.9	*0.0*	0	"	22180	3.0	*5.5*	1
600	H *4239*	1.4	0.4	1	"	H *472*	0.2	0.2	0	"	H 303	0.0	0.2	*2*	621	H 152	1.3	0.3	2
"	H 4248	0.3	*0.1*	*1*	"	H 487	*0.4*	*0.0*	0	"	H 316	0.8	0.0	*3*	"	H 153	2.1	0.1	2
"	H 4250	1.8	*0.0*	*2*	"	H 494	1.3	0.1	*1*	"	H 317	2.0	0.0	*5*	"	H 154	1.6	0.4	*3*
"	H 4249	1.3	0.1	*1*	"	H 184	1.8	4.4	*2*	"	H 319	2.3	*0.0*	1	"	H 159	1.4	0.8	2
"	H 109	0.2	0.0	*1*	"	H 488	2.2	2.8	1	"	H 329	1.6	0.0	3	"	H 160	1.5	0.6	1
"	H 111	0.7	*0.0*	1	"	σ	1.8	*3.6*	0	"	H 328	1.2	*0.0*	2	"	H 221	1.5	0.0	0
"	H 112	1.7	*0.0*	1	"	σ	1.9	*3.8*	0	"	H 792	1.1	0.0	2	"	H 222	1.8	*0.0*	*2*
"	H 119	*0.2*	0.2	0	"	17440	2.3	*6.9*	*2*	"	H 794	0.4	0.0	*5*	"	H 477	0.0	0.1	*1*
"	H 554	*0.6*	0.1	2	"	20104	3.6	*9.6*	3	"	H 796	*0.3*	*0.1*	0	"	H 478	0.9	0.0	0
"	H 564	1.0	*0.0*	*1*	612	H 512	*0.8*	*0.0*	0	"	H 797	*3.4*	0.1	3	"	H 219	*1.6*	2.1	A
"	H 567	*0.4*	0.1	*1*	"	H 518	1.7	*0.0*	3	"	H 71	0.1	2.6	0	"	3172	3.3	*2.5*	0
"	H 571	0.4	0.0	2	"	H 533	*1.1*	*0.0*	*3*	"	H 304	1.3	5.6	1	"	σ	1.7	*3.5*	0
"	H 4256	2.3	3.7	3	"	H 758	0.7	0.0	0	"	H 836	0.5	3.5	0	"	σ	1.6	*3.7*	*1*
"	H 142	*1.9*	2.2	*1*	"	H 733	0.3	0.4	*3*	"	1738	1.8	*2.2*	1	"	σ	1.8	*3.8*	0
"	H 583	1.0	2.7	*2*	"	H 737	*1.0*	0.1	*3*	"	1800	1.6	*2.4*	1	"	18321	2.6	*6.2*	2
"	31360	1.9	*1.7*	0	"	H 742	0.7	0.1	2	"	1869	1.9	*1.8*	1	623	H 451	0.7	*0.0*	1
"	31548	2.0	*1.7*	0	"	H 749	0.9	*0.0*	2	"	4672	2.2	*2.5*	*1*	"	H 452	1.0	0.1	2
"	147	1.4	*2.5*	*4*	"	H 836	0.7	3.5	0	"	σ	1.7	*3.5*	1	"	H 459	1.0	0.1	2
"	σ	1.8	*3.5*	1	"	H 705	1.5	2.4	*1*	"	σ	1.7	*3.7*	0	"	H 464	*0.8*	0.0	*1*
"	σ	1.9	*3.6*	1	"	σ	1.7	*3.7*	*2*	"	σ	1.6	*3.8*	*1*	"	H 467	1.0	0.9	*2*
"	σ	1.7	*3.8*	*1*	"	σ	1.8	*3.8*	*1*	"	17440	2.5	*6.9*	1	"	H 879	*0.9*	0.7	*4*
"	15189	3.3	*7.5*	*1*	"	20818	3.2	*7.4*	2	"	19197	3.4	*13.8*	*2*	"	H 884	0.3	0.0	3
"	17440	2.7	*6.9*	2	618	H 103	*2.6*	*0.0*	0	"	22180	2.7	*5.5*	0	"	H 888	*0.1*	0.2	*2*
"	20818	3.0	*7.4*	1	"	H 129	0.8	*0.0*	*3*	620	H 103	*2.7*	*0.0*	*1*	"	H 894	*0.1*	0.1	*1*
602	H 88	0.9	*0.0*	*1*	"	H *131*	1.1	0.3	1	"	H 108	2.8	0.6	*1*	"	H 896	*1.0*	0.7	2
"	H 86	1.6	0.2	*4*	"	H 141	1.1	0.2	4	"	H 113	1.5	0.8	1	"	H 516	1.1	3.2	1
"	H 99	1.6	0.2	1	"	H 150	*0.2*	0.2	*1*	"	H 116	0.8	0.1	*2*	"	H 488	2.2	2.8	3
"	H 92	*1.2*	0.3	*1*	"	H 282	0.2	0.0	1	"	H 117	0.8	0.1	*2*	"	H 876	*0.2*	2.2	*3*
"	H 90	*0.1*	0.3	*2*	"	H 286	*1.0*	0.0	*1*	"	H 118	1.5	0.2	1	"	3172	3.3	*2.5*	1
"	H 408	1.4	0.1	1	"	H 285	1.5	0.1	4	"	H 482	*2.2*	0.0	*2*	"	3984	4.2	*2.1*	1
"	H 409	0.2	0.0	*1*	"	H 773	*1.0*	0.2	0	"	H 477	0.4	0.1	5	"	4304	3.8	*2.4*	*2*
"	H 416	1.1	0.0	0	"	H 775	*0.9*	0.1	*1*	"	H 478	0.9	0.0	2	"	5090	1.4	*1.7*	1
"	H 417	0.9	0.2	0	"	H 776	*1.3*	0.1	*2*	"	H 485	1.3	*0.0*	0	"	5219	1.5	*1.9*	*1*
"	H 610	*0.2*	0.2	*1*	"	H 781	1.0	0.1	2	"	H 757	0.6	0.1	2	"	5742	3.8	*1.7*	2
"	H 613	*0.7*	0.2	*2*	"	H 142	*2.1*	2.2	*2*	"	H 759	0.9	*0.0*	5	"	σ	1.9	*3.7*	1
"	H 615	*0.1*	0.2	2	"	H 184	1.6	4.4	1	"	H 760	*0.3*	0.2	*3*	"	σ	1.7	*3.8*	*1*
"	H 618	*1.6*	0.2	*1*	"	H 287	*0.4*	2.7	1	"	H 761	0.6	0.2	*3*	"	20104	3.6	*9.6*	2
"	H 71	0.5	2.6	0	"	H 836	0.5	3.5	1	"	H 764	*0.4*	0.2	*4*	"	20125	3.1	*7.1*	2
"	H 384	1.1	3.8	*2*	"	4672	2.3	*2.5*	0	"	H 769	1.0	0.2	2	"	22180	2.6	*5.5*	*2*
"	σ	1.7	*3.6*	*1*	"	σ	1.7	*3.5*	1	"	H 142	*2.0*	2.2	*2*	624	H 3515	0.7	0.3	*1*
"	σ	1.7	*3.8*	*2*	"	σ	1.7	*3.7*	0	"	H 488	2.1	2.8	2	"	H 3519	0.7	0.3	*4*
"	17440	2.6	*6.9*	1	"	σ	1.7	*3.8*	0	"	H 836	0.6	3.5	0	"	H 3520	1.4	0.3	2
"	20104	3.6	*9.6*	2	"	17440	2.3	*6.9*	0	"	1869	1.8	*1.8*	*1*	"	H 3583	*0.5*	0.3	1
"	20818	2.8	*7.4*	*1*	"	19197	3.7	*13.8*	2	"	3172	3.3	*2.5*	0	"	H 3586	0.9	0.0	1
605	H 125	*0.1*	0.1	*2*	"	22180	2.4	*5.5*	*3*	"	σ	1.6	*3.5*	*1*	"	H 4157	0.4	*0.0*	5

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
624	H 4174	*0.7*	0.9	*1*	629	13840	3.6	*11.1*	*2*	707	H 1275	*5.2*	0.0	*2*	710	H 1782	0.8	0.1	*5*
"	H 4190	*0.1*	*0.0*	0	"	15189	3.4	*7.5*	*1*	"	H 1276	1.5	*0.0*	*1*	"	H 1356	2.2	3.0	0
"	H 4189	0.6	*0.0*	*1*	704	H 1559	3.1	0.0	5	"	H 1315	1.4	*0.0*	6	"	H 1558	0.3	3.4	*1*
"	H 3594	0.0	2.6	0	"	H 1560	2.2	0.0	*2*	"	H 1305	1.0	0.2	*2*	"	H 1753	0.9	2.9	0
"	H 4256	1.8	3.7	1	"	H 1569	2.2	0.2	*2*	"	H 1325	*1.8*	*0.0*	3	"	σ	2.2	*2.6*	0
"	28622	3.8	*1.9*	1	"	H 1579	2.6	0.0	4	"	H 1482	1.7	0.0	*2*	"	σ	2.1	*2.6*	*1*
"	30358	0.9	*1.8*	1	"	H 1702	2.1	0.1	*1*	"	H 1496	1.6	*0.0*	4	"	σ	2.2	*2.6*	0
"	30380	1.5	*2.7*	*1*	"	H 1725	2.4	0.2	*1*	"	H 1498	1.3	0.0	*2*	"	25077	3.6	*5.3*	2
"	30879	*0.1*	*1.9*	*1*	"	H 1723	2.3	0.0	1	"	H 1707	1.6	0.6	*4*	"	29624	2.6	*4.5*	0
"	30980	1.2	*1.8*	0	"	H 1729	2.4	*0.0*	*2*	"	H 1713	2.7	0.0	3	711	H 1242	0.9	*0.0*	1
"	σ	1.7	*3.4*	1	"	11964	3.6	*1.4*	0	"	H 1717	0.9	0.7	*3*	"	H 1246	1.9	0.0	3
"	σ	1.7	*3.5*	1	"	12698	4.5	*1.4*	*1*	"	H 1722	1.8	0.7	*2*	"	H 1245	1.8	0.8	3
"	11598	4.5	*13.6*	0	"	12790	4.4	*1.4*	0	"	H 1740	0.0	0.1	*2*	"	H 1249	*1.8*	0.2	*2*
627	H 3742	*0.1*	*0.1*	*1*	"	Z 1728	5.3	*1.2*	*1*	"	H 1356	1.8	3.0	*2*	"	H 1583	2.2	0.0	1
"	H 3751	1.6	0.2	4	"	13048	2.1	*1.3*	1	"	H 1558	0.3	3.4	2	"	H 1588	0.6	0.1	1
"	H 3753	1.2	0.1	0	"	13246	2.1	*1.3*	2	"	H 1753	0.7	2.9	0	"	H 1589	0.6	0.1	*2*
"	H 3755	1.0	0.2	0	"	12834	4.4	*1.5*	*2*	"	8667	2.0	*1.3*	*2*	"	H 1778	3.0	*0.0*	*1*
"	H 3759	0.8	*0.0*	*2*	"	13004	4.6	*1.6*	*1*	"	σ	2.0	*2.6*	*3*	"	H 1780	3.1	0.1	1
"	H 3783	*0.2*	*0.0*	1	"	13035	5.1	*1.6*	0	"	σ	2.4	*2.6*	1	"	H 1786	2.6	0.1	*3*
"	H 4154	0.6	0.6	0	"	13051	4.2	*1.6*	2	"	27836	3.1	*5.7*	0	"	H 1799	1.6	0.0	*1*
"	H 4158	1.1	0.2	5	"	13146	5.3	*1.4*	0	"	27956	3.3	*5.4*	4	"	H 1159	1.9	3.5	*1*
"	H 4160	1.7	0.2	1	"	13151	5.0	*1.4*	1	"	29624	2.6	*4.5*	0	"	H 1753	0.7	2.9	1
"	H 4161	1.2	0.0	1	"	13222	5.3	*1.3*	*2*	709	H 1309	0.7	0.0	*1*	"	8667	2.1	*1.3*	*1*
"	H 4163	1.2	*0.0*	*3*	"	13328	4.8	*1.4*	*5*	"	H 1337	*0.3*	*0.0*	1	"	σ	2.3	*2.6*	*1*
"	H 4165	1.0	0.6	2	"	13360	3.6	*1.3*	0	"	H 1350	*1.7*	*0.0*	*1*	"	σ	2.3	*2.6*	*1*
"	H 3885	0.3	2.3	1	"	13200	4.3	*1.4*	*1*	"	H 1506	2.6	0.0	*3*	"	σ	2.1	*2.6*	*3*
"	H 3757	*1.5*	2.5	1	"	σ	2.5	*2.6*	1	"	H 1512	2.7	0.0	3	"	25077	3.8	*5.3*	2
"	H 4191	2.6	2.9	*1*	"	σ	2.4	*2.6*	0	"	H 1511	1.6	0.3	*2*	"	29624	2.8	*4.5*	1
"	28622	3.8	*1.9*	1	"	27956	4.3	5.4	p	"	H 1755	2.6	0.3	0	"	30358	2.7	*5.9*	1
"	30879	0.1	*1.9*	1	"	27836	3.8	*5.7*	8	"	H 1772	2.7	*0.0*	0	713	H 1353	2.5	0.0	1
"	σ	1.6	*3.4*	0	705	H 1416	1.6	*0.0*	4	"	H 1356	2.3	3.0	1	"	H 1354	1.2	0.0	*3*
"	σ	1.8	*3.5*	2	"	H 1420	1.1	*0.0*	*1*	"	H 1558	0.4	3.4	1	"	H 1359	0.7	0.0	3
"	13246	3.4	*13.8*	*6*	"	H 1428	2.2	*0.0*	2	"	H 1753	0.9	2.9	0	"	H 1361	1.4	0.2	*5*
"	12688	2.3	*6.2*	0	"	H 1437	1.5	0.0	0	"	H 1751	1.6	1.2	*4*	"	H 1620	2.3	*0.0*	1
"	15189	3.4	*7.5*	0	"	H 1703	2.1	0.1	*3*	"	13840	2.2	*1.4*	*2*	"	H 1614	1.8	0.0	3
629	H 3687	*0.5*	0.6	*1*	"	H 1726	1.2	0.1	*2*	"	σ	2.0	*2.6*	*5*	"	H 1625	1.8	0.5	*4*
"	H 3712	*0.5*	*0.0*	*2*	"	H 1750	2.2	0.1	1	"	σ	2.4	*2.6*	*1*	"	H 1639	0.7	0.1	*1*
"	H 3716	*1.0*	0.8	*3*	"	H 1759	0.5	0.0	*2*	"	26929	4.0	*5.5*	2	"	H 1356	3.4	3.0	1
"	H 3723	0.0	0.0	0	"	H 1448	2.2	1.6	2	"	27836	4.0	*5.7*	6	"	H 1669	3.2	3.6	*3*
"	H 3722	1.6	*0.0*	0	"	H 1489	3.1	2.9	3	"	29624	2.9	*4.5*	0	"	9770	3.3	*2.0*	0
"	H 4005	0.5	0.6	0	"	H 1753	1.0	2.9	*1*	710	H 1257	2.6	*0.0*	5	"	σ	2.4	*2.6*	*2*
"	H 4001	0.3	1.2	*2*	"	H 1745	2.0	2.6	*6*	"	H 1258	2.2	0.0	2	"	σ	2.4	*2.6*	*2*
"	H 4025	1.3	0.8	0	"	13048	1.9	*1.3*	0	"	H 1278	1.7	0.0	1	"	σ	2.2	*2.5*	*3*
"	H 4038	0.0	*0.1*	3	"	13246	1.6	*1.3*	*2*	"	H 1280	0.9	0.1	*4*	"	26929	4.0	*5.5*	*1*
"	H 4044	1.2	*0.0*	0	"	σ	2.2	*2.6*	*2*	"	H 1574	2.0	*0.0*	3	"	27956	4.3	*5.4*	8
"	H 3656	*0.5*	2.4	0	"	σ	2.2	*2.6*	*2*	"	H 1578	2.5	*0.0*	3	"	30358	3.1	*5.9*	1
"	H 4037	*0.3*	3.4	0	"	27956	3.5	*5.4*	4	"	H 1577	2.1	0.1	0	714	H 1524	1.0	0.0	3
"	30879	0.3	*1.9*	1	"	27836	3.3	*5.7*	1	"	H 1576	2.2	0.7	1	"	H 1527	1.8	0.0	4
"	σ	1.8	*3.4*	1	"	29624	2.7	*4.5*	0	"	H 1773	2.7	*0.0*	*1*	"	H 1529	1.2	0.0	0
"	σ	1.8	*3.5*	0	707	H 1272	0.2	0.1	4	"	H 1776	2.2	0.1	*5*	"	H 1533	*0.5*	0.1	*4*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res	J. D.	Design.	Obs. Br.	Path.	Res.
714	H 1539	0.6	1.0	0	776	32303	1.3	*4.8*	1	822	16438	1.1	*1.7*	0	824	H 1600	*0.2*	0.0	0
"	H 1548	2.5	0.2	2	"	32200	1.2	*4.8*	5	"	16529	3.5	*1.8*	1	"	9770	1.8	*2.0*	*2*
"	H 1618	2.0	*0.0*	0	777	H 1505	0.0	0.4	0	"	Z 3236	4.0	*1.3*	*2*	"	11964	2.1	*1.4*	*2*
"	H 1642	2.1	0.0	1	"	H 1508	1.2	0.3	1	"	14829	*0.2*	*1.2*	0	"	12698	3.1	*1.4*	*2*
"	H *1811*	*0.2*	0.3	1	"	H 1514	0.5	*0.0*	6	"	Z 3313	3.6	*1.3*	*3*	"	12790	3.0	*1.4*	*1*
"	H 1814	1.5	0.2	*5*	"	H 1728	1.6	*0.0*	0	"	Z 3982	3.8	*1.2*	*2*	"	Z 1283	4.9	*1.3*	*1*
"	H 1830	2.5	0.6	4	"	H 1736	0.6	0.5	*5*	"	Z 4096	4.2	*1.3*	1	"	Z 1728	4.1	*1.2*	1
"	H 1832	1.9	0.6	*2*	"	H 1724	0.6	0.5	*1*	"	15095	3.7	*1.3*	1	"	12834	5.0	*1.5*	R
"	H 1846	1.7	0.0	4	"	H 1742	0.7	0.5	*2*	"	14920	3.6	*1.3*	1	"	13063	4.1	*1.3*	0
"	H 1862	1.3	*0.0*	*2*	"	H 1519	3.0	2.4	R	"	15128	1.7	*1.3*	*2*	"	13167	3.4	*1.3*	*1*
"	H 1558	0.0	3.4	A	"	H 1558	*1.2*	3.4	A	"	15122	2.7	*1.4*	0	"	13401	5.0	*1.3*	*1*
"	σ	2.3	*2.6*	*1*	"	11598	0.7	*1.3*	*1*	"	15217	3.3	*1.3*	*1*	"	13537	3.4	*1.3*	*2*
"	σ	2.1	*2.5*	*3*	"	15189	0.4	*1.6*	n	"	σ	1.0	*2.6*	2	"	13151	3.4	*1.4*	*2*
"	27836	3.4	*5.7*	*2*	"	σ	1.1	*2.6*	2	"	σ	0.6	*2.5*	*2*	"	13146	4.1	*1.4*	1
"	30358	3.5	*5.9*	5	"	σ	0.9	*2.6*	0	"	30358	1.1	*5.9*	2	"	13222	4.5	*1.3*	3
721	H 1546	2.6	*0.0*	6	"	σ	1.1	*2.5*	2	"	30380	1.6	*3.2*	5	"	13328	4.1	*1.4*	1
"	H 1544	2.6	0.2	3	"	27836	1.5	*5.7*	*3*	823	H *1521*	0.0	0.2	1	"	13360	2.4	*1.3*	1
"	H 1549	2.1	0.4	*2*	"	27956	1.7	*5.4*	0	"	H 1536	0.3	0.4	0	"	15128	2.1	*1.3*	0
"	H 1572	2.0	0.3	1	"	31530	0.3	*2.8*	*8*	"	H 1537	1.0	0.3	1	"	15217	3.6	*1.3*	0
"	H 1845	1.7	0.8	7	"	31360	0.8	*6.6*	n	"	H 1538	0.9	0.3	*2*	"	15311	4.8	*1.3*	1
"	H 1857	0.5	0.9	n	782	H 2120	*1.5*	0.0	4	"	H 1531	1.6	*0.0*	2	"	15095	3.8	*1.3*	0
"	H 1550	3.3	1.2	3	"	H 2128	*0.3*	0.0	3	"	H 1604	*1.1*	*0.0*	1	"	14920	3.7	*1.3*	0
"	H 1558	0.7	3.4	*3*	"	H 2121	0.8	*0.0*	*2*	"	H 1602	*0.7*	0.2	*2*	"	Z 4096	4.1	*1.3*	*2*
"	H 1882	0.8	1.2	n	"	H 2133	*0.5*	0.9	*2*	"	H 1635	1.1	0.2	3	"	Z 3982	4.2	*1.2*	1
"	σ	2.6	*2.6*	0	"	H 2134	*2.1*	*0.0*	1	"	H 1934	0.6	0.1	*3*	"	Z 3313	4.4	*1.3*	3
"	σ	2.5	*2.5*	*1*	"	H 2303	0.9	*0.0*	3	"	H 1933	0.9	*0.0*	1	"	14829	0.4	*1.2*	5
"	27956	3.9	*5.4*	2	"	H 2304	0.1	0.7	*3*	"	H 1932	*0.2*	*0.0*	*6*	"	Z 3236	4.4	*1.3*	0
776	H 2019	*0.9*	0.1	*3*	"	H 2312	0.3	0.0	0	"	H 1944	0.8	*0.0*	0	"	14547	2.4	*1.2*	0
"	H 2035	*0.2*	*0.0*	4	"	H 2329	0.6	*0.0*	*1*	"	H 1946	*0.5*	*0.0*	*1*	"	15189	2.1	*1.6*	5
"	H 2044	0.5	*0.0*	3	"	H 2341	0.4	*0.0*	2	"	H 2263	*3.5*	0.0	1	"	σ	0.8	*2.6*	*4*
"	H 2235	1.2	0.2	*8*	"	H 2309	1.3	1.9	A	"	H 2301	0.7	*0.0*	*1*	"	σ	1.2	*2.5*	0
"	H 2237	*0.2*	0.8	*5*	"	σ	1.0	*2.5*	4	"	H 2306	0.8	0.1	0	"	27836	2.0	*5.7*	*4*
"	H 2242	0.5	*0.0*	*2*	"	σ	1.0	*2.4*	4	"	H 1558	*0.9*	3.4	2	"	27956	1.8	*5.4*	*4*
"	H 2408	0.1	0.0	3	"	1738	2.0	*4.3*	0	"	H 2279	1.1	3.2	2	825	H *1423*	*2.9*	0.5	4
"	H 2410	0.5	0.0	1	"	1869	2.9	*6.2*	2	"	H *2264*	*2.5*	2.2	*3*	"	H 1430	*0.9*	0.4	*2*
"	H 2412	1.3	0.0	0	822	H 1759	*0.1*	0.0	6	"	H 2267	*0.7*	2.2	*3*	"	H 1431	*0.4*	*0.0*	1
"	H 2413	*0.2*	0.2	*3*	"	H 1758	1.0	0.0	1	"	15189	1.3	*1.6*	*4*	"	H 1432	0.4	*0.0*	2
"	H 2423	0.2	0.1	0	"	H 1760	*1.1*	0.4	*3*	"	18321	1.1	*1.8*	*1*	"	H 1486	0.8	0.2	5
"	H 2436	*1.8*	0.8	*2*	"	H 1772	1.8	*0.0*	7	"	σ	1.1	*2.6*	*1*	"	H 1487	1.3	0.2	4
"	H 2427	0.3	*0.0*	1	"	H 1782	*0.3*	0.1	*3*	"	σ	1.1	*2.5*	0	"	H 1488	1.2	0.1	0
"	H 2018	*1.1*	1.4	*4*	"	H 1994	*1.3*	*0.0*	*1*	"	σ	1.0	*2.4*	*1*	"	H 1497	0.9	0.3	0
"	H 2020	0.7	2.3	*1*	"	H 1993	0.0	*0.0*	*4*	"	27956	2.4	*5.4*	5	"	H 1499	0.9	0.2	*1*
"	H 2426	*0.3*	1.8	1	"	H 1992	1.1	*0.0*	*5*	"	27836	2.0	*5.7*	0	"	H 1641	*0.8*	0.9	*1*
"	H 2460	2.1	3.6	3	"	H 1995	1.3	0.0	6	"	32200	1.3	*4.8*	1	"	H 1640	0.1	0.5	*7*
"	16438	1.1	*1.7*	*2*	"	14523	2.3	*1.4*	1	"	1738	1.9	*4.3*	0	"	H 1931	*0.2*	0.1	1
"	19776	2.0	*2.1*	1	"	15363	2.9	*1.6*	*2*	824	H 1459	*3.8*	0.4	0	"	H 1935	1.7	*0.0*	3
"	20125	0.8	*1.7*	*4*	"	15189	1.3	*1.6*	*1*	"	H 1466	0.2	0.6	*3*	"	H 1950	0.8	0.1	0
"	σ	1.0	*2.5*	1	"	15711	3.1	*1.7*	1	"	H 1469	0.3	0.0	1	"	H 2204	0.0	0.5	*2*
"	σ	0.8	*2.5*	*1*	"	15792	3.5	*1.6*	0	"	H 1587	1.3	0.1	4	"	H 2225	1.0	0.7	*3*
"	σ	0.8	*2.4*	*1*	"	15959	2.7	*1.7*	0	"	H 1594	0.2	0.0	0	"	H 2243	1.5	0.2	2

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
825	H 2248	0.2	0.9	0	826	13222	4.1	1.3	0	829	H 1582	1.2	0.1	3	830	12834	3.3	1.5	2
"	H 1441	0.2	2.8	1	"	13328	3.9	1.4	0	"	H 1586	1.1	0.0	2	"	13328	3.9	1.4	0
"	H 1490	1.5	3.2	0	"	13360	2.0	1.3	2	"	H 1590	0.8	0.0	6	"	13222	4.1	1.3	1
"	H 1669	0.8	3.6	0	"	13200	3.0	1.4	0	"	H 1593	0.5	0.0	2	"	13480	2.4	1.8	1
"	H 1645	1.2	1.3	1	"	13401	4.9	1.3	1	"	H 1598	0.8	0.1	0	"	13479	3.5	1.4	0
"	H 2279	1.0	3.2	1	"	13537	3.5	1.3	0	"	H 1599	0.2	0.1	4	"	13661	3.6	1.5	0
"	H 2207	0.4	2.4	2	"	13761	3.9	1.3	1	"	H 1863	0.1	0.1	3	"	13761	3.9	1.3	0
"	11964	2.2	1.4	0	"	13899	1.9	1.3	0	"	H 1864	1.0	0.1	1	"	13899	1.8	1.3	0
"	12698	3.3	1.4	1	"	17440	0.6	1.7	1	"	H 1875	0.2	0.0	2	"	Z 896	4.2	1.3	0
"	12790	3.0	1.4	0	"	σ	0.9	2.6	0	"	H 1893	1.4	0.0	1	"	Z 1573	4.4	1.3	1
"	12834	3.3	1.5	2	"	σ	0.9	2.5	0	"	H 2224	0.5	0.0	1	"	14421	3.1	1.3	4
"	13004	3.0	1.6	2	"	σ	0.8	2.5	1	"	H 2231	0.2	0.0	1	"	14531	3.2	1.3	1
"	13035	3.3	1.6	3	"	29624	1.3	4.5	2	"	H 2232	0.6	0.4	3	"	14529	2.7	1.3	0
"	13051	2.3	1.6	2	827	H 1679	0.6	0.0	2	"	H 2241	0.8	0.9	3	"	14523	2.3	1.4	0
"	17440	0.6	1.7	1	"	H 1682	1.5	0.2	1	"	H 2249	1.5	0.0	1	"	14777	3.8	1.4	2
"	σ	1.0	2.6	0	"	H 1698	2.6	0.0	4	"	H 2251	2.0	0.1	5	"	15122	3.0	1.4	2
"	σ	0.7	2.5	2	"	H 1699	0.6	0.0	3	"	H 2252	2.1	0.1	R	"	15217	3.5	1.3	1
"	σ	0.9	2.5	0	"	H 1700	0.1	0.0	1	"	H 2279	1.2	3.2	A	"	15128	1.9	1.3	0
"	26929	2.7	5.5	4	"	H 1815	0.6	0.0	2	"	12834	3.1	1.5	0	"	15311	4.4	1.3	1
"	27956	2.1	5.4	4	"	H 1821	0.2	0.2	2	"	13328	4.1	1.4	2	"	15095	3.5	1.3	1
"	1738	1.4	4.3	3	"	H 1827	1.6	0.9	2	"	13222	4.0	1.3	1	"	14920	3.4	1.3	1
826	H 1414	0.9	0.0	1	"	H 1837	1.1	0.0	2	"	13480	2.2	1.8	1	"	14829	0.2	1.2	0
"	H 1412	0.1	0.4	4	"	H 2101	1.1	1.0	1	"	13479	3.5	1.4	0	"	Z 3313	4.1	1.3	2
"	H 1415	0.4	0.2	3	"	H 2108	0.1	0.8	3	"	13661	3.5	1.5	1	"	14547	2.2	1.2	1
"	H 1419	0.5	0.1	3	"	H 2111	0.3	0.4	1	"	σ	0.8	2.6	1	"	14267	2.6	1.3	1
"	H 1438	1.0	0.7	2	"	H 2118	0.4	0.3	1	"	σ	0.8	2.5	1	"	13907	2.5	1.4	1
"	H 1442	4.2	0.1	2	"	H 1669	0.7	3.6	0	"	σ	1.0	2.4	1	"	13764	3.8	1.4	1
"	H 1445	0.7	0.0	3	"	H 2122	1.1	2.8	1	"	27956	1.6	5.4	3	"	σ	0.9	2.6	1
"	H 1653	0.3	0.8	2	"	13328	3.8	1.4	0	"	30879	0.1	5.2	2	"	σ	1.0	2.5	0
"	H 1664	0.9	0.5	8	"	13222	3.8	1.3	2	"	1738	1.4	4.3	0	"	σ	0.8	2.4	2
"	H 1676	0.8	0.1	2	"	13063	3.9	1.3	0	830	H 1603	1.0	0.1	5	"	29624	1.0	4.5	4
"	H 1690	0.2	0.0	2	"	13167	3.3	1.3	0	"	H 1605	1.0	0.4	3	"	30980	1.5	6.2	2
"	H 1698	2.7	0.0	2	"	13401	4.8	1.3	1	"	H 1616	0.1	1.0	3	"	1738	1.9	4.3	2
"	H 1942	0.6	0.0	1	"	13537	3.5	1.3	1	"	H 1622	1.1	0.4	2	831	H 1604	0.9	0.0	3
"	H 1946	0.1	0.0	4	"	13761	3.9	1.3	0	"	H 1626	0.4	0.4	1	"	H 1606	1.1	0.0	1
"	H 2210	1.0	0.0	3	"	13899	1.7	1.3	1	"	H 1629	1.6	0.1	1	"	H 1611	0.8	0.0	5
"	H 2219	0.3	0.0	0	"	13200	3.1	1.4	2	"	H 1663	0.0	0.0	2	"	H 1608	1.2	0.1	0
"	H 2224	0.3	0.0	2	"	13479	3.4	1.4	0	"	H 1854	0.9	0.0	2	"	H 1837	0.9	0.0	2
"	H 2232	0.8	0.4	4	"	13661	3.6	1.5	1	"	H 1870	0.1	0.0	3	"	H 1842	0.7	0.0	4
"	H 1669	0.7	3.6	1	"	13480	2.2	1.8	1	"	H 1886	0.8	0.5	3	"	H 1849	0.9	0.0	1
"	H 2279	1.1	3.2	1	"	17440	1.0	1.7	3	"	H 1892	0.6	0.1	3	"	H 2219	0.2	0.0	2
"	11964	2.3	1.4	1	"	σ	0.8	2.6	1	"	H 1897	1.1	0.0	3	"	H 2224	0.4	0.0	0
"	12834	3.2	1.5	1	"	σ	0.9	2.5	0	"	H 2259	1.6	1.1	0	"	H 2231	0.4	0.0	1
"	13004	3.3	1.6	1	"	σ	0.8	2.5	1	"	H 2262	1.3	0.7	2	"	H 2232	0.3	0.4	0
"	13035	3.8	1.6	2	"	29624	1.1	4.5	1	"	H 2277	0.8	0.1	1	"	H 2238	0.7	0.1	2
"	13051	2.3	1.6	2	"	30879	0.2	5.2	1	"	H 2290	0.6	0.0	1	"	H 2249	1.9	0.0	5
"	13063	3.8	1.3	2	"	78	1.2	4.7	2	"	H 2297	0.2	0.7	1	"	H 1669	0.7	3.6	2
"	13167	3.2	1.3	2	829	H 1526	0.8	0.5	1	"	H 2294	1.7	0.0	2	"	H 2279	1.2	3.2	1
"	13151	3.5	1.4	0	"	H 1541	1.1	0.0	1	"	H 1926	2.5	3.8	1	"	12834	2.8	1.5	4
"	13146	3.9	1.4	0	"	H 1545	1.3	0.6	1	"	H 2279	1.1	3.2	2	"	13328	4.0	1.4	1

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res
831	13222	4.0	*1.3*	*1*	832	14481	3.2	*1.9*	1	834	15761	3.2	*2.2*	1	838	H 1734	*0.8*	0.0	*1*
"	13907	2.7	*1.4*	1	"	14444	2.9	*2.3*	*1*	"	14481	3.4	*1.9*	3	"	H 1732	*0.1*	0.1	0
"	13764	3.9	*1.4*	2	"	15761	3.1	*2.2*	0	"	14249	2.0	*1.5*	1	"	H 1740	*1.2*	0.1	*1*
"	14032	2.5	*1.9*	*1*	"	14249	2.2	*1.5*	2	"	14883	3.1	*1.9*	1	"	H 1747	*1.7*	0.3	1
"	*14023*	2.4	*1.6*	*3*	"	σ	1.1	*2.6*	0	"	σ	1.1	*2.6*	1	"	H 1758	1.3	0.0	3
"	14457	4.0	*1.6*	1	"	σ	1.1	*2.5*	1	"	σ	0.9	*2.5*	*1*	"	H 2163	1.0	0.8	*1*
"	14507	4.0	*1.6*	1	"	27956	2.1	*5.4*	3	"	27956	2.0	*5.4*	2	"	H 2162	1.5	1.1	*2*
"	14570	4.3	*1.6*	0	"	28706	1.9	*10.4*	*3*	"	28162	3.4	*12.3*	*3*	"	H 2175	1.4	0.3	*1*
"	14531	3.2	*1.3*	0	"	762	2.9	*14.9*	1	"	28171	4.2	*14.1*	*3*	"	H 2194	1.7	*0.0*	0
"	14421	2.7	*1.3*	*1*	833	H 1627	1.2	0.8	0	"	762	2.7	*14.9*	*4*	"	H 2208	*2.2*	0.1	*3*
"	Z 1573	4.3	*1.3*	*1*	"	H 1662	1.0	0.0	1	836	H 1686	1.1	0.0	1	"	H 2210	0.6	*0.0*	*1*
"	Z 896	4.2	*1.3*	*1*	"	H 1667	0.8	0.0	*2*	"	H 1688	0.2	0.0	2	"	H 2219	0.2	0.0	*1*
"	14529	2.8	*1.3*	0	"	H 1676	*0.6*	0.1	1	"	H 1690	0.0	*0.0*	0	"	H 1753	*0.7*	2.9	*2*
"	14523	2.3	*1.4*	0	"	H 1681	*0.8*	0.7	0	"	H 1698	*2.7*	0.0	2	"	H 2191	*2.6*	2.4	2
"	14267	2.5	*1.3*	*1*	"	H 1672	1.2	*0.0*	1	"	H 2224	*0.3*	0.0	2	"	*14023*	2.7	*1.6*	1
"	σ	1.0	*2.6*	0	"	H 1887	1.6	0.1	0	"	H *2226*	*0.4*	0.2	1	"	15370	2.6	*1.8*	0
"	σ	0.9	*2.5*	0	"	H 1888	0.8	0.2	*3*	"	H 2232	*0.5*	0.4	*1*	"	15440	2.0	*1.8*	*1*
"	27956	1.9	*5.4*	5	"	H 1628	0.9	1.2	*4*	"	H 2238	0.7	0.1	*1*	"	σ	0.8	*2.6*	*2*
"	1738	1.6	*4.3*	1	"	H 1669	0.8	3.6	1	"	H 2242	0.1	*0.0*	*5*	"	σ	1.0	*2.5*	0
"	1869	2.3	*6.2*	4	"	*14023*	2.5	*1.6*	*3*	"	H 2249	*1.6*	*0.0*	*1*	"	29624	1.1	*4.5*	*2*
832	H 1629	*1.7*	0.1	*1*	"	14032	3.0	*1.9*	3	"	H 1753	*0.6*	2.9	*2*	"	29533	0.5	*9.7*	1
"	H 1637	1.5	0.1	1	"	14883	3.2	*1.9*	1	"	H 2279	1.3	3.2	2	"	762	2.8	*14.9*	5
"	H 1643	1.3	0.4	3	"	14481	3.0	*1.9*	*2*	"	*14023*	2.7	*1.6*	0	"	336	*0.9*	*9.7*	*3*
"	H 1646	0.7	0.3	*1*	"	14444	3.0	*2.3*	0	"	σ	1.1	*2.6*	0	841	H 1932	0.0	*0.0*	*3*
"	H 1663	0.0	*0.0*	1	"	15761	3.1	*2.2*	0	"	σ	1.0	*2.5*	0	"	H 1933	1.0	*0.0*	3
"	H 1672	1.2	*0.0*	4	"	14507	4.0	*1.6*	0	"	29624	1.1	*4.5*	*3*	"	H 1942	0.6	*0.0*	1
"	H 2224	*0.2*	0.0	3	"	14457	3.9	*1.6*	*1*	"	29533	0.7	*9.7*	1	"	H 1944	1.0	*0.0*	3
"	H 2231	0.2	0.0	0	"	14570	4.3	*1.6*	*1*	"	762	3.1	*14.9*	3	"	H 1994	*0.9*	*0.0*	2
"	H 2238	0.6	0.1	*2*	"	14777	3.5	*1.4*	*3*	837	H 1711	0.1	0.1	*3*	"	H 2258	0.2	*0.0*	*4*
"	H 2242	0.5	*0.0*	*1*	"	15122	2.8	*1.4*	*2*	"	H 1714	*0.1*	0.0	1	"	H 2263	*3.7*	0.0	0
"	H 2245	0.2	0.2	*5*	"	14249	1.9	*1.5*	*2*	"	H 1720	0.4	*0.0*	0	"	H 2268	0.1	0.0	*5*
"	H 1649	0.9	1.4	*2*	"	Z 3313	4.0	*1.3*	*2*	"	H 1721	1.5	*0.0*	5	"	H 2269	*0.1*	0.0	0
"	H 1669	1.1	3.6	1	"	σ	1.1	*2.6*	1	"	H 1739	0.5	0.0	4	"	H 2267	*0.8*	2.2	*2*
"	H 2279	1.3	3.2	2	"	29533	0.5	*9.7*	8	"	H 1740	*1.1*	0.1	*1*	"	H *2264*	*2.6*	2.2	*2*
"	13764	3.4	*1.4*	*4*	"	29624	1.2	*4.5*	1	"	H 2258	0.7	*0.0*	0	"	15311	4.7	*1.3*	1
"	13907	2.7	*1.4*	0	834	H 1554	*0.9*	0.0	2	"	H 2263	*3.9*	0.0	*3*	"	15363	3.2	*1.6*	*1*
"	14267	2.7	*1.3*	1	"	H 1588	*0.9*	0.1	0	"	H 2269	*0.1*	0.0	*1*	"	15792	3.8	*1.6*	1
"	14523	2.3	*1.4*	*1*	"	H 1589	*0.5*	0.1	1	"	H 2280	1.4	0.0	1	"	15959	2.9	*1.7*	0
"	14529	2.9	*1.3*	1	"	H 1594	*0.1*	0.0	*3*	"	H 2283	*0.2*	0.0	*3*	"	15711	3.1	*1.7*	*1*
"	14531	3.3	*1.3*	1	"	H 1621	*0.9*	*0.0*	*2*	"	H 2294	*1.2*	0.0	1	"	15440	2.0	*1.8*	*1*
"	14421	2.7	*1.3*	*1*	"	H 1759	*0.5*	0.0	2	"	H 1753	*0.4*	2.9	*1*	"	15370	2.4	*1.8*	*2*
"	14777	3.6	*1.4*	*1*	"	H 1766	2.2	*0.0*	4	"	H 2279	1.3	3.2	1	"	16016	1.6	*1.5*	0
"	14829	*0.2*	*1.2*	*1*	"	H 2231	0.3	0.0	2	"	*14023*	3.0	*1.6*	2	"	Z 549	3.4	*1.3*	1
"	Z 3313	4.0	*1.3*	0	"	H 2232	*0.5*	0.4	0	"	σ	1.1	*2.6*	0	"	Z 649	4.2	*1.3*	2
"	*14023*	2.9	*1.6*	2	"	H 2247	*0.1*	*0.0*	1	"	σ	1.0	*2.4*	*1*	"	16265	3.9	*1.5*	0
"	14507	3.9	*1.6*	0	"	H 2249	*1.8*	*0.0*	*2*	"	29624	1.1	*4.5*	*3*	"	16529	3.5	*1.8*	*1*
"	14457	4.0	*1.6*	1	"	H 1558	*0.9*	3.4	0	"	29533	0.4	*9.7*	*2*	"	16859	1.8	*1.8*	1
"	14570	4.3	*1.6*	0	"	H 2279	1.2	3.2	1	"	762	2.9	*14.9*	3	"	16709	2.0	*2.1*	*2*
"	14032	2.6	*1.9*	0	"	*14023*	2.7	*1.6*	1	"	1738	1.8	*4.3*	0	"	17241	2.3	*2.3*	2
"	14883	2.9	*1.9*	*1*	"	14444	3.0	*2.3*	0	838	H 1714	0.1	0.0	4	"	17696	2.4	*2.0*	*2*

J. D.	Design.	Obs. Br.	Path.	Res	J. D.	Design.	Obs Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br	Path	Res.
841	σ	1.1	*2.5*	1	845	H 1865	1.3	*0.0*	2	846	σ	1.1	*2.6*	1	854	σ	0.8	*2.6*	*2*
"	σ	1.1	*2.5*	1	"	H 1872	*0.2*	0.5	*2*	"	σ	0.9	*2.5*	*1*	"	σ	0.9	*2.5*	*1*
"	σ	1.1	*2.4*	1	"	H 1874	1.7	0.2	1	"	σ	1.0	*2.4*	0	"	σ	0.9	*2.4*	*1*
844	H 1782	*0.2*	0.1	*3*	"	H 1883	0.6	0.4	*2*	"	30358	1.5	*5.9*	2	"	30358	1.5	*5.9*	4
"	H 1789	0.2	0.0	4	"	H 1990	1.5	0.2	3	"	336	*0.5*	*9.7*	*2*	"	30520	4.3	*14.7*	7
"	H 1788	1.3	*0.0*	5	"	H 1996	0.8	0.1	0	"	1869	2.1	*6.2*	*2*	"	336	*0.7*	*9.7*	*2*
"	H 1793	*1.3*	0.2	0	"	H 1998	1.0	0.2	2	850	H 1789	*0.1*	0.0	1	"	3704	2.0	*9.9*	*2*
"	H 1797	*3.3*	0.1	2	"	H 2000	1.6	0.1	3	"	H 1793	*1.2*	0.2	1	855	H 1782	*0.3*	0.1	*2*
"	H 1800	*1.0*	0.0	0	"	H 2001	0.8	0.4	*2*	"	H 1797	*3.3*	0.1	2	"	H 1800	*1.0*	0.0	2
"	H 2387	0.1	*0.0*	*2*	"	H 2041	0.5	0.2	0	"	H 1800	*1.1*	0.0	*1*	"	H 1801	1.0	0.0	*3*
"	H 2389	1.4	*0.0*	0	"	H 2033	1.1	*0.0*	*1*	"	H 2136	0.0	0.3	0	"	H 1810	*1.3*	1.0	0
"	H 2391	1.3	*0.0*	1	"	H 2258	0.3	*0.0*	*3*	"	H 2132	0.6	0.6	1	"	H 1815	0.6	0.0	3
"	H 2393	0.9	*0.0*	3	"	H 2263	*3.8*	0.0	*1*	"	H 2153	1.6	0.7	1	"	H 1839	2.1	0.0	7
"	H 2400	*5.3*	0.2	*4*	"	H 2269	*0.3*	0.0	*2*	"	H 2169	1.6	0.0	4	"	H 1841	1.0	0.1	2
"	H 2392	0.6	0.2	0	"	H 2279	1.1	3.2	A	"	H 2181	0.2	0.4	0	"	H 2063	*1.7*	*0.0*	3
"	H 2388	0.3	0.1	2	"	15189	1.7	*1.6*	1	"	H 2186	*0.1*	0.0	*2*	"	H 2082	0.6	0.6	5
"	H 2390	*0.8*	0.0	*2*	"	16016	1.5	*1.5*	*1*	"	H 2193	*1.7*	0.1	*5*	"	H 2089	0.6	0.4	*2*
"	H 1753	*0.6*	2.9	A	"	16265	3.8	*1.5*	*1*	"	H 2176	1.5	1.4	0	"	H 2093	1.4	0.4	0
"	15189	1.5	*1.6*	0	"	16709	2.2	*2.1*	0	"	H 2177	1.7	3.3	1	"	H 2098	*0.6*	0.4	*4*
"	15792	3.4	*1.6*	*2*	"	17696	2.4	*2.0*	*1*	"	16709	2.0	*2.1*	*1*	"	H 2583	0.1	0.9	*1*
"	15959	2.8	*1.7*	*1*	"	17753	3.6	*1.4*	0	"	17696	2.4	*2.0*	*1*	"	H 2584	0.2	0.9	1
"	15711	3.1	*1.7*	*1*	"	18212	2.4	*1.8*	*2*	"	17753	3.6	*1.4*	0	"	H 2582	0.5	0.0	*2*
"	15440	2.1	*1.8*	0	"	19007	2.2	*1.6*	*1*	"	18212	2.6	*1.8*	0	"	H 2603	0.1	*0.0*	*5*
"	15370	2.6	*1.8*	0	"	19017	3.2	*1.3*	1	"	σ	1.1	*2.6*	1	"	H 2610	*0.2*	*0.0*	*3*
"	15363	3.5	*1.6*	3	"	σ	1.1	*2.5*	1	"	σ	1.1	*2.5*	1	"	H 1753	*0.7*	2.9	*2*
"	16016	1.5	*1.5*	0	"	σ	0.9	*2.5*	*1*	"	30358	1.3	*5.9*	2	"	H 2077	*0.9*	2.6	3
"	16265	3.7	*1.5*	*1*	"	σ	1.0	*2.4*	0	"	30350	2.2	*9.4*	*1*	"	H 2569	*1.1*	2.9	0
"	16619	2.8	*1.5*	1	"	30879	0.3	*5.2*	0	"	78	1.2	*4.7*	1	"	19017	3.0	*1.3*	0
"	16952	2.1	*1.5*	1	"	30980	1.6	*6.2*	*1*	"	336	*0.5*	*9.7*	0	"	18800	4.7	*1.6*	0
"	16859	1.7	*1.8*	0	"	762	2.9	*14.9*	3	854	H 1791	2.1	*0.0*	3	"	σ	1.1	*2.6*	2
"	16709	2.1	*2.1*	0	846	H 1800	*1.0*	0.0	1	"	H 1789	*0.3*	0.0	*1*	"	σ	0.7	*2.5*	*2*
"	17241	1.9	*2.3*	*1*	"	H 1815	0.8	0.0	4	"	H 1797	*3.5*	0.1	0	"	σ	1.0	*2.4*	1
"	17696	2.5	*2.0*	0	"	H 1821	0.1	0.2	1	"	H 1799	0.7	0.0	3	"	30879	0.4	*5.2*	1
"	17714	2.9	*1.5*	*1*	"	H 2103	0.2	0.4	0	"	H 1800	*1.1*	0.0	*1*	"	30520	4.2	*14.7*	1
"	17753	3.5	*1.4*	*1*	"	H 2106	1.0	0.3	*2*	"	H *2155*	*2.0*	0.0	1	"	78	1.3	*4.7*	2
"	18212	2.2	*1.8*	*4*	"	H 2109	*0.1*	0.4	*3*	"	H 2169	1.4	0.0	2	"	336	*0.5*	*9.7*	*2*
"	18374	2.6	*1.6*	*1*	"	H 2110	*0.6*	0.4	*4*	"	H 2181	0.0	0.4	*1*	"	3704	2.2	*9.9*	*3*
"	19007	2.4	*1.6*	2	"	H 2119	0.9	0.3	2	"	H 2576	0.7	*0.0*	2	857	H 1908	*0.1*	0.3	4
"	18802	4.4	*1.7*	0	"	H 2269	*0.2*	0.0	0	"	H 2577	0.5	*0.0*	0	"	H 1907	0.9	0.6	3
"	19017	3.2	*1.3*	1	"	H 2282	1.3	*0.0*	3	"	H 2581	1.4	0.2	1	"	H 1906	1.1	0.6	0
"	19098	3.5	*2.3*	0	"	H 2283	*0.5*	0.0	*4*	"	H 2579	1.3	0.7	*1*	"	H 1909	1.5	0.1	2
"	18722	1.1	*1.4*	0	"	H 2294	*1.4*	0.0	1	"	H 2588	*0.7*	0.5	*2*	"	H 1928	0.9	0.0	0
"	σ	0.9	*2.6*	*1*	"	H 2122	0.7	2.8	*3*	"	H 1753	*0.5*	2.9	1	"	H 2150	*0.1*	0.0	*1*
"	σ	0.9	*2.4*	*1*	"	H 2279	1.1	3.2	3	"	H 2191	*2.8*	2.4	0	"	H 2181	*0.1*	0.4	*4*
"	29533	0.6	*9.7*	2	"	16709	2.4	*2.1*	3	"	H 2569	*1.1*	2.9	1	"	H 2186	*0.1*	0.0	*4*
"	30358	1.1	*5.9*	0	"	17696	2.6	*2.0*	1	"	16709	2.0	*2.1*	*1*	"	H 2625	*0.8*	0.4	*3*
"	1800	1.4	*3.6*	2	"	17753	3.6	*1.4*	0	"	17753	3.5	*1.4*	*1*	"	H 2637	*0.7*	*0.0*	0
"	1869	2.3	*6.2*	2	"	18212	2.9	*1.8*	3	"	19007	2.2	*1.6*	*1*	"	H 2641	0.5	0.1	0
845	H 1855	1.9	*0.0*	4	"	19007	2.0	*1.6*	*2*	"	18800	4.8	*1.6*	*1*	"	H 1926	*2.4*	3.8	1
"	H 1858	1.3	*0.0*	2	"	19017	2.9	*1.3*	*2*	"	19017	3.0	*1.3*	*1*	"	H 2191	*2.9*	2.4	*1*

J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res	J. D.	Design.	Obs. Br.	Path.	Res.	J. D.	Design.	Obs. Br.	Path.	Res.
857	H 2696	1.2	2.8	p	858	H 1967	*0.2*	1.0	*6*	858	18321	1.1	*1.8*	0	859	H 2572	*0.9*	0.4	2
"	15189	1.5	*1.6*	*1*	"	H 1969	*1.1*	0.1	*1*	"	18722	1.1	*1.4*	0	"	H 2595	*1.2*	*0.0*	*1*
"	16438	1.3	*1.7*	*1*	"	H 1971	*0.2*	0.0	*2*	"	19197	0.4	*1.3*	0	"	H 2895	*0.4*	*0.0*	1
"	17440	0.9	*1.7*	0	"	H 2408	*0.3*	0.0	1	"	19284	*0.6*	*1.5*	0	"	H 2899	*1.6*	*0.0*	0
"	18800	4.8	*1.6*	*1*	"	H 2410	0.3	0.0	1	"	19776	2.0	*2.1*	0	"	H 2907	0.5	0.8	*5*
"	19284	*0.4*	*1.5*	1	"	H 2413	0.0	0.2	0	"	21889	2.4	*1.4*	1	"	H 2908	1.1	0.1	1
"	19197	0.1	*1.3*	*3*	"	H 2640	0.0	*0.0*	2	"	23360	1.5	*1.3*	2	"	H 2569	*1.1*	2.9	*1*
"	19776	2.0	*2.1*	0	"	H 2650	0.1	*0.0*	1	"	σ	1.0	*2.5*	*1*	"	H 2906	0.1	1.2	*9*
"	20104	0.9	*1.5*	*1*	"	H 2653	0.5	*0.0*	*1*	"	σ	1.2	*2.4*	1	"	H 2955	1.1	3.7	1
"	20125	1.0	*1.7*	*3*	"	H 2670	0.0	0.0	2	"	σ	1.1	*2.3*	0	"	21889	2.5	*1.4*	1
"	21889	2.6	*1.4*	2	"	H 2916	*0.5*	*0.0*	1	"	32200	1.9	*4.8*	6	"	23360	1.3	*1.3*	*1*
"	σ	0.9	*2.5*	*1*	"	H 2925	0.4	0.0	2	"	32376	1.5	*10.1*	*4*	"	σ	1.0	*2.4*	*2*
"	σ	1.0	*2.4*	0	"	H 2940	0.7	0.2	1	"	1869	2.2	*6.2*	*4*	"	σ	0.9	*2.3*	*3*
"	30980	1.5	*6.2*	1	"	H 2950	1.2	0.5	4	"	6907	2.1	6.3	0	"	6105	2.8	*4.9*	4
"	30879	0.4	*5.2*	3	"	H 1997	1.8	2.2	4	"	6827	2.9	*8.2*	*2*	"	6827	3.7	*8.2*	1
"	78	1.5	*4.7*	6	"	H 2460	2.2	3.6	0	859	H 2556	1.3	0.0	2					
"	336	1.6	*9.7*	p	"	H 2955	1.0	3.7	*3*	"	H 2557	0.1	0.0	*1*					
858	H 1962	0.1	0.8	1	"	16438	1.4	*1.7*	1	"	H 2561	*0.3*	0.7	2					

REMARKS.

154. A third observation of σ, omitted in Table I., gave the observed brightness 2.0, length of path 3.3, and residual 2.

162. H 2408. Residual 17.

171. H 2828. S Herculis. Variable.

172. H 2784. No magnitude in the Harvard Photometry.

179. H 2254. Retained.

183. H 2963. Rejected.

" 23360. Residual *10*.

186. H 2429. Residual *10*. A large negative residual also on J. D. 535.

196. H 3041. No magnitude in the Harvard Photometry.

203. H 2554. Rejected.

" H 2567. Residual *11*.

" H 2568. Residual *12*.

204. — All three stars observed at lower culmination give large negative residuals indicating that the sky was clearer below the pole than above it.

" Z 2394. This star is in right ascension 15^h.

208. H 2891. Residual *12*.

" H 2892. Cluster. N. G. C. 6341. Residual 13.

228. H 2976. Retained. Probably an unnoticed cloud over σ affected this and the two following stars.

" H 2975. Residual *11*.

" H 2977. Residual *16*.

" H 3281. No magnitude in Harvard Photometry owing to the proximity of H. P. 3280

237. Z 695. This star is in right ascension 16^h.

" Z 1809. This star is in right ascension 16^h.

244. H 3721. Residual *10*.

245. H 3420. Retained.

" H 3885. Rejected.

" H 3896. Residual 11.

" 11598. Residual 20.

260. 29624. Cloud over σ.

277. H 1147. Retained.

304. H 979. This star was used in deriving the constant and atmospheric absorption. When too late to reject the observation it was found that the fourth reading was in the wrong quadrant. If rejected, the constant would be changed from 4.5 to 4.4 and the absorption for northern stars from .24 to .22. The residuals would then become 1 2 *5* 4 *1* p T 9 *5* *2* 5 *3*. The residual of the star preceding H 979 is 14. A second approximation (see page 99) was accordingly made for this series, which showed that the constant originally adopted, 4.5, should be retained.

" H 1340. Residual 10.

" Z 20. This star is in right ascension 3^h.

" Z 1345. This star is in right ascension 4^h.

" Z 2286. This star is in right ascension 5^h.

" Z 241. This star is in right ascension 6^h.

" Z 2550. This star is in right ascension 6^h.

312. H 273. Residual *11*.

382. H 547. Perhaps some other star was observed by mistake.

388. H 633. Residual 11.

393. H 740. Residual 10.

395. Z 2550. This star is in right ascension 6^h.

396. Z 1710. This star is in right ascension 8^h.

" Z 1524. This star is in right ascension 8^h.

397. Z 1710. This star is in right ascension 8^h.

" Z 1524. This star is in right ascension 8^h.

405. H 804. Residual 11.

" Z 1345. This star is in right ascension 4^h.

" Z 2286. This star is in right ascension 5^h.

" Z 241. This star is in right ascension 6^h.

409. 30879. Some other star was observed by mistake.

417. 29670. Residual 3; rejected on account of clouds.
" 29624. Residual *14*; rejected on account of clouds.
499. H 3222. Residual *14*. See Vol. XIV. pp. 306 and 412.
502. 1800. Retained.
513. H 2933. Residual *12*. Clouds over σ.
" H 2878. Residual 18.
514. Z 549. This star is in right ascension 12^h.
" Z 649. This star is in right ascension 12^h.
" Z 2394. This star is in right ascension 15^h.
516. H 2164. Retained.
525. Z 2394. This star is in right ascension 15^h.
531. H 2525. Residual 21. Perhaps a passing cloud affected this and H 2524, the following star.
" H 2524. Retained. See H 2525.
534. H 3553. No magnitude in the Harvard Photometry owing to the proximity of H. P. 3554.
536. H 2181. Residual *10*.
544. — All the stars observed at lower culmination give negative residuals, indicating that the sky was clearer below the pole than above it.
" Z 2394. This star is in right ascension 15^h.
" Z 1809. This star is in right ascension 16^h.
" Z 695. This star is in right ascension 16^h.
559. H 4142. Residual 5; retained, clouds.
560. H 2515. Residual 14. Clouds.
" H 3134. Clouds.
563. Z 49. This star is in right ascension 14^h.
564. H 3561. Residual 14.
" Z 49. This star is in right ascension 14^h.
573. Z 1107. This star is in right ascension 21^h.
574. 13048. Residual 18.
" Z 1107. This star is in right ascension 21^h.
579. H 171. B.D. +4° 176 magn. 8.2 follows 0.8 s north 0'.2 and was probably combined with H 171 in the Harvard Photometry. The magnitude in that work has therefore not been used.
586. 6907. Rejected.
590. Z 1048. This star is in right ascension 2^h.
591. Z 1048. This star is in right ascension 2^h.
593. Z 20. This star is in right ascension 3^h.
599. 16438. Residual 11. Clouds.
704. Z 1728. This star is in right ascension 9^h.
" 27956. Residual 15. The only other star observed in this series at lower culmination also gives a large positive residual.
721. H 1845. Retained. May have been affected by clouds.
721. H 1857. Residual *13*. Clouds.
" H 1882. Residual *13*. Clouds.
777. H 1519. Residual 18. Clouds.
" 15189. Residual *10*. Clouds.
" 31530. Rejected. Clouds.
" 31360. Residual *15*. Clouds.
822. Z 3236. This star is in right ascension 10^h.
" Z 3313. This star is in right ascension 10^h.
" Z 3982. This star is in right ascension 10^h.
" Z 4096. This star is in right ascension 10^h.
824. Z 1283. This star is in right ascension 9^h.
" Z 1728. This star is in right ascension 9^h.
" 12834. Rejected. Perhaps some other star was observed by mistake, since the position of the object observed appears to precede $2^m.9$ south 10'.
" Z 4096. This star is in right ascension 10^h.
" Z 3982. This star is in right ascension 10^h.
" Z 3313. This star is in right ascension 10^h.
" Z 3236. This star is in right ascension 10^h.
825. H 1432. Recorded "dbl." B.D. +3° 1719, magn. 7.1, follows $1^m.1$ north 6'.
826. H 1664. Retained. The large residual is probably due to clouds.
829. H 1582. Recorded "dbl." but no other star near in the Durchmusterung or on photograph. Position apparently correct.
" H 2252. No magnitude in the Harvard Photometry owing to the proximity of H 2251.
830. Z 896. This star is in right ascension 10^h.
" Z 1573. This star is in right ascension 10^h.
" Z 3313. This star is in right ascension 10^h.
831. Z 1573. This star is in right ascension 10^h.
" Z 896. This star is in right ascension 10^h.
832. Z 3313. This star is in right ascension 10^h.
833. Z 3313. This star is in right ascension 10^h.
841. Z 549. This star is in right ascension 12^h.
" Z 649. This star is in right ascension 12^h.
857. H 2696. Residual 15. Haze.
" 336. Residual 26.

Table II. gives the provisional magnitudes of the circumpolar stars, which were used in determining the atmospheric absorption as described on page 57. The first column gives the number of the star in the Argentine General Catalogue or, if not contained in that work, the designation in the Cordoba Zone Catalogue. The second column gives the provisional magnitude obtained by using the value of the atmospheric absorption derived from the observations of σ. The result is given to hundredths of a magnitude, although as in other cases the magnitude used has been taken to the nearest tenth of a unit.

TABLE II.

PROVISIONAL MAGNITUDES OF POLAR STARS.

Design.	Magn.	Design.	Magn.	Design.	Magn.	Design.	Magn.	Design.	Magn.	Design.	Magn.
38	7.37	2^h 1048	8.55	6879	8.37	12698	7.87	14547	7.10	18212	7.18
78	5.24	2982	7.47	6907	5.58	9^h 1283	9.60	14570	8.87	18240	8.00
104	7.23	3172	7.28	6928	7.23	12790	7.70	14777	8.27	18321	5.70
147	5.78	3378	8.40	7097	6.25	12834	7.82	10^h 3236	8.95	18369	9.27
182	6.70	3400	8.13	5^h 2286	9.25	9^h 1728	8.70	14829	4.65	18374	7.35
222	7.23	3349	7.97	6^h 241	9.10	13004	7.87	10^h 3313	8.70	18500	8.70
336	2.82	3451	8.62	7601	6.77	13035	8.30	14883	7.57	18722	5.78
403	8.07	3715	8.37	7754	7.30	13051	7.17	14920	8.33	18800	9.47
639	8.03	3466	7.63	7769	8.27	13048	5.33	10^h 3982	8.85	18802	9.03
635	7.97	3704	5.50	7835	8.80	13063	8.70	15095	8.43	18868	7.10
646	9.27	3780	7.57	7845	7.43	13146	8.63	10^h 4096	8.90	19017	7.78
678	7.77	3774	8.37	7882	7.60	13151	8.17	15122	7.53	19007	6.94
700	6.80	3782	9.27	7920	8.03	13167	8.07	15128	6.67	14^h 49	10.00
762	4.96	3951	8.07	8331	9.00	13200	7.70	15189	6.25	19197	5.04
782	8.23	3984	7.98	8350	8.73	13222	8.78	15217	8.23	19284	4.10
839	8.00	4075	7.67	8667	5.64	13246	5.25	15311	9.33	19098	8.10
1075	8.20	4304	8.10	6^h 2550	9.05	13328	8.60	15363	7.90	19424	7.17
1114	7.43	*4272*	7.83	8888	7.33	13360	6.90	15370	7.17	19532	7.90
1110	7.77	*4359*	7.87	8942	7.63	13401	9.67	15440	6.67	19742	8.70
1304	8.07	4546	7.80	8919	8.95	*13480*	7.00	15711	7.80	19809	7.82
1440	8.47	4610	9.03	9075	7.77	13479	8.23	15761	7.63	19776	6.50
1597	7.17	3^h 20	9.00	9088	7.97	13537	8.23	15792	8.27	20034	5.60
1714	7.20	4672	6.38	9418	7.60	13661	8.33	15959	7.50	20104	5.55
1738	5.87	4871	7.93	9770	6.44	13761	8.70	16016	6.20	20125	5.85
1757	7.37	5090	5.60	9653	8.43	13764	8.40	16265	8.47	20152	8.03
1754	7.73	5136	8.43	9819	7.67	13840	5.60	16438	5.88	20423	8.47
1768	7.87	5292	7.93	10477	7.63	13899	6.60	16529	8.17	20624	8.37
1800	5.64	5219	5.81	10508	7.90	13907	7.33	16619	7.43	20818	5.73
1799	8.46	5264	7.13	11013	7.77	14032	7.20	16709	6.71	15^h 2394	9.22
1869	6.07	5274	7.13	10578	7.87	*14023*	7.31	12^h 549	8.00	21419	7.75
1893	8.27	5310	6.77	10637	7.00	10^h 896	8.95	12^h 649	8.70	21663	5.70
1926	7.53	4^h 1345	9.65	10681	9.07	14444	7.50	16859	6.33	21646	9.60
2081	7.03	5685	7.47	10936	8.57	14249	6.63	16952	6.70	21881	4.73
2151	8.07	*5720*	7.90	10948	8.43	14267	7.30	17241	6.60	21889	6.97
2141	8.43	5742	7.90	11196	8.47	10^h 1573	9.10	17401	7.20	21385	8.30
2202	7.17	6105	5.92	8^h 1524	9.85	14421	7.53	17440	5.44	21937	7.33
2205	7.90	6276	7.67	11273	9.50	14481	7.70	17694	7.27	21943	7.90
2278	7.90	6293	7.93	8^h 1710	9.40	14457	8.53	17714	7.67	21950	8.97
2647	7.87	6388	6.50	11598	5.57	14507	8.53	17696	7.12	16^h 695	8.70
3149	7.90	6422	6.73	11982	7.00	14523	7.02	17753	8.33	22037	8.53
2928	7.77	6584	7.13	11964	6.90	14529	7.50	17875	9.07	22090	6.40
2948	7.73	6827	6.14	12688	5.51	14531	7.93	18097	8.33	22253	6.37

Design.	Magn.	Design.	Magn.	Design.	Magn.	Design.	Magn.	Design.	Magn.	Design.	Magn.
22180	6.08	24659	8.03	27838	7.10	29170	8.17	30358	5.14	31417	6.50
22269	9.53	24819	5.88	27956	5.70	29210	7.13	*30373*	9.03	31413	9.83
22393	4.23	25083	5.76	28162	6.06	29187	9.17	30400	8.10	31440	9.27
16^h 1809	8.50	25047	9.50	28171	6.46	29234	7.40	30380	5.66	31494	8.13
22775	7.23	25077	6.23	28199	8.47	*29235*	6.47	30500	5.42	31512	8.87
22858	7.43	25045	8.24	28217	7.50	29222	9.43	30520	6.08	31518	7.77
23025	7.93	25167	7.73	28264	7.57	29300	7.63	30532	5.93	31522	8.23
23027	7.53	25227	7.12	28468	8.40	29336	5.39	30693	8.07	31548	6.20
23192	6.77	25383	4.03	28573	9.30	29316	6.73	30701	6.73	31530	5.60
23362	5.60	25370	6.60	28622	7.99	*29431*	7.83	30632	9.13	31575	9.80
23360	5.98	25412	7.63	*28676*	7.30	29533	3.75	30816	7.87	31672	7.63
23429	7.70	25527	6.17	28684	6.83	29562	7.67	30879	4.34	31793	7.40
23615	7.80	25488	6.73	28706	5.22	29568	6.73	30925	9.80	31876	7.90
23696	6.38	25721	7.47	28663	6.87	29605	7.03	30980	5.49	32031	7.67
23843	7.30	25868	7.73	28704	8.93	29624	5.50	31023	10.00	32098	7.90
23954	7.27	25992	7.90	28728	7.70	29670	6.10	31096	8.37	32184	7.90
24153	6.30	26386	7.99	28714	7.30	29042	6.62	31079	9.17	32200	5.10
24176	5.27	26415	6.60	28756	7.57	29677	8.97	31127	6.23	32195	7.90
24483	5.57	26929	6.27	28851	5.88	21^h 1107	8.60	31201	7.80	32223	6.77
24456	7.75	26980	5.47	*28818*	7.47	29629	9.03	*31195*	9.17	32229	8.37
24570	5.97	27225	4.03	28929	7.40	29847	7.47	31129	8.50	32286	8.13
24468	6.53	27498	6.30	28922	8.07	29823	8.17	*31343*	9.43	32303	5.58
24595	7.30	27666	9.07	28938	7.37	30034	5.97	31360	6.10	32376	4.53
24354	9.75	27799	7.57	29062	7.67	30045	7.43	31322	8.53	32410	7.83
24821	5.37	27836	5.75	29060	6.47	30350	5.68	31376	9.40		

A summary of the various series of observations made in South America is given in Table III. together with the constants used in reducing them. The Julian day is given in the first column omitting the constant quantity 2,411,000. The numbers I., II., III., IV. in the second column give the four sections into which the work may be divided as explained on page 51. Sections I. and III. were taken at the station on the mountain near Chosica, Section II. was taken at Pampa Central, Chile, near the borders of the Desert of Atacama, and Section IV. at Arequipa. The date is given in the third column and the sidereal times of beginning and ending in the fourth and fifth columns. The next six columns give the number of stars observed in each of the various classes into which each series may be divided, including those which were rejected for discordance or other causes. The first of these classes in general contains the number of southern stars the determination of whose magnitude was the object of the research. More precisely it gives the number of stars observed and not contained in the following five columns. The next columns give the number of the stars taken from the Harvard Photometry, from which the constant of the series was derived, the number of stars observed near the northern horizon, the number of southern polar stars observed at upper culmination, the number of observations of σ *Octantis* and the number of stars observed at lower culmination. The total number of stars, which is equal to the sum of the preceding six columns, is given in the twelfth column. The constant of the series is given in the thirteenth column, and the atmospheric absorption as derived from the stars near the northern horizon, from σ *Octantis*, and from the southern circumpolar stars are contained in the next three columns. In several series no stars were observed near the northern horizon. The value of the absorption was then assumed to be .12, .13, .25, and .18, respectively, for the four sections of the work. These values equal the mean results provisionally found for all the series in each section. In such cases the value of the constant is given only to tenths of a unit. The average deviation of the observations of the stars used in deriving the constant, and of those near the northern and southern horizon are given in the next three columns. The last two columns give the age of the Moon and the time of observation in minutes. The last quantity equals the difference between the fourth and fifth columns after subtracting the time lost by clouds and other interruptions. Additional information regarding the observations will be found in the Remarks following the table.

TABLE III.

SUMMARY OF SERIES.

J. D.	S.	Date. 1889.	Beginning.	Ending.	Number of Stars. A.	H.	N.	U.	σ	L.	B.	Const.	Absorption. N.	σ	S.	Aver. Dev. H.	N.	S.	Age of Moon	Time.
			h. m.	h. m.															d.	m.
147	I.	May 24	11 14	15 2	50	14	.	2	2	3	71	4.0	.12	.13	.06	.28	..	.24	25	228
148	"	" 25	11 24	15 42	70	12	2	7	2	3	96	4.22	.13	.08	.13	.20	.35	.23	26	258
150	"	" 27	11 9	15 5	40	14	3	4	2	3	66	4.20	.26	.17	.17	.22	.13	.16	28	236
151	"	" 28	10 58	15 35	47	13	3	1	2	3	69	3.99	.08	.08	.14	.26	.27	.17	29	277
152	"	" 29	13 0	16 35	47	12	3	3	2	3	70	4.35	.15	.19	.19	.23	.13	.18	30	215
154	"	" 31	11 28	17 54	46	11	2	3	3	3	68	4.17	.10	.18	.16	.15	.15	.23	2	386
155	"	June 1	11 31	16 6	73	14	3	5	2	3	100	3.80	.08	.06	.03	.24	.17	.16	4	275
157	"	" 3	11 35	16 37	75	12	3	1	2	3	96	4.16	.04	.17	.18	.14	.30	.07	6	302
158	"	" 4	11 52	16 4	67	11	3	1	2	3	87	4.34	.10	.19	.20	.15	.17	.12	6	252
160	"	" 6	12 47	15 31	22	13	2	1	3	3	44	4.40	.13	.21	.24	.25	.10	.11	8	164
162	"	" 8	12 3	16 53	72	12	3	3	2	3	95	4.19	.03	.16	.16	.12	.13	.16	10	290
167	"	" 13	12 3	16 52	99	12	3	5	3	3	125	4.11	.09	.10	.13	.18	.00	.18	16	289
171	"	" 17	12 49	17 10	59	13	3	1	2	3	81	4.23	.17	.17	.15	.23	.13	.22	20	261
172	"	" 18	12 47	16 57	70	11	3	1	2	3	90	4.58	.27	.27	.23	.16	.10	.10	20	250
173	"	" 19	12 48	16 38	63	10	3	2	3	3	84	4.14	.12	.15	.14	.19	.23	.19	22	216
174	"	" 20	12 39	17 30	94	9	3	1	3	3	113	3.87	.04	.06	.09	.20	.10	.26	22	291
175	"	" 21	12 24	16 58	78	15	3	1	3	3	103	4.38	.16	.13	.18	.23	.00	.16	24	274
178	"	" 24	12 46	18 30	110	10	3	1	3	2	129	4.33	.04	.12	.11	.15	.37	.23	26	344

J. D.	S.	Date. 1889.		Beginning.		Ending.		Number of Stars.							Const.	Absorption.			Aver. Dev.			Age of Moon.	Time.
				h.	m.	h.	m.	A.	H.	N.	U.	σ	L.	B.		N.	σ	S.	H.	N.	S.	d.	m.
179	I.	June	25	12	46	17	41	120	12	3	1	2	3	141	4.34	.12	.14	.16	.33	.13	.28	28	295
180	“	“	26	13	32	15	38	24	..	2	1	1	3	31	4.2	.12	.13	.17	..	A	.22	28	126
182	“	“	28	13	3	17	39	62	10	2	1	3	3	81	4.12	*.03*	.13	.14	.28	.00	.26	1	276
183	“	“	29	13	52	17	46	66	8	3	1	3	3	84	4.51	.16	.24	.21	.29	.13	.18	2	234
185	“	July	1	13	22	18	9	83	10	3	1	3	3	103	4.60	.21	.20	.20	.19	.03	.11	4	287
186	“	“	2	13	53	17	8	61	10	3	1	2	3	80	4.18	.01	.14	.19	.31	.17	.25	5	195
192	“	“	8	13	49	18	32	64	11	3	2	2	3	85	4.30	.08	.13	.14	.22	.13	.17	11	263
193	“	“	9	14	0	18	11	91	12	2	5	2	3	115	4.42	.20	.19	.17	.18	.05	.10	12	251
196	“	“	12	13	58	18	18	77	12	3	5	3	3	103	4.34	.13	.15	.14	.20	.17	.09	15	260
197	“	“	13	14	9	18	40	89	12	3	5	3	3	115	4.10	.03	.09	.09	.14	.17	.12	16	271
201	“	“	17	14	29	18	48	60	12	2	2	3	3	82	4.02	.04	.08	.10	.22	.00	.12	20	259
202	“	“	18	15	13	19	16	59	13	3	1	3	3	82	4.41	.10	.20	.18	.32	.20	.13	21	243
203	“	“	19	15	6	19	10	86	11	4	1	3	3	108	3.99	*.04*	.03	.11	.20	.02	.30	22	244
204	“	“	20	14	43	19	2	4	10	3	47	3	3	70	4.35	.14	.20	.20	.21	.23	.16	23	259
206	“	“	22	15	0	19	12	110	10	3	..	3	3	129	4.32	.13	.15	.15	.16	.13	.10	25	252
207	“	“	23	15	4	19	2	32	5	3	1	2	3	46	4.26	.14	.22	.17	.20	.20	.13	26	238
208	“	“	24	14	54	18	53	77	12	3	1	3	3	99	4.03	.05	.05	.10	.22	.23	.20	27	239
210	“	“	26	15	6	19	34	72	10	3	1	3	3	92	4.21	.13	.13	.16	.22	.07	.16	29	268
213	“	“	29	15	35	19	20	91	12	3	1	2	3	112	4.46	.12	.15	.21	.22	.13	.15	2	225
217	“	Aug.	2	15	30	19	1	15	8	2	1	3	2	31	4.13	.09	.08	.11	.16	.05	.25	6	148
218	“	“	3	15	31	19	55	93	11	3	1	3	3	114	4.25	.10	.14	.14	.19	.17	.09	7	264
220	“	“	5	15	28	19	14	19	5	2	..	3	2	31	4.54	.16	.20	.19	.20	.20	.12	9	86
221	“	“	6	15	39	20	10	117	11	3	1	3	3	138	4.38	.17	.20	.20	.22	.10	.20	10	242
222	“	“	7	15	43	17	41	39	7	2	1	2	2	53	4.45	.12	.22	.18	.29	.05	.18	11	118
223	“	“	8	16	25	20	25	112	10	3	1	3	3	132	4.82	.28	.32	.32	.25	.07	.15	12	240
225	“	“	10	16	55	20	20	102	12	3	1	3	3	124	4.57	.21	.27	.23	.21	.20	.14	14	205
227	“	“	12	16	6	19	44	73	10	3	1	2	2	91	4.32	.14	.15	.19	.19	.17	.12	16	218
228	“	“	13	16	56	19	18	37	11	2	..	3	2	55	3.87	.02	.05	.10	.29	.35	.20	17	142
230	“	“	15	16	50	20	26	31	5	1	2	3	.	42	3.98	*.10*	.08	.01	.22	A	.28	19	92
231	“	“	16	16	29	20	48	118	10	2	2	3	1	136	4.41	.22	.22	.19	.20	.10	.13	20	259
235	“	“	20	16	44	21	2	109	14	3	1	3	2	132	4.13	.20	.12	.15	.24	.23	.25	24	258
236	“	“	21	16	32	21	2	144	11	3	1	3	2	164	4.10	*.05*	.11	.13	.28	.33	.13	25	270
237	“	“	22	16	39	19	52	77	3	2	2	3	2	89	4.19	.06	.12	.13	.23	.30	.13	26	193
241	“	“	26	16	54	21	24	83	11	3	1	3	3	104	4.06	.04	.12	.13	.27	.37	.17	30	270
244	“	“	29	17	0	22	30	91	11	3	1	4	2	112	4.20	.07	.12	.13	.28	.20	.14	4	330
245	“	“	30	19	10	22	20	41	10	.	15	2	2	70	3.8	.12	*.03*	*.01*	.28	..	.17	5	183
252	“	Sept.	6	0	41	2	0	28	6	1	1	2	2	40	4.18	.16	.16	.12	.28	A	.16	12	79
253	“	“	7	19	4	23	15	107	8	2	2	3	2	124	4.10	.02	.06	.11	.20	.10	.21	13	210
260	“	“	14	18	53	22	33	75	9	1	1	4	.	90	3.71	*.08*	.00	.00	.20	A	.05	20	164
262	“	“	16	20	51	21	42	20	6	.	1	2	1	30	4.6	.12	.32	.28	.25	..	.12	22	51
264	“	“	18	19	35	22	23	20	6	2	1	3	.	32	4.36	.13	.23	.23	.27	.15	.12	24	70
266	“	“	20	20	53	0	10	119	5	2	1	2	.	129	4.51	.15	.33	.31	.20	.30	.13	26	197
272	“	“	26	23	12	5	50	266	11	3	7	2	3	292	4.21	*.06*	.18	.11	.22	.17	.22	2	398
274	“	“	28	20	21	0	33	104	9	3	1	3	2	122	4.21	.03	.10	.08	.26	.23	.20	4	252
275	“	“	29	3	45	6	9	33	8	1	21	3	.	66	4.16	.15	.11	.12	.18	A	.09	5	121
277	“	Oct.	1	1	42	6	12	102	11	2	2	3	3	123	4.24	.44	.12	.15	.35	.05	.19	7	260
278	“	“	2	4	36	5	42	20	4	.	..	2	.	26	4.1	.12	.12	.12	.12	..	.05	8	66
282	“	“	6	1	55	6	27	133	10	3	1	3	1	151	3.96	.03	.06	.06	.13	.50	.04	12	272
283	“	“	7	19	48	3	50	176	12	3	10	4	3	208	4.21	.08	.13	.11	.19	.33	.09	13	349
286	“	“	10	1	1	4	51	81	6	2	2	3	3	97	4.13	.10	.08	.10	.20	.20	.16	16	160

J. D.	S.	Date. 1889-90.	Beginning.	Ending.	Number of Stars. A.	H.	N.	U.	σ	L.	B.	Const.	Absorption. N.	σ	S.	Aver. Dev. H.	N.	S.	Age of Moon.	Time.
			h. m.	h. m.															d.	m.
295	I.	Oct. 19	22 6	1 41	78	11	3	1	3	2	98	4.21	.17	.11	.12	.22	.10	.07	25	215
304	"	" 28	2 22	7 35	38	12	3	64	3	2	122	4.44	.24	.14	.11	.29	.47	.14	5	313
311	"	Nov. 4	21 54	0 34	51	7	1	3	3	1	66	5.45	.20	.09	.11	.23	A	.16	12	155
312	"	" 5	0 3	1 57	52	7	2	..	2	1	64	3.92	.10	.10	.10	.28	.35	.03	13	114
375	II.	Jan. 7	5 25	6 51	17	4	3	1	2	1	28	3.55	.28	.06	.00	.15	.03	.15	17	86
377	"	" 9	3 22	6 32	65	10	3	2	2	2	84	3.51	*.25*	*.16*	*.15*	.26	.13	.18	19	190
378	"	" 10	3 45	6 10	68	8	1	..	2	.	79	3.72	.17	*.09*	*.09*	.11	A	.05	20	145
379	"	" 11	4 38	6 8	36	6	2	..	2	.	46	3.90	.17	.41	.41	.20	.20	.15	21	83
381	"	" 13	3 17	9 18	192	5	12	1	3	2	215	3.48	.17	.02	*.02*	.18	.22	.13	23	361
382	"	" 14	3 13	9 11	191	11	1	2	3	2	210	3.80	.29	.19	.17	.30	A	.03	24	358
383	"	" 15	3 18	8 19	105	11	..	1	4	1	122	3.8	.13	.22	.17	.19	..	.12	25	211
385	"	" 17	3 29	9 26	188	8	1	1	3	.	201	3.5	.13	*.02*	*.02*	.32	A	.08	27	341
386	"	" 18	3 31	8 16	134	10	..	1	3	3	151	3.6	.13	.08	.05	.17	..	.10	28	285
388	"	" 20	3 48	11 15	284	9	5	..	2	2	302	3.55	.20	.16	.09	.26	.10	.15	30	447
389	"	" 21	3 46	9 53	201	11	3	..	3	2	220	3.58	.09	.12	.11	.25	.17	.28	1	367
390	"	" 22	4 8	8 39	139	11	5	..	3	3	161	3.53	.09	.04	.14	.21	.24	.20	2	271
391	"	" 23	4 3	9 50	185	8	6	2	3	3	207	3.64	.17	.10	.14	.29	.13	.15	3	347
392	"	" 24	4 3	8 9	103	7	..	..	2	.	112	3.5	.13	.09	.09	.13	..	.05	4	185
393	"	" 25	4 14	8 2	95	9	5	..	3	3	115	3.77	.25	.19	.18	.16	.10	.13	5	228
395	"	" 27	4 8	9 29	57	12	5	48	3	5	130	3.64	.20	.06	.16	.16	.22	.11	7	321
396	"	" 28	4 22	9 37	88	11	8	40	3	3	153	3.67	.07	.23	.24	.27	.19	.15	8	315
397	"	" 29	4 16	10 12	156	11	6	21	3	3	200	3.77	.27	.21	.23	.17	.27	.09	9	356
398	"	" 30	5 22	10 29	158	11	3	9	3	3	187	3.99	.26	.33	.34	.27	.20	.18	10	307
399	"	" 31	4 27	10 13	186	11	4	7	3	3	214	3.69	.11	.25	.25	.13	.28	.17	11	346
403	"	Feb. 4	4 32	10 22	179	12	5	7	3	4	210	3.62	.00	.17	.19	.17	.30	.09	15	350
404	"	" 5	4 40	10 16	174	11	4	7	3	3	202	3.57	.18	.08	.17	.17	.12	.13	16	336
405	"	" 6	4 33	10 5	155	12	4	8	3	3	185	3.57	.12	.10	.17	.21	.25	.12	17	332
406	"	" 7	4 41	10 19	119	10	5	3	3	3	143	3.40	.04	*.06*	.14	.24	.46	.38	18	338
407	"	" 8	4 46	9 2	70	9	5	..	3	3	90	3.73	.07	.12	.18	.24	.14	.15	19	256
409	"	" 10	5 31	10 48	163	10	5	..	3	4	185	3.57	.22	.15	.29	.24	.14	.36	21	291
410	"	" 11	5 40	10 13	161	7	5	..	3	3	179	3.51	.05	.10	.14	.11	.34	.23	22	273
412	"	" 13	6 10	10 4	117	10	3	..	2	3	135	3.53	.17	.12	.09	.21	.07	.30	24	234
413	"	" 14	5 55	10 31	140	12	5	..	3	4	164	3.59	.13	.10	.18	.25	.34	.21	25	276
414	"	" 15	6 16	9 34	105	10	7	..	2	2	126	3.49	.13	.09	.14	.18	.26	.18	26	198
416	"	" 17	6 24	10 38	75	8	8	..	3	3	97	3.49	.22	.06	.10	.18	.16	.08	28	151
417	"	" 18	6 6	9 51	102	10	4	..	2	3	121	3.66	.25	.28	.23	.30	.30	.17	29	225
418	"	" 19	6 12	10 35	140	11	5	..	3	4	163	3.43	.20	.06	.15	.25	.28	.21	1	263
459	III.	April 1	11 2	13 19	46	9	3	1	3	2	64	4.96	.26	.29	.25	.14	.27	.17	12	137
460	"	" 2	9 49	12 53	93	11	3	3	3	2	115	5.18	.35	.27	.26	.19	.10	.15	13	184
467	"	" 9	7 37	10 59	80	10	3	1	3	3	100	5.15	.31	.34	.31	.26	.13	.14	20	202
472	"	" 14	8 3	12 14	102	13	3	1	2	3	124	4.90	.25	.24	.27	.17	.10	.23	25	251
497	"	May 9	18 28	20 44	42	10	4	..	2	2	60	4.71	.25	.19	.24	.28	.10	.18	21	136
499	"	" 11	18 44	20 53	41	14	3	..	2	2	62	5.05	.26	.31	.30	.20	.03	.08	23	129
501	"	" 13	12 26	16 32	94	13	3	1	3	2	116	5.14	.38	.31	.33	.21	.17	.18	25	246
502	"	" 14	11 9	14 12	65	12	3	1	3	3	87	5.27	.23	.35	.34	.23	.50	.24	26	183
513	"	" 25	17 14	21 52	79	14	4	1	2	2	102	4.60	.04	.16	.21	.34	.33	.24	7	226
514	"	" 26	10 40	15 59	54	12	3	36	3	1	109	4.90	.22	.23	.26	.26	.10	.14	8	263
516	"	" 28	10 35	14 37	61	8	1	3	3	.	76	4.82	.29	.23	.20	.25	A	.12	10	191
517	"	" 29	10 34	15 51	134	17	4	2	3	3	163	5.05	.28	.28	.28	.17	.10	.09	11	317
522	"	June 3	11 7	14 50	88	13	2	1	2	4	110	4.71	.22	.18	.18	.17	.05	.11	16	223

J. D.	S.	Date. 1890.	Beginning.	Ending.	Number of Stars.							Const.	Absorption.			Aver. Dev.			Age of Moon.	Time.
					A.	H.	N.	U.	σ	L.	B.		N.	σ	S.	H.	N.	S.		
			h. m.	h. m.															d.	m.
525	III.	June 6	11 10	16 19	58	15	3	26	2	2	106	4.68	.18	.18	.20	.21	.23	.14	19	257
526	"	" 7	11 13	16 14	124	13	3	2	3	3	148	4.67	.21	.21	.21	.29	.10	.10	20	301
531	"	" 12	13 54	18 19	93	14	2	..	3	1	113	4.95	.20	.30	.29	.22	.05	.10	25	201
533	"	" 14	15 41	17 41	67	10	2	..	2	2	83	4.65	.29	.15	.17	.25	.05	.08	27	120
534	"	" 15	18 0	21 54	80	13	3	..	3	4	103	4.86	.32	.31	.29	.21	.10	.09	28	196
535	"	" 16	14 15	18 31	123	11	3	..	3	3	143	4.62	.15	.17	.20	.25	.07	.20	29	256
536	"	" 17	12 37	18 28	175	15	3	..	3	4	200	4.56	.14	.19	.21	.21	.10	.10	1	351
537	"	" 18	12 45	17 19	127	13	3	..	3	3	149	4.73	.28	.22	.22	.20	.10	.12	2	274
539	"	" 20	16 17	18 49	82	12	2	..	2	2	100	4.40	.12	.19	.22	.15	.00	.10	4	152
540	"	" 21	12 32	17 38	147	14	4	..	3	2	170	4.70	.19	.20	.21	.15	.12	.12	5	306
542	"	" 23	13 4	18 22	184	13	3	..	3	3	206	4.64	.16	.17	.19	.28	.10	.10	7	318
543	"	" 24	12 58	18 24	162	14	3	..	3	4	186	4.80	.24	.24	.21	.20	.17	.10	8	326
544	"	" 25	14 49	18 31	35	9	3	47	2	3	99	4.91	.26	.29	.29	.11	.20	.13	9	222
545	"	" 26	13 10	16 26	15	3	1	..	2	.	21	4.71	.35	.22	.22	.00	A	.10	10	56
552	"	July 3	13 34	19 37	104	14	3	1	3	2	127	4.63	.15	.21	.20	.20	.03	.07	17	363
553	"	" 4	13 39	19 42	90	13	3	48	3	3	160	4.66	.22	.24	.22	.31	.20	.12	18	363
556	"	" 7	14 5	19 2	102	12	2	..	3	1	120	4.76	.30	.24	.26	.36	.05	.12	21	268
559	"	" 10	19 46	23 33	110	8	2	..	3	1	124	4.69	.26	.24	.24	.17	.00	.10	24	227
560	"	" 11	14 54	18 38	71	10	1	..	2	.	84	4.83	.07	.30	.30	.32	A	.10	25	224
561	"	" 12	14 34	19 21	108	11	4	7	3	2	135	4.67	.25	.25	.26	.18	.10	.18	26	287
562	"	" 13	20 0	0 28	134	14	3	1	3	3	158	4.55	.20	.25	.23	.18	.13	.10	27	268
563	"	" 14	14 46	20 35	149	14	3	8	3	3	180	4.61	.21	.20	.22	.16	.03	.14	28	349
564	"	" 15	14 50	20 41	148	15	2	7	3	4	179	4.83	.31	.28	.28	.19	.05	.11	29	351
565	"	" 16	14 47	20 34	158	12	3	4	3	3	183	4.69	.29	.26	.30	.14	.13	.17	30	347
566	"	" 17	16 27	20 27	94	11	3	1	3	2	114	4.81	.32	.25	.27	.13	.37	.22	1	240
567	"	" 18	20 6	0 0	107	9	2	1	2	1	122	4.72	.23	.26	.26	.16	.20	.08	2	234
569	"	" 20	20 39	0 51	114	11	3	3	2	3	136	4.56	.19	.23	.26	.14	.17	.12	4	252
570	"	" 21	19 42	0 18	129	12	3	1	2	2	149	4.59	.25	.17	.23	.12	.10	.14	5	276
571	"	" 22	20 4	0 31	117	11	2	1	2	2	135	4.60	.14	.23	.25	.11	.10	.08	6	267
572	"	" 23	21 35	0 20	97	10	2	2	2	2	115	4.65	.27	.20	.24	.14	.15	.13	7	165
573	"	" 24	21 21	1 2	6	10	2	39	2	2	61	4.65	.30	.23	.23	.21	.05	.11	8	221
574	"	" 25	21 0	23 32	6	8	1	42	2	2	61	4.62	.37	.19	.22	.14	A	.10	9	144
576	"	" 29	22 10	1 46	30	13	2	32	2	3	82	4.62	.17	.26	.24	.18	.05	.07	13	216
579	"	" 30	22 44	1 39	55	15	3	9	2	3	87	4.69	.21	.18	.20	.11	.27	.09	14	175
580	"	" 31	17 8	22 26	117	13	3	6	3	2	144	4.75	.23	.21	.23	.18	.10	.14	15	318
581	"	Aug. 1	19 17	22 42	102	12	3	6	2	2	127	4.81	.30	.21	.25	.10	.13	.10	16	205
582	"	" 2	17 10	20 32	56	14	3	6	3	4	86	4.58	.18	.18	.20	.19	.10	.17	17	202
584	"	" 4	17 8	22 27	141	15	3	6	3	3	171	4.79	.23	.26	.25	.16	.17	.08	19	319
585	"	" 5	17 30	21 8	71	12	2	..	2	3	90	4.75	.29	.26	.29	.16	.10	.12	20	218
586	"	" 6	17 31	21 42	41	12	3	44	3	3	106	4.54	.28	.24	.22	.08	.07	.10	21	251
587	"	" 7	18 4	21 12	42	11	2	24	2	2	83	4.71	.30	.30	.28	.13	.05	.09	22	188
588	"	" 8	18 0	21 26	60	10	2	13	2	3	90	4.71	.29	.30	.27	.13	.05	.15	23	206
590	"	" 10	23 43	3 2	10	10	2	53	2	3	80	4.69	.26	.28	.26	.16	.10	.10	25	199
591	"	" 11	22 44	3 2	11	10	3	80	2	3	109	4.93	.39	.28	.31	.09	.10	.10	26	234
592	"	" 12	23 26	3 9	1	12	3	68	2	3	89	4.97	.34	.35	.35	.21	.10	.11	27	223
593	"	" 13	23 21	3 2	88	10	3	9	2	3	115	4.54	.32	.22	.24	.13	.30	.12	28	221
596	"	" 16	18 51	20 19	15	6	.	2	2	1	26	4.7	.25	.27	.29	.23	..	.18	2	88
597	"	" 17	23 35	3 24	101	11	3	..	2	3	120	4.64	.38	.23	.25	.20	.30	.12	2	229
598	"	" 18	23 41	3 24	108	13	3	3	3	3	133	4.56	.24	.26	.24	.18	.10	.10	4	223
599	"	" 19	23 51	2 54	94	9	2	..	3	2	110	4.80	.30	.29	.30	.13	.10	.02	4	183

J. D.	S.	Date. 1890-91.		Beginning.		Ending.		Number of Stars.							Const.	Absorption.			Aver. Dev.			Age of Moon.	Time.
								A.	H.	N.	U.	σ	L.	B.		N.	σ	S.	H.	N.	S.		
				h.	m.	h.	m															d.	m.
600	III.	Aug.	20	23	46	3	32	104	12	3	3	3	3	128	4.61	.22	.25	.24	.12	.20	.12	6	226
602	"	"	22	0	34	3	50	92	13	2	..	2	3	112	4.65	.33	.22	.25	.13	.10	.14	8	196
605	"	"	25	0	43	3	42	78	9	2	..	2	2	93	4.54	.27	.23	.23	.12	.15	.12	10	171
612	"	Sept.	1	3	4	4	29	39	8	2	..	2	1	52	4.63	.25	.23	.26	.20	.05	.17	18	85
618	"	"	7	23	51	4	40	127	12	4	1	3	3	150	4.68	.21	.25	.23	.17	.12	.09	24	289
619	"	"	8	0	0	4	42	121	15	3	4	3	3	149	4.72	.24	.24	.24	.22	.03	.09	24	282
620	"	"	9	0	7	4	34	91	16	3	2	3	3	118	4.69	.27	.24	.27	.22	.13	.09	26	267
621	"	"	10	0	7	4	5	50	9	1	1	3	1	65	4.50	.05	.19	.20	.14	A	.06	26	177
623	"	"	12	1	49	5	5	64	10	3	6	2	3	88	4.70	.29	.27	.26	.20	.23	.15	28	196
624	"	"	13	20	14	23	7	102	9	2	5	2	1	121	4.75	.19	.29	.27	.18	.05	.08	30	173
627	"	"	16	21	3	23	44	58	12	3	2	2	3	80	4.76	.22	.29	.26	.17	.10	.14	3	161
629	"	"	18	20	50	23	16	43	10	2	..	2	2	59	4.65	.22	.26	.25	.11	.00	.10	5	146
704	IV.	Dec.	2	8	16	9	36	1	8	.	16	2	2	29	3.4	.18	.13	.10	.22	..	.15	21	80
705	"	"	3	7	26	9	40	46	8	4	2	2	3	65	3.62	.23	.12	.18	.19	.30	.16	22	134
707	"	"	5	6	40	9	42	64	14	3	1	2	3	87	3.60	.10	.12	.15	.29	.13	.17	24	182
709	"	"	7	6	53	9	51	77	8	4	1	2	3	95	3.44	.09	.04	.17	.14	.15	.27	26	178
710	"	"	8	6	34	9	53	66	11	3	..	3	2	85	3.71	.20	.14	.17	.27	.03	.06	27	199
711	"	"	9	6	16	10	3	85	11	2	1	3	3	105	3.60	.06	.13	.18	.17	.10	.14	28	227
713	"	"	11	7	0	10	11	72	8	2	1	3	3	89	3.65	.52	.17	.26	.26	.20	.24	30	191
714	"	"	12	8	4	10	23	50	14	1	..	2	2	69	3.87	.14	.24	.30	.23	A	.28	1	139
721	"	"	19	7	44	10	35	66	6	3	..	2	1	78	3.69	.39	.29	.32	.38	.30	.10	8	171
776	"	Feb.	12	11	40	14	39	60	13	4	3	3	2	85	4.83	.12	.07	.09	.22	.22	.20	4	179
777	"	"	13	7	56	11	36	91	7	2	2	3	4	109	5.11	.15	.25	.20	.21	A	.13	5	201
782	"	"	18	12	18	14	14	48	10	1	..	2	2	63	4.95	.50	.20	.32	.21	A	.25	10	116
822	"	Mar.	30	9	40	12	35	51	9	.	18	2	2	82	5.0	.18	.12	.13	.40	..	.14	21	175
823	"	"	31	8	0	13	38	169	16	4	2	3	4	198	4.84	.09	.15	.18	.16	.25	.14	22	338
824	"	April	1	7	45	11	34	66	6	.	28	2	2	104	5.0	.18	.20	.28	.13	..	.16	23	211
825	"	"	2	7	25	13	17	165	18	6	8	3	3	203	4.98	.16	.14	.18	.21	.08	.17	24	352
826	"	"	3	7	32	13	11	128	18	2	18	3	1	170	4.91	.15	.11	.12	.27	.10	.09	25	311
827	"	"	4	9	10	12	36	90	13	2	13	3	3	124	4.96	.14	.13	.16	.19	.05	.09	26	206
829	"	"	6	8	0	13	24	145	20	1	6	3	3	178	4.76	.17	.07	.08	.22	A	.11	28	324
830	"	"	7	8	46	13	30	90	18	2	27	3	3	143	4.95	.16	.16	.19	.21	.15	.11	29	284
831	"	"	8	8	38	13	18	116	13	2	17	2	3	153	4.85	.15	.10	.10	.20	.15	.13	30	280
832	"	"	9	8	40	13	21	137	11	3	20	2	3	176	4.88	.20	.20	.18	.20	.17	.11	1	281
833	"	"	10	8	50	10	47	11	8	2	13	1	2	37	4.61	*.04*	.08	.05	.10	.25	.19	2	79
834	"	"	11	8	29	13	18	163	11	2	6	2	4	188	4.96	.22	.20	.21	.17	.05	.18	3	289
836	"	"	13	9	10	13	15	125	10	2	1	2	3	143	4.90	.18	.18	.18	.16	.20	.12	5	245
837	"	"	14	9	22	13	29	133	12	2	1	2	4	154	4.79	.18	.14	.16	.19	.10	.16	6	247
838	"	"	15	9	26	13	7	118	13	2	3	2	4	142	4.93	.14	.12	.15	.15	.20	.17	7	221
841	"	"	18	10	27	13	38	42	9	2	16	3	.	72	4.93	*.03*	.20	.18	.23	.20	.11	10	191
844	"	"	21	9	46	14	24	93	14	1	24	2	4	138	4.87	.09	.12	.15	.20	A	.10	13	278
845	"	"	22	10	15	13	29	42	16	1	9	3	3	74	4.89	.18	.16	.17	.19	A	.09	14	194
846	"	"	23	9	57	13	41	52	12	2	6	3	3	78	5.00	.13	.20	.20	.21	.30	.16	15	224
850	"	"	27	9	57	12	58	72	11	2	4	2	4	95	4.89	.16	.20	.16	.16	.05	.08	19	181
854	"	May	1	9	55	15	35	130	13	3	5	3	4	158	4.86	.12	.11	.16	.14	.07	.20	23	340
855	"	"	2	9	55	15	33	102	17	3	2	3	5	132	5.06	.20	.21	.21	.26	.17	.14	24	338
857	"	"	4	10	32	17	19	102	11	3	10	2	4	132	4.74	.06	.06	.09	.19	.10	.16	26	399
858	"	"	5	11	1	18	0	68	15	3	8	3	5	102	4.96	.27	.25	.24	.17	.23	.15	27	419
859	"	"	6	15	2	17	57	32	9	3	2	2	2	50	4.98	.19	.19	.30	.17	.10	.20	28	175

REMARKS.

1889.

148. May 25. Haze during first part of series.
150. May 27. Haze in south.
157. June 3. Haze in south.
158. June 4. Haze.
160. June 6. Haze and cirrus clouds. Stopped by clouds in south.
162. June 8. Haze.
173. June 19. Interrupted by clouds.
174. June 20. Clouds at Dec. +60° at end of series.
175. June 21. A few clouds near horizon at beginning of series.
179. June 25. Slight haze during first part of series.
180. June 26. Scattering clouds at beginning of series. Stopped by clouds. Constant 4.2 assumed.
182. June 28. Haze. Images bad.
183. June 29. Clouds during first part of series.
186. July 2. Clouds during first part of series.
193. July 9. Slight haze during first part of series.
196. July 12. Haze.
197. July 13. Slight haze during first part of series.
201. July 17. Occasional light clouds.
202. July 18. Clouds near horizon. Images poor.
204. July 20. Clouds near horizon during first part of series.
206. July 22. Clouds near horizon, and haze during first part of series.
207. July 23. Haze; low clouds in north. Mrs. S. I. Bailey recorder.
210. July 26. Clouds near eastern and western horizon during first part of series.
217. August 2. Series interrupted by clouds from $17^h 15^m$ to $18^h 18^m$. Stopped by clouds.
220. August 5. Series interrupted by clouds from $15^h 54^m$ to $18^h 14^m$. Stopped by clouds.
221. August 6. Haze; clouds below pole at beginning of series.
222. August 7. Clouds near horizon, and haze irregularly distributed. Stopped by increasing haze.
223. August 8. Haze dense, but uniformly distributed.
225. August 10. Haze.
227. August 12. Clouds near eastern, northern, and western horizon.
228. August 13. Clouds in west during first part of evening. Clouds noticed below pole after the Moon rose.
230. August 15. Scattering clouds. Interrupted by clouds from $17^h 17^m$ to $19^h 21^m$. Stopped by clouds.
231. August 16. Irregular and increasing cloudiness.
235. August 20. Clouds near horizon during first part of series.
236. August 21. Clouds near horizon, and haze.
237. August 22. Clouds near eastern and southwestern horizon. Stopped by clouds.
241. August 26. Clouds near horizon during first part of series. Mrs. S. I. Bailey recorder before 19^h.
244. August 29. Clouds near eastern horizon during first part of series. Interrupted by clouds from $18^h 21^m$ to $19^h 54^m$.
245. August 30. Clouds during first part of evening. Stopped by clouds.
252. September 6. Clouds before and after series.
253. September 7. Clouds east of meridian during first part of series. Interrupted by clouds from $21^h 57^m$ to $22^h 38^m$. Scattering clouds at end of series.
260. September 14. Clouds near eastern and southern horizon. Interrupted by clouds from $19^h 48^m$ to $20^h 44^m$. Stopped by clouds.
262. September 16. Clouds in east and north during first part of series. Haze dense. Stopped by clouds.
264. September 18. Clouds during first part of evening. Interrupted by clouds from $20^h 19^m$ to $21^h 57^m$. Stopped by clouds.
266. September 20. Clouds during first part of evening. Stopped by clouds.
272. September 26. Clouds during first part of evening.
274. September 28. Clouds during first part of evening.
275. September 29. Clouds during first part of evening. Haze. Scattering clouds during series.
277. October 1. Clouds during first part of evening. Haze. Images poor.
278. October 2. Clouds near horizon, and haze. Stopped by clouds. Images poor. Mirrors cleaned with brush and chamois skin.
282. October 6. Clouds near eastern, southern, and western horizon during first part of series. Scattering clouds from $4^h 0^m$ to $4^h 50^m$.
283. October 7. Scattering clouds. Interrupted by clouds from $19^h 56^m$ to $22^h 9^m$. Stopped by clouds.
286. October 10. Clouds near eastern and western horizon during first part of evening. Haze during first part of series. Interrupted by clouds from $2^h 59^m$ to $3^h 46^m$ and from $4^h 26^m$ to $4^h 49^m$. Stopped by clouds.
295. October 19. Clouds near eastern, southern, and western horizon. Haze.
304. October 28. Clouds near horizon.
311. November 4. Clouds near southwestern horizon during first part of series. Stopped by clouds. Image of σ faint in southern mirror.
312. November 5. Southern mirror resilvered. Clouds near horizon. After taking this series northern mirror resilvered. The changes in the constant are thus explained.

1890.

377. January 9. Clouds near eastern and northern horizon. Light cirri and haze visible after the Moon rose.
378. January 10. Stopped by light clouds and haze which were not visible until the Moon rose.
379. January 11. Stopped by clouds.
381. January 13. Some clouds seen on meridian soon after the series was ended.
383. January 15. Clouds near horizon, and haze in the north and east. Scattering clouds during series. Interrupted by clouds from $4^h 6^m$ to $5^h 0^m$ and from $6^h 33^m$ to $7^h 9^m$.
385. January 17. See page 56. Sky recorded as clear at beginning of series. Six stars observed between $9^h 8^m$ and $9^h 24^m$ rejected by observer and remark entered

"Clouds in S. E. Also discovered a large light cloud on pole which was not there when the last H. P. stars were measured." These stars were H. P. 1613, 1618, and 1619, and they were observed from $8^h\ 51^m$ to $8^h\ 55^m$.

386. January 18. Scattering clouds during first part of series.
392. January 24. Clouds near northern, eastern, and southern horizon. Haze. Interrupted by clouds from $7^h\ 6^m$ to $8^h\ 7^m$.
393. January 25. Clouds near horizon, and haze during first part of series.
396. January 28. Haze during first part of series.
398. January 30. Clouds near horizon, and haze.
399. January 31. Clouds near horizon, and haze.
403. February 4. Clouds near northern and eastern horizon, and haze.
405. February 6. Clouds near horizon, and haze.
406. February 7. Clouds during first part of series.
407. February 8. Clouds in north, east, and west during first part of series.
409. February 10. Entire horizon cloudy.
410. February 11. Haze during latter part of series.
412. February 13. Clouds in east and south. Images poor.
414. February 15. Dust brushed from mirrors.
416. February 17. Clouds in east and near the northern horizon. Interrupted by clouds from $6^h\ 27^m$ to $8^h\ 10^m$. Clouds in east and southeast at end of series.
417. February 18. Clouds in north and east, and near the southern horizon during first part of series. Stopped by clouds.
459. April 1. Clouds near horizon, and haze.
460. April 2. Clouds near horizon during first part of series. Haze.
467. April 9. Haze. Images poor.
472. April 14. Haze. Images poor.
497. May 9. Clouds near horizon, and haze.
499. May 11. Haze dense, especially in south and west.
501. May 13. Clouds near horizon during first part of series. Haze.
502. May 14. Clouds near eastern, southern, and western horizon. Haze dense. Images poor.
513. May 25. Haze. Interrupted by clouds from $17^h\ 30^m$ to $18^h\ 12^m$.
514. May 26. Haze and clouds in east and near the northern and southern horizon. Interrupted by clouds in south from $13^h\ 51^m$ to $14^h\ 47^m$. Images poor.
516. May 28. Clouds in east and near southern horizon. Interrupted by clouds from $11^h\ 59^m$ to $13^h\ 50^m$.
517. May 29. Clouds near southern and western horizon.
522. June 3. Scattering clouds during series.
525. June 6. Scattering clouds. Interrupted by clouds from $15^h\ 8^m$ to $16^h\ 0^m$.
526. June 7. Clouds near northern and eastern horizon during first part of series.
531. June 12. Clouds during first part of series. Interrupted by clouds over pole from $15^h\ 55^m$ to $16^h\ 59^m$.
533. June 14. Clouds in east and west and near the southern horizon during first part of evening.
534. June 15. Cloud near southern horizon during first part of series. Interrupted by clouds from $19^h\ 30^m$ to $20^h\ 8^m$.
535. June 16. Clouds near horizon, and haze in south during first part of series.
536. June 17. Clouds near southern and western horizon during first part of series.
537. June 18. Clouds near southern and western horizon during first part of series.
539. June 20. Clouds near southern and western horizon during first part of series.
545. June 26. Haze. Interrupted by clouds from $13^h\ 58^m$ to $16^h\ 24^m$. Stopped by clouds.
552. July 3. Scattering clouds in south during first part of series.
556. July 7. Clouds in east and near southern horizon, and haze during first part of series. Stopped by clouds.
559. July 10. Clouds during first part of evening. Stopped by clouds.
560. July 11. Clouds during first part of evening. Scattering clouds and haze during series.
561. July 12. Clouds near southern and southwestern horizon.
566. July 17. Scattering clouds during first part of evening.
567. July 18. Stopped by clouds.
572. July 23. Clouds during latter part of series.
574. July 25. Clouds during first part of series. Stopped by clouds.
580. July 31. Clouds during first part of evening. Scattering clouds during last part of series.
584. August 4. Images poor.
585. August 5. Haze.
590. August 10. Clouds near horizon, and haze.
591. August 11. Haze dense.
592. August 12. Clouds near southern and southwestern horizon, and haze.
596. August 16. Haze and clouds in north, east, and west. Stopped by clouds.
599. August 19. Clouds near southern horizon during first part of series. Stopped by clouds.
602. August 22. Clouds during first part of evening. Clouds near horizon during series.
605. August 25. Clouds near eastern, southern, and western horizon, and haze. Stopped by clouds in south.
612. September 1. Clouds near horizon.
620. September 9. Clouds near western and eastern horizon, and haze.
621. September 10. Haze during first part of series. Interrupted by clouds from $1^h\ 27^m$ to $2^h\ 3^m$ and from $3^h\ 7^m$ to $3^h\ 32^m$. Stopped by clouds.
624. September 13. Clouds in east.
629. September 18. Clouds during first part of evening. Clouds near southern and southwestern horizon during series.
704. December 2. Clouds near northern, northeastern, and western horizon.
711. December 9. Light clouds in north at end of series.
713. December 11. Sky hazy, and at dawn the entire sky seemed covered with dense haze or light cloud, which was invisible during the night.
714. December 12. Clouds near horizon.
721. December 19. Clouds during last part of series.

1891.

777. February 13. Clouds near eastern, southern, and western horizon at beginning of series, and covering pole at end of series.

782. February 18. Clouds in west and near northern, eastern, and southeastern horizon. Stopped by clouds.
822. March 30. Clouds near horizon. Haze. Stopped by clouds in south.
823. March 31. Clouds in east and west during first part of series.
824. April 1. Clouds in east and near northern horizon. Stopped by clouds.
825. April 2. Clouds near northern and eastern horizon during first part of series.
826. April 3. Clouds in east, and near northern, southern, and western horizon during series.
827. April 4. Clouds near eastern and southern horizon during first part of evening.
829. April 6. Clouds in east and near northern horizon during first part of series.
830. April 7. Clouds near northern and eastern horizon during first part of evening.
833. April 10. Interrupted by clouds from $9^h\ 54^m$ to $10^h\ 32^m$. Stopped by clouds.
838. April 15. Clouds near eastern and western horizon during first part of series.
841. April 18. Clouds in west, near eastern and southern horizon, and haze during series. Stopped by clouds near pole.
855. May 2. Clouds near horizon, and haze during first part of series.
857. May 4. Clouds near western horizon during first part of series. Stopped by clouds.
858. May 5. Clouds in west and northwest during last part of series. Southern absorption should be .24 instead of .22. The latter has been used.

It will be noticed that the above Remarks relate almost entirely to the presence of haze or clouds. Of course the observations were suspended when the observer supposed that either cloud or haze would affect the work. A careful watch was kept, and when no record appears, it may be assumed that the sky was perfectly clear.

It appears from Table III. that the greatest number of stars observed on any one evening was 302, taken on January 20, 1890. As the observations extended over seven hours and a half it is obvious that such a series is not to be recommended although there is no evidence that the accuracy of the observations was diminished during the latter part. On forty-three evenings the time of observation exceeded five hours. The clearness of the climate of Pampa Central and the energy of the observer and recorder are indicated by the fact that observations were obtained on thirty-three of the thirty-eight week days from January 7 to February 19, 1890. During this month and a half, 5137 stars were observed during 9073 minutes.

Monthly results derived from Table III. are given in Table IV. followed by the corresponding results for each of the four sections and for all combined. The month or class is given in the first column, the number of series in the second, and the total number of stars in the seven classes into which the series are divided are given in the next seven columns. The average number in each series of stars of the classes marked A, H, and B are given in the next three columns. They are found by dividing the numbers in the third, fourth, and ninth columns by the numbers in the second column. The mean absorptions and average deviations are given in the next six columns as in Table III. The total time of observation and the average time for each star, found by dividing the total time by the total number of stars, are given in the next two columns. The final column gives the algebraic mean of all the residuals of σ and shows that its variations in light, if any, were entirely inappreciable.

TABLE IV.

RESULTS OF TABLE III.

Class.	No. Series.	Total Number of Stars.							Average No. Stars.			Average Absorp.			Average Dev.			Time.		σ
		A.	H.	N.	U.	σ	L.	B.	A.	H.	B.	N.	σ	S.	H.	N.	S.	Total.	Av.	
1889.																		m.		
May	6	300	76	13	20	13	18	440	50.0	12.7	73.3	.14	.14	.14	.22	.20	.20	1600	3.6	.00
June	16	1154	172	45	27	39	47	1484	72.1	10.8	92.7	.10	.15	.16	.21	.15	.18	4139	2.8	−.03
July	15	1056	162	44	74	40	45	1421	70.4	10.8	94.7	.10	.14	.15	.21	.13	.15	3754	2.6	−.05
Aug.	17	1301	160	40	32	49	36	1618	76.5	9.4	95.2	.11	.15	.15	.24	.19	.17	3518	2.2	.00
Sept.	9	772	68	15	36	24	10	925	85.8	7.6	102.8	.07	.17	.15	.23	.19	.14	1542	1.7	+.02
Oct.	7	628	66	16	80	21	14	825	89.7	9.4	117.9	.17	.11	.11	.23	.29	.13	1635	2.0	.00
Nov.	2	103	14	3	3	5	2	130	51.5	7.0	65.0	.15	.10	.10	.25	.35	.12	269	2.1	−.08
1890.																				
Jan.	20	2648	184	73	136	55	41	3137	132.4	9.2	156.8	.15	.12	.12	.21	.19	.13	5550	1.8	−.01
Feb.	13	1700	132	65	25	36	42	2000	130.8	10.2	153.8	.14	.11	.17	.21	.25	.19	3523	1.8	−.10
Apr.	4	321	43	12	6	11	10	403	80.2	10.8	100.8	.29	.28	.27	.19	.15	.17	774	1.9	+.05
May	8	570	100	25	44	21	15	775	71.2	12.5	96.9	.24	.26	.27	.24	.18	.15	1691	2.2	−.02
June	15	1560	182	40	76	39	40	1937	104.0	12.1	129.1	.22	.21	.22	.21	.11	.12	3559	1.8	−.02
July	21	2046	246	52	213	53	46	2656	97.4	11.7	126.5	.24	.23	.24	.18	.13	.11	5555	2.1	−.04
Aug.	18	1215	201	44	317	42	49	1868	67.5	11.2	103.8	.29	.26	.26	.15	.14	.11	3782	2.0	−.01
Sept.	9	695	101	23	21	22	20	882	77.2	11.2	98.0	.22	.25	.25	.18	.10	.10	1776	2.0	.00
Dec.	9	527	88	22	22	22	22	703	58.6	9.8	78.1	.21	.15	.20	.24	.18	.17	1501	2.1	−.14
1891.																				
Feb.	3	199	30	7	5	8	8	257	66.3	10.0	85.7	.26	.17	.20	.22	.22	.19	496	1.9	+.14
Mar.	2	220	25	4	20	5	6	280	110.0	12.5	140.0	.14	.14	.16	.24	.25	.14	513	1.8	−.04
Apr.	18	1788	233	36	220	43	52	2372	99.3	12.9	131.8	.14	.15	.16	.20	.14	.12	4398	1.9	−.03
May	5	434	65	15	27	13	20	574	86.8	13.0	114.8	.17	.16	.20	.19	.14	.17	1671	2.9	−.07
I.	72	5314	718	176	272	191	172	6843	73.8	10.0	95.0	.11	.14	.15	.22	.18	.16	16457	2.4	−.02
II.	33	4348	316	138	161	91	83	5137	131.8	9.6	155.7	.15	.12	.14	.21	.21	.15	9073	1.8	−.05
III.	75	6407	873	196	677	188	180	8521	85.4	11.6	113.6	.25	.24	.25	.19	.13	.12	17137	2.0	−.02
IV.	37	3168	441	84	294	91	108	4186	85.6	11.9	113.1	.17	.15	.18	.21	.16	.14	8579	2.1	−.04
Total	217	19237	2348	594	1404	561	543	24687	88.6	10.8	113.8	.17	.18	.19	.20	.17	.14	51246	2.1	−.03

The values of the atmospheric absorption derived from the observations contained in Section III. are much greater than those in either of the other classes. This is shown by both the northern and southern stars. Although the location was the same as in Section I., the climatic conditions were very different, as has been stated on page 43.

All of the observations were reduced by the formula $D = C + ap$ given on page 56, using the constants contained in Table III. The values of C were taken from the thirteenth column of that table and the values of a from the sixteenth column. Adding the values of $C + ap$ thus obtained to the observed magnitudes found by Table I. of Volume XIV. gives the required magnitude of the star. The values of ap were computed to hundredths of a magnitude, since if expressed in tenths they would generally have the same values for a given star however many times it was observed. A constant error of several hundredths of a magnitude might have entered into the final result had the hundredths been neglected.

A grouping was next made of the number of residuals exceeding two tenths of a magnitude contained in each series not including the standard stars. The results are given in Table V. The first column gives the Julian Day omitting the constant 2,411,000, the second column gives the number of stars used in this grouping. The third column gives the total number of residuals exceeding two-tenths of a unit. The next columns contain the number of positive, and the number of negative residuals having the numerical values given in the headings of the columns. Residuals exceeding 10 are included with those having that value. These residuals show that in some cases a systematic correction should be applied to the stars observed in the series. The adopted value of this correction is given in the final column. On Julian Day 230 the correction was 0.0 for Z. C. 17^h1389 and for all preceding stars, and +0.3 for all following stars. The observations were interrupted by clouds for about two hours between these portions of the series. On Julian Day 260 the correction was +0.6 for A. G. C. 11265 and for all preceding stars, and +0.8 for all following stars.

TABLE V.

NUMBER OF RESIDUALS EXCEEDING 2.

J. D.	Total No.	No. Res.	Positive.								Negative.								Cor.
			3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	
147	50	25	1	1	.	.	.	.	.	.	9	5	6	2	1	.	.	.	+2
148	70	10	3	1	1	.	.	.	.	.	2	2	1	.	.	.	.	.	0
150	40	12	4	3	1	.	1	.	1	.	1	.	.	1	.	.	.	.	0
151	45	23	.	.	.	.	.	.	.	.	12	4	5	2	.	.	.	.	+2
152	47	14	8	4	1	.	.	1	.	.	.	.	.	.	.	.	.	.	0
154	46	8	3	4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	0
155	73	21	.	.	.	.	.	.	.	.	12	4	3	2	.	.	.	.	0
157	75	10	.	.	.	.	1	.	.	.	4	2	2	1	.	.	.	.	0
158	67	19	11	1	3	.	2	.	.	.	2	.	.	.	.	.	.	.	+1
160	22	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
162	72	9	2	.	.	.	.	1	.	.	5	1	.	.	.	.	.	.	0
167	99	16	10	3	.	.	.	.	.	.	1	2	.	.	.	.	.	.	0
171	59	5	1	.	1	.	.	.	.	.	2	1	.	.	.	.	.	.	0
172	70	35	19	3	6	6	.	.	.	.	1	.	.	.	.	.	.	.	−3
173	63	10	3	2	.	.	.	.	.	.	2	1	1	.	1	.	.	.	0
174	94	36	.	.	.	.	.	.	.	.	10	5	10	4	2	4	.	1	+3
175	78	13	6	6	.	.	1	.	.	.	.	.	.	.	.	.	.	.	0
178	110	15	6	3	2	.	2	.	.	.	2	.	.	.	.	.	.	.	0
179	120	18	9	3	2	1	.	.	.	.	1	1	.	1	.	.	.	.	0
180	24	10	6	2	.	.	.	1	1	.	.	.	.	.	.	.	.	.	0
182	62	24	.	.	.	.	1	.	.	.	8	6	4	2	.	2	.	1	+2

J. D.	Total No.	No. Res.	Positive.								Negative.								Cor.
			3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	
183	66	26	5	1	2	1	.	.	.	.	10	5	.	1	.	.	1	.	0
185	82	41	17	8	6	6	2	2	.	.	.	.	.	.	.	.	.	.	−3
186	61	16	3	.	1	.	.	.	.	.	6	3	1	1	.	1	.	.	0
192	64	8	2	3	.	2	.	.	.	.	1	.	.	.	.	.	.	.	0
193	91	13	11	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	0
196	77	14	8	3	.	.	1	.	.	.	2	.	.	.	.	.	.	.	0
197	89	8	.	.	.	.	.	.	.	.	6	1	1	.	.	.	.	.	0
201	60	9	.	.	.	.	.	.	.	.	6	3	.	.	.	.	.	.	0
202	58	26	22	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.	−2
203	86	17	.	.	.	.	.	.	.	.	4	5	4	3	1	.	.	.	+2
204	4	2	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
206	110	13	6	.	1	.	.	.	.	.	6	.	.	.	.	.	.	.	0
207	32	5	4	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	0
208	77	35	1	.	.	.	.	.	.	.	17	4	6	6	1	.	.	.	+2
210	72	5	1	2	.	.	.	.	.	.	1	1	.	.	.	.	.	.	0
213	91	9	3	1	3	.	.	.	.	.	1	1	.	.	.	.	.	.	0
217	15	3	.	.	.	.	.	.	.	.	1	1	.	.	.	.	1	.	0
218	93	13	.	.	.	.	.	.	.	.	9	2	1	.	1	.	.	.	0
220	19	4	.	2	1	.	.	.	.	.	1	.	.	.	.	.	.	.	0
221	117	12	4	.	2	.	.	.	1	.	4	.	.	1	.	.	.	.	0
222	39	2	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	0

J. D.	Total No.	No. Res.	Positive.								Negative.								Cor.
			3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	
223	112	5	3	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
225	102	8	3	3	2	.	.	.	.	.	.	.	.	.	.	.	.	.	0
227	73	7	4	.	.	.	.	.	.	.	2	.	.	1	.	.	.	.	0
228	37	18	.	.	.	.	.	.	.	.	11	1	1	2	2	.	.	1	0
230	31	19	2	.	.	.	.	.	.	.	3	3	4	3	1	3	.	.	R
231	118	25	9	7	2	1	1	.	.	.	2	1	.	1	.	.	.	1	0
235	109	2	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	0
236	144	13	2	1	.	2	.	.	.	.	5	3	.	.	.	.	.	.	0
237	75	18	.	1	.	.	.	.	.	.	10	3	4	.	.	.	.	.	+1
241	83	25	.	1	.	.	.	.	.	.	17	3	1	2	.	1	.	.	+2
244	91	14	.	.	.	2	.	.	.	.	8	2	1	1	.	.	.	.	0
245	41	16	.	.	.	.	.	.	.	.	13	.	.	2	1	.	.	.	0
252	28	4	3	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
253	107	13	3	.	.	1	.	.	.	.	5	3	.	1	.	.	.	.	0
260	75	70	.	.	1	.	.	.	.	.	6	8	12	12	12	8	5	6	R
262	20	12	5	2	2	2	.	.	.	.	.	1	.	.	.	.	.	.	−3
264	20	9	7	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	0
266	119	25	11	6	2	1	.	.	.	.	5	.	.	.	.	.	.	.	0
272	266	42	16	5	3	1	.	.	.	.	12	4	2	.	.	.	.	.	0
274	104	14	.	.	.	.	.	.	.	.	11	.	1	1	.	1	.	.	0
275	33	12	4	.	1	.	.	.	.	.	4	2	1	.	.	.	.	.	0
277	102	21	4	.	.	.	.	.	.	.	11	4	2	.	.	.	.	.	0
278	20	10	.	.	.	.	.	.	.	.	6	.	1	3	.	.	.	.	0
282	133	7	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
283	176	13	8	2	.	.	.	.	.	.	2	1	.	.	.	.	.	.	0
286	81	13	.	.	.	.	.	.	.	.	10	1	2	.	.	.	.	.	0
295	76	23	.	.	.	.	.	.	1	.	6	3	6	5	1	.	1	.	+2
304	38	5	2	.	.	1	.	.	.	.	1	.	.	.	1	.	.	.	0
311	51	7	1	1	.	.	.	1	.	.	4	.	.	.	.	.	.	.	0
312	52	6	.	.	.	.	.	.	.	.	4	1	1	.	.	.	.	.	0
375	17	2	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
377	65	21	4	1	.	.	.	.	.	.	5	4	3	2	1	1	.	.	0
378	68	26	14	6	1	1	.	.	.	.	2	1	.	.	1	.	.	.	−2
379	36	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
381	192	34	4	.	1	.	.	.	.	1	14	7	2	3	2	.	.	.	0
382	191	24	14	.	.	2	.	.	.	.	5	2	1	.	.	.	.	.	0
383	105	20	11	3	.	.	1	.	.	.	2	.	.	3	.	.	.	.	0
385	188	23	4	.	1	.	.	.	.	.	8	6	1	2	1	.	.	.	0
386	134	9	7	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
388	284	19	9	1	.	.	.	.	.	.	6	.	1	.	2	.	.	.	0
389	201	23	12	5	1	1	.	.	.	.	3	1	.	.	.	.	.	.	0
390	139	14	.	.	1	.	.	.	.	.	9	3	.	.	.	.	.	1	0
391	185	27	19	4	.	.	.	.	.	.	1	1	2	.	.	.	.	.	0
392	103	11	5	.	.	.	.	.	.	.	3	2	.	1	.	.	.	.	0
393	95	21	11	2	4	.	.	.	.	.	2	.	.	2	.	.	.	.	0
395	57	3	.	1	.	.	.	.	.	.	1	.	1	.	.	.	.	.	0

J. D.	Total No.	No. Res.	Positive.								Negative.								Cor.
			3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	
396	88	6	3	.	.	.	1	.	.	.	2	.	.	.	.	.	.	.	0
397	156	15	11	2	1	1	.	.	.	.	.	.	.	.	.	.	.	.	0
398	155	60	41	9	7	3	.	.	.	.	.	.	.	.	.	.	.	.	−2
399	186	6	4	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	0
403	179	4	1	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	0
404	174	11	.	1	.	.	.	.	.	.	9	1	.	.	.	.	.	.	0
405	155	6	1	.	.	.	.	.	.	.	3	1	.	.	1	.	.	.	0
406	119	19	1	.	.	.	.	.	.	.	12	4	1	.	.	1	.	.	0
407	70	10	2	4	2	.	.	.	.	.	.	.	.	2	.	.	.	.	0
409	163	13	5	3	1	1	.	.	.	.	1	1	.	1	.	.	.	.	0
410	161	5	.	1	1	.	.	.	.	.	3	.	.	.	.	.	.	.	0
412	117	12	2	.	.	2	.	.	.	.	5	2	.	1	.	.	.	.	0
413	140	9	5	2	.	.	.	.	.	.	1	1	.	.	.	.	.	.	0
414	105	12	8	2	1	.	.	.	.	.	.	1	.	.	.	.	.	.	0
416	75	4	1	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	0
417	102	14	9	2	3	.	.	.	.	.	.	.	.	.	.	.	.	.	0
418	140	6	1	.	.	.	.	.	.	.	2	2	1	.	.	.	.	.	0
459	46	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
460	93	4	1	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
467	80	11	2	4	4	.	.	.	1	.	.	.	.	.	.	.	.	.	0
472	102	5	4	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	0
497	42	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
499	41	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
501	94	14	11	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
502	65	14	7	2	.	1	1	.	.	.	.	.	.	.	.	.	.	.	0
513	79	16	1	2	.	.	.	.	.	.	2	4	2	3	2	.	.	.	0
514	54	5	1	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	0
516	61	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
517	130	28	19	6	2	1	.	.	.	.	.	.	.	.	.	.	.	.	−1
522	88	7	3	1	.	.	.	.	.	.	1	2	.	.	.	.	.	.	0
525	58	2	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
526	124	14	2	1	.	.	.	.	.	.	8	2	1	.	.	.	.	.	0
531	93	17	8	2	.	2	2	.	.	.	1	.	1	.	.	.	1	.	0
533	67	5	3	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	0
534	80	14	7	4	1	1	.	.	.	.	.	1	.	.	.	.	.	.	0
535	123	16	2	.	1	.	.	.	.	.	8	3	1	1	.	.	.	.	0
536	175	21	8	.	.	.	.	.	.	1	3	2	3	.	.	1	3	.	0
537	127	8	5	1	1	.	.	.	.	.	.	.	.	.	1	.	.	.	0
539	82	21	.	.	.	.	.	.	.	.	10	8	3	.	.	.	.	.	+1
540	147	17	6	2	.	.	.	.	.	.	6	2	.	1	.	.	.	.	0
542	184	21	8	2	2	.	.	.	.	.	5	3	1	.	.	.	.	.	0
543	162	23	11	5	4	1	.	.	.	.	1	1	.	.	.	.	.	.	0
544	35	5	3	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	0
545	15	1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
552	104	19	1	.	.	.	.	.	.	.	14	3	1	.	.	.	.	.	0
553	90	5	3	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	0

J. D.	Total No.	No. Res.	Positive.								Negative.								Cor.
			3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	
556	102	16	6	5	.	.	1	.	.	.	2	2	.	.	.	.	.	.	0
559	110	21	18	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
560	71	36	6	5	2	.	.	1	.	.	8	3	2	3	.	4	.	2	0
561	108	13	5	2	.	1	.	.	.	.	2	2	1	.	.	.	.	.	0
562	134	4	2	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
563	149	13	8	2	.	.	.	.	.	.	.	2	1	.	.	.	.	.	0
564	148	48	28	14	2	1	.	.	.	.	3	.	.	.	.	.	.	.	0
565	158	21	11	2	.	.	1	.	.	.	5	2	.	.	.	.	.	.	0
566	94	33	17	7	2	2	3	.	.	.	1	1	.	.	.	.	.	.	−1
567	107	9	3	2	1	.	1	.	.	.	1	.	1	.	.	.	.	.	0
569	114	5	3	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	0
570	129	14	7	3	.	.	.	.	.	.	4	.	.	.	.	.	.	.	0
571	117	9	8	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
572	97	3	1	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	0
573	6	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
574	6	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
576	30	3	2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
579	55	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
580	117	15	8	2	2	.	.	1	.	.	2	.	.	.	.	.	.	.	0
581	102	13	10	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	0
582	56	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
584	141	14	7	4	.	.	.	.	.	.	2	1	.	.	.	.	.	.	0
585	71	8	5	1	.	.	.	.	.	.	2	.	.	.	.	.	.	.	0
586	41	7	1	.	.	.	.	.	.	.	3	3	.	.	.	.	.	.	0
587	42	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
588	60	11	5	4	.	.	.	.	.	.	2	.	.	.	.	.	.	.	0
590	10	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
591	11	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
592	1	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
593	88	3	1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	0
596	15	7	3	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	0
597	101	5	4	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
598	108	2	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	0
599	94	12	9	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	0
600	104	8	1	1	.	.	.	.	.	.	3	2	1	.	.	.	.	.	0
602	92	12	.	.	.	1	.	.	.	.	9	2	.	.	.	.	.	.	0
605	78	5	1	.	.	.	.	.	.	.	.	2	.	2	.	.	.	.	0
612	39	5	4	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
618	127	12	4	.	1	1	.	.	.	.	4	2	.	.	.	.	.	.	0
619	121	16	4	8	1	.	.	.	.	.	3	.	.	.	.	.	.	.	0
620	91	17	14	.	2	.	.	.	.	.	1	.	.	.	.	.	.	.	0
621	50	21	.	.	.	.	.	.	.	.	12	7	2	.	.	.	.	.	0

J. D.	Total No.	No. Res	Positive.								Negative.								Cor.
			3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	
623	64	18	5	6	1	.	1	.	.	.	3	2	.	.	.	.	.	.	0
624	102	22	15	3	1	.	.	.	.	.	2	1	.	.	.	.	.	.	0
627	58	22	11	8	2	1	.	.	.	.	.	.	.	.	.	.	.	.	−2
629	43	5	2	.	.	.	.	.	.	.	2	1	.	.	.	.	.	.	0
704	1	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
705	46	3	.	.	.	.	.	.	.	.	2	1	.	.	.	.	.	.	0
707	64	6	2	1	.	.	.	.	.	.	3	.	.	.	.	.	.	.	0
709	77	16	1	1	.	.	.	.	.	.	8	4	2	.	.	.	.	.	0
710	66	10	5	2	1	1	.	.	.	.	1	.	.	.	.	.	.	.	0
711	85	6	1	1	.	.	.	.	.	.	3	.	1	.	.	.	.	.	0
713	72	12	1	.	.	.	1	.	.	.	6	2	1	.	1	.	.	.	0
714	50	3	1	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
721	66	12	5	4	.	.	.	.	.	.	1	2	.	.	.	.	.	.	0
776	60	4	.	1	.	.	.	.	.	.	2	.	.	1	.	.	.	.	0
777	91	7	2	1	.	1	.	.	.	.	2	.	1	.	.	.	.	.	0
782	48	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
822	51	2	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
823	169	9	5	.	.	.	.	.	.	.	1	2	1	.	.	.	.	.	0
824	66	6	2	.	.	1	.	.	.	.	1	2	.	.	.	.	.	.	0
825	165	13	6	4	1	.	.	.	.	.	1	.	.	1	.	.	.	.	0
826	128	7	5	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
827	90	5	2	1	.	.	.	.	.	.	1	1	.	.	.	.	.	.	0
829	145	6	1	.	.	.	.	.	.	.	3	.	2	.	.	.	.	.	0
830	90	4	2	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	0
831	116	6	.	.	.	1	.	.	.	.	4	.	.	1	.	.	.	.	0
832	137	9	8	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	0
833	11	3	.	.	.	.	.	.	.	.	2	.	.	1	.	.	.	.	0
834	163	12	8	2	1	1	.	.	.	.	.	.	.	.	.	.	.	.	0
836	125	8	7	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	0
837	133	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	0
838	118	8	2	1	.	.	.	1	1	.	2	1	.	.	.	.	.	.	0
841	42	2	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	0
844	93	5	1	1	.	.	.	.	.	.	1	.	2	.	.	.	.	.	0
845	42	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	0
846	52	7	4	.	1	.	.	.	.	.	.	.	.	2	.	.	.	.	0
850	72	4	1	.	.	.	.	.	.	.	1	2	.	.	.	.	.	.	0
854	130	12	5	.	1	.	.	.	.	.	5	1	.	.	.	.	.	.	0
855	102	40	11	11	5	1	.	.	.	.	2	5	3	1	1	.	.	.	0
857	102	27	5	.	.	.	.	.	.	.	10	7	4	1	.	.	.	.	0
858	68	25	11	6	3	.	.	.	.	.	3	1	1	.	.	.	.	.	0
859	32	9	7	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	0

The effect of the corrections given in the last column of Table V. is shown in Table VI. The first two columns give the Julian Day and the residuals of all the stars not standard stars contained in each of the twenty-two series to which corrections have been applied. The third column gives the same residuals after correction. They do not differ by a constant amount from the residuals of the preceding column, since after the magnitudes have been corrected means and residuals have been taken a second time. The fourth column gives the means of the residuals contained in the second column after grouping them in sets of five. The residuals of the third column are similarly grouped in the fifth column.

TABLE VI.

SECOND APPROXIMATION.

J. D.	Uncorrected.	Corrected.	Uncorr.	Corr.
147	33131,11123,52611,23512,50516,12123, 72435,43330,05440,21404	21010,01212,30411,11301,32404,10001, 51223,52212,23221,01222	213331 3132	101120 3010
151	32321,34155,32535,33423,30240,43201, 51622,21261,00332	21100,22033,21333,21312,11132,21111, 31411,10140,11121	244322 322	122200 210
158	27015,00111,22150,31343,13215,33211, 30112,11201,11133,12132,31702,21211, 13202,23	27116,00001,11150,21144,13105,22100, 41330,11121,10134,01021,20801,10110, 22111,12	300022 111231 12	301221 211120 02
172	56656,20121,26122,23121,35633,33333, 44224,35322,22303,26352,33303,22253, 12123,22111	24426,02301,03100,11101,22301,00000, 11011,02011,11030,13021,00030,11120, 21214,14120	613243 332423 10	410020 001110 21
174	22120,11532,11125,21751,03011,70100, 04511,12121,33211,13023,21013,52442, 56825,36215,12483,16342,22202,11568, 852n	54201,00321,00002,00430,11100,42011, 12200,01010,01100,01132,10102,21111, 23412,03122,21150,23011,11131,22235, 5217	022312 212113 534324 6	210000 100000 201011 3
182	11022,32212,11220,12523,22113,4208n, 15048,32416,24312,54364,20132,21253, 27	11210,00010,11112,20211,05120,1025n, 33225,00213,02110,32142,03211,11021, 09	121316 332423 2	101023 110210 4
185	11017,24454,51116,02115,03134,12638, 32025,22363,35325,42473,42638,12343, 10312,16116,12323,01321,32	22314,01121,22113,21312,31212,11315, 01313,01031,02012,11141,31415,23121, 01130,23313,20010,12203,10	243124 234452 13212	110101 011130 10110
202	03313,23022,21122,24131,14433,23135, 21101,11322,32133,22133,33333,332	21111,01200,01100,02111,12211,01113, 01121,11100,10111,00111,11211,110	222233 022233	000011 100011
203	24613,12122,02022,21211,54201,22155, 22101,12211,42312,14122,22263,25402, 11226,27132,01221,10212,11222,2	13501,01011,10101,10302,32112,21243, 11010,01100,21101,13011,11141,13211, 00014,16021,10110,01301,02131,1	321023 112233 231002	210112 001121 120111
208	11510,31211,33226,50211,12265,40612, 56222,31243,22011,13325,31333,13031, 46123,20423,67323,53	20301,20113,11004,32011,10043,22410, 34000,11021,00211,11103,11112,22220, 24001,02201,44101,31	113233 311331 3244	001011 111110 1022
230	12330,42255,31425,12321,41268,76886, 3	32340,20133,11203,21210,20045,43553, 0	243147 3	221024 0

J. D.	Uncorrected.	Corrected.	Uncorr.	Corr.
237	04005,31101,11110,01111,20121,31013,	13104,22110,20110,00001,31111,20102,	200102	100011
	30234,11201,41125,13341,11113,12311,	21233,02310,51014,02340,10002,21311,	201211	200211
	12525,31110,02112	12424,20111,12001	311	300
241	41230,33221,13211,01111,12100,40116,	52331,21001,02100,00010,12000,31114,	022112	111001
	02201,33105,22320,22001,03243,13316,	10111,11114,11111,11110,12122,11204,	122123	011011
	33320,02332,80032,21114,210	22211,11221,61121,10003,101	22321	11110
260	46253,5117n,84418,79666,73433,14475,	11112,03527,31142,24110,22112,31121,	455744	000211
	5n756,5n636,65675,7n566,35476,47798,	12021,23151,12203,03211,32301,30021,	764757	012020
	5759n,88988,8n759	22324,12212,15022	888	022
262	40322,21345,41326,33651	14101,12101,05102,11312	1334	1110
295	19376,21525,20111,51644,45192,11102,	09254,11313,11000,30422,230p1,00011,	531411	410210
	23600,11120,21111,52223,31102,31111,	12411,20211,12000,30112,20011,20200,	201311	110100
	61160,15021,31112,1	40041,03110,22001,0	3211	1100
378	12311,40020,33102,34542,43432,34236,	01202,52101,42200,23431,32321,43124,	100432	021321
	21011,37323,10132,22324,31231,01131,	21111,29212,01021,11213,20122,13020,	011321	100210
	10102,012	01011,121	10	01
398	51312,32345,21023,20214,12231,21223,	31201,10223,10102,11102,01110,11112,	232122	121111
	14211,10221,02221,42263,20223,24333,	03100,01100,10010,20142,01111,13221,	211323	100202
	12133,23222,33135,33113,21210,25251,	01012,12100,22113,12001,11101,13130,	223213	111102
	02311,22342,62235,53463,33122,22112,	20100,01121,41123,31242,31001,11001,	134422	012211
	33233,31222,23233,13313,11242,13410,	21111,10011,12121,01111,00120,12211,	323222	111010
	33111	21112	1	0
517	00000,23321,13032,13312,10001,10003,	11111,13211,02131,02202,10011,11002,	022201	121100
	01220,10200,41301,13112,21100,11120,	10210,01100,32201,23001,20100,22221,	111101	000012
	12232,13112,11311,23222,31121,23211,	21121,02111,00201,13221,20011,12101,	211222	111211
	43351,34214,20124,22625,21111,10213,	32140,23123,11013,11113,11200,01111,	322311	211100
	22242,22020	01131,11111	21	10
539	12445,23242,01031,10010,54133,30102,	11444,13131,00121,10020,43122,21011,	331031	320020
	11020,40014,10111,11021,01011,40303,	21011,30003,10120,10020,00011,30202,	020002	110001
	00011,11122,25342,21222,33	10001,10111,14232,21121,22	01323	00212
566	02322,24415,36233,24311,24133,23012,	21211,03204,25122,13222,12022,11101,	233130	122010
	33011,20210,00011,14020,00411,00113,	22102,00021,01001,04101,01310,00123,	110111	000111
	12023,10130,22107,07751,14223,23603,	12100,20120,22115,15534,23111,13301,	112423	001212
	4233	1112	3	1
627	01301,46134,42223,45133,32412,21141,	21111,23201,11110,12211,10210,01120,	143322	110000
	11142,31001,03040,31321,05322,112	01120,11221,01122,11201,23101,310	211221	010011

The residuals in the third column of Table VI. are not in all cases the same as those finally given in the General Catalogue contained in Table VII., since after Table VI. was completed a careful examination was made of each of the large residuals still remaining. In many cases a satisfactory explanation was found of the cause of discordance as will be shown in Chapter V., and the observation was rejected, thus changing the mean magnitude and all the residuals of these stars. It is obvious from an examination of the last two columns of Table VI. that the corrections render the observations much more accordant. The fourth column contains twenty-seven residuals of four tenths of a magnitude, the fifth column only three. The fourth column contains nineteen residuals greater than four tenths of a magnitude, the fifth column only one, and this is a group containing only a single star, Z. C. 16^h1003, the last star which was observed on Julian Day 182, and which has since been rejected for discordance. The arithmetical mean of all the residuals in the fourth column is .22; of the residuals in the fifth, .09.

While the systematic errors have been greatly reduced by these corrections they have not been entirely eliminated. Accordingly the signs of the residuals are generally the same for each series before and after correction. Thus in the first series of the table on Julian Day 147 negative signs predominate in both cases. The mean value of the residuals before correction is —.22, and after correction —.09. This outstanding deviation is due to the small number of nights on which each star was observed. A portion only of the error appears in each residual, the remainder being distributed among the other residuals of the same star. Thus, if a star is observed on two nights with the resulting magnitudes 8.2 and 8.6, the mean will be 8.4 and the residuals +0.2 and —0.2. If now a correction of —0.2 is applied to the second series the magnitudes become 8.2 and 8.4, the mean is 8.3, and the residuals are +0.1 and —0.1. They therefore have the same signs as before. This difficulty was considered in deciding on the amount of the correction to be applied, but it was deemed safer to make the correction too small rather than too large. Values were therefore generally adopted equal to the mean of the residuals in each series without allowing for the portion distributed in other series.

CHAPTER IV.

PHOTOMETRIC CATALOGUE.

THE results of the measures of 7922 southern stars are given in Table VII. The explanation of the successive columns is given below. For convenience of reference the heading of each column is prefixed to the description of it.

S. M. P. A number for reference is given in the first column. As this catalogue may be called a Southern Meridian Photometry, it is suggested that reference be made to it by prefixing the letters S. M. P. to the numbers contained in this column.

Design. The number of the star in the Argentine General Catalogue when it occurs in that work. In other cases the number in the Cordoba Zone Catalogue is inserted, and it is then placed in Italics. The hour can always be found from the right ascension, recollecting that the positions here given are for 1900, while those in the Zone Catalogue are for 1875. When the hour is changed by precession, the correct hour is given in the Remarks following the table.

R. A. 1900. The minutes and tenths of right ascension of the star for 1900. The hour is given in heavy-faced figures at the top of the page.

S. Dec. 1900. The declination of the star for 1900 in degrees and minutes. As all of these stars are south of the equator the sign is omitted since it would always be negative.

Magn. Cat. The magnitude in the catalogue indicated in the second column expressed in units and tenths. When more than one magnitude is assigned to any star in the Cordoba Zone Catalogue, the mean value is inserted in this column.

Magn. S. M. P. The magnitude according to the measures made with the Meridian Photometer and discussed in this volume.

Julian Day. The Julian Days on which the star was observed, omitting the constant number 2,411,000. When more than three observations of a star were obtained additional lines are employed. The Julian Day is repeated when the star was observed more than once in a given series. Nearly all the stars were observed within a few minutes of the meridian. The sidereal time of observation may therefore be assumed equal to the right ascension of the star.

Resid. Phot. The residuals found by subtracting the mean magnitude given in the sixth column from the individual results. They are as usual expressed in tenths of a magnitude, negative values being denoted by Italics. Values of 10 or more are indicated by the letter **p** when positive, and by the letter **n** when negative. The numerical value is then given in the Remarks following the table. A further discussion of all the residuals exceeding 5 will be found in Chapter V. The meaning of other letters in this and the following column will be found on page 58.

Resid. Est. Estimates of the magnitude of each star were made by the observer. The magnitude, according to the Cordoba catalogues, was then read to him by the recorder, and he endeavored to make his subsequent estimates on the scale of that work. The estimates therefore agree closely with the visual magnitudes given in the fifth column. Residuals are taken by subtracting the mean photometric magnitude given in the sixth column from the estimated magnitude. The difference is expressed in tenths of a unit as in the preceding column. To compare the estimates with the measures they must first be reduced to the scale of the latter. This will be a matter for discussion later. The numerical values of the residuals greater than 9 will be found in Table IX.

TABLE VII.

CATALOGUE

OF THE MAGNITUDES OF 7922 SOUTHERN STARS OBSERVED WITH THE MERIDIAN PHOTOMETER.

0^h

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1	1613	0.2	49 42	9	9.32	569,572	22	35
2	32435	0.3	57 31	6.7	7.20	266,272,283	001	822
3	1620	0.4	79 49	8	7.82	576,590	21	22
4	32445	1.1	29 43	8.5	8.08	569,571	11	11
5	32446	1.1	49 38	5.7	5.60	272,283,311	111	323
6	1640	1.3	64 48	9	7.97	569,571	01	20
7	9	1.9	44 33	8	7.56	295,600	00	44
8	30	3.0	34 6	5.7	5.57	272,283,311,	421	310
						579,618,619,	102	322
						620	1	0
9	49	3.2	54 43	8.5	8.34	274,598	01	22
10	38	3.3	86 36	7.8	7.37	590,591,592,	02T	444
						593	2	4
11	37	3.4	24 39	7.8	7.75	593,598	10	00
12	45	3.8	74 48	8	7.77	597,599	21	20
13	50	4.0	54 34	6.4	6.38	274,579,598,	211	102
						618	1	2
14	57	4.4	46 18	3.8	3.85	272,283,311,	020	052
						579,618,619	100	082
15	59	4.6	24 57	9.5	9.80	593,598	11	33
16	108	5.1	49 42	8.5	8.48	597,600	12	00
17	72	5.3	79 34	7.5	7.80	576,590	00	22
18	78	5.5	82 47	5.6	5.25	272,283,311,	211	463
						562,571,579,	110	786
						591,592	25	66
19	81	5.7	54 58	8.2	8.44	274,598	12	44
20	84	5.8	59 44	9.2	9.03	597,600	01	20
21	95	6.7	35 42	5.4	5.06	272,283,311	100	143
22	97	6.9	54 46	8.2	8.08	274,598	11	14
23	104	7.0	80 44	7.8	7.21	590,591,592	132	386
24	103	7.1	54 56	8.5	8.58	274,598	00	42
25	169	7.6	29 54	10	9.62	593,599	01	11
26	108	7.7	43 44	7.5	7.34	272,283,579	002	.55
27	177	7.9	30 2	9.5	9.68	593,599	11	52
28	147	9.5	85 33	6.4	5.78	590,591,592,	220	624
						598,600	24	22
29	161	10.5	24 54	9.2	9.25	593,598	01	20
30	167	11.1	32 0	5.9	5.48	272,283,311,	220	744
						618,619,620,	112	131
						621	0	3
31	182	11.5	80 25	7.0	6.71	590,591,592	102	585
32	222	12.5	88 55	7.3	7.22	590,591,592	112	386
33	321	13.3	34 44	8	8.78	597,599	11	33
34	216	13.5	79 48	8	7.98	576,590	00	22
35	218	13.8	43 48	6.6	6.34	312,579,618,	101	115
						619	1	3
36	220	14.0	25 0	8.8	9.00	593,598	22	20
37	221	14.1	24 49	8.8	9.15	593,598	21	22
38	233	14.9	65 29	4.1	4.28	272,283,312,	100	533
						618,619,620	231	13p
39	250	16.0	39 48	6.7	7.30	295,599,619,	321	133
						620,621	30	5.
40	253	16.0	70 11	5.7	5.25	272,283,312	102	635
41	263	16.5	29 32	5.3	5.20	579,593,599,	022	632
						618	0	4
42	403	16.6	34 44	9	8.28	597,599	11	13
43	267	16.7	54 49	8.8	8.75	597,598	01	33
44	289	17.8	39 49	6.6	6.80	295,579,599,	002	023
						618	1	3
45	446	17.9	49 45	9	9.02	597,600	00	20
46	462	18.7	29 56	9	9.58	593,599	22	64
47	305	18.7	54 37	7.5	7.70	597,598	00	23
48	306	18.8	49 55	8	7.92	597,600	00	11
49	307	18.8	55 6	7.5	8.30	597,598	11	13
50	317	19.4	55 7	7.2	7.75	597,598	01	00
51	322	19.6	72 39	4.5	cum.	579	R	R
52	320	19.8	24 51	8.5	8.35	593,598	01	42
53	327	19.8	54 33	7.5	7.40	597,598	11	21
54	506	20.3	45 1	9	9.62	295,600	00	64
55	337	20.4	39 49	6.8	6.93	295,599	12	31
56	512	20.5	44 56	8.8	8.92	295,600	21	01
57	336	20.5	77 49	2.7	2.89	272,283,312,	111	133
						579,618,619	102	161
58	514	20.6	29 42	8.5	9.38	593,599	11	66
59	355	21.3	42 51	2.4	2.45	272,283,312,	11T	21n
						579,618,619,	100	414
						620	0	p
60	351	21.3	44 14	3.9	3.95	272,283,312,	112	520
						579,579,618,	102	n37
						619	0	2
61	366	22.2	69 52	7.2	7.10	597,599	11	11
62	566	22.5	34 51	9	9.42	597,599	32	66
63	579	22.9	30 1	9	9.38	593,599	11	44
64	377	22.9	33 34	5.2	4.81	272,283,312,	11T	28p
						571,579	01	56
65	381	23.2	29 36	6.7	6.80	593,599	00	47
66	387	23.4	29 51	6.9	7.18	593,599	00	03
67	388	23.4	55 11	7.5	8.25	597,598	01	50
68	390	23.5	40 28	5.9	5.16	272,283,312	302	145
69	403	23.8	83 42	7.5	8.06	590,591,592	011	131
70	396	23.9	25 12	7	7.20	593,598	11	22
71	399	23.9	54 59	7.5	8.00	597,598	00	52
72	619	24.2	54 51	8.5	9.30	597,598	11	13
73	644	25.5	59 54	9.5	9.33	597,600	32	11
74	424	25.6	40 4	6.8	6.68	295,599	11	51
75	427	25.6	48 46	5.7	5.47	272,283,312	202	534
76	443	26.6	49 22	4.6	4.80	272,283,312	100	404
77	680	26.9	74 43	9.2	9.37	597,599	10	22
78	451	27.0	63 31	4.3	4.50	272,283,312	010	319
79	452	27.0	63 31	4.7	4.33	272,283,312	112	73p

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
80	697	27.7	34	52	9	9.58	597,599	11	44
81	699	27.8	24	52	9	9.15	593,598	10	22
82	462	27.8	39	53	8.5	8.58	295,599,619,	230	142
							620,621	01	11
83	463	27.9	34	44	8.8	9.18	597,599	11	24
84	467	28.1	63	35	5.5	5.07	272,283,312	103	118
85	715	28.5	54	43	9	9.25	597,598	21	22
86	476	28.7	30	7	5.8	5.58	272,283,312,	214	331
							618,619,620,	102	202
							621	0	.
87	485	29.0	39	48	8	8.28	295,599	22	23
88	491	29.2	71	49	6.4	5.99	272,283,312	110	001
89	501	29.7	52	56	5.7	5.44	272,283,312	020	566
90	760	30.3	29	48	8.3	8.60	593,599,619,	441	141
							620,621	21	11
91	519	30.9	48	33	5.6	5.45	272,283,312	011	573
92	518	30.9	55	23	6.2	5.79	272,283,312	111	412
93	526	31.3	49	41	8	8.58	598,600	12	64
94	798	31.5	55	1	9.5	9.60	597,598	11	11
95	536	31.8	25	3	7.8	8.35	593,598	01	44
96	539	31.8	49	41	6.9	6.68	598,600	01	33
97	553	32.4	69	59	7.8	8.06	597,599	10	14
98	830	32.5	55	2	9.5	9.95	597,598	21	55
99	834	32.7	44	58	9	9.16	295,600	00	22
100	555	32.7	54	57	6.5	6.43	579,597,598,	111	121
							618	2	1
101	595	34.7	24	44	9	9.30	593,598	22	33
102	616	35.6	29	58	6.6	6.82	593,599	10	20
103	617	35.7	60	1	6.0	5.71	272,283,312	311	332
104	620	36.1	39	49	8.5	8.43	295,599	01	12
105	639	36.5	85	48	8	8.03	590,591,592	001	252
106	626	36.6	46	38	4.7	4.61	272,283,312	001	462
107	635	36.9	81	13	8.2	7.95	590,591,592	211	000
108	946	37.0	59	51	9	9.13	597,600	21	11
109	633	37.2	57	3	5.9	5.81	272,283,312,	412	141
							618,619,620,	210	220
							621	0	2
110	952	37.3	39	49	10	10.13	295,599	01	46
111	646	37.3	83	35	9.5	9.26	590,591,592	002	313
112	645	37.9	39	1	6.0	6.12	272,283,312	201	314
113	649	37.9	74	44	9	9.02	597,599	00	22
114	648	38.1	54	40	8	8.10	597,598	00	11
115	652	38.2	60	49	6.1	5.78	272,283,312	112	222
116	653	38.2	66	1	5.7	5.42	272,283,312	211	542
117	660	38.7	44	40	7.8	8.02	295,600	00	00
118	662	38.8	58	1	4.5	4.49	272,283,312	010	576
119	678	38.8	85	58	8.2	7.73	590,591,592	111	553
120	666	39.4	38	59	5.8	5.76	272,283,312	012	132
121	668	39.6	49	56	6.9	6.98	598,600	01	22
122	700	39.6	86	15	7	6.77	590,591,592	210	240

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
123	676	39.9	54	44	9.5	9.60	597,598	22	44
124	677	39.9	54	52	7.8	8.25	591,598	10	30
125	690	40.4	74	49	8	7.72	597,599	11	33
126	699	40.9	54	53	8.5	9.00	597,598	00	22
127	1046	41.0	24	43	9	9.50	593,598	00	55
128	702	41.1	48	6	6.2	5.71	272,283,312	102	212
129	710	41.7	29	53	9.5	9.82	593,599	23	33
130	714	42.0	24	46	7.8	7.70	593,598	00	27
131	1071	42.0	34	53	9.5	9.38	598,599	11	22
132	718	42.1	54	39	7.8	7.85	597,598	32	20
133	732	43.0	29	54	7.2	7.68	593,599	11	22
134	1102	43.0	39	42	8.5	9.28	295,599	11	35
135	1107	43.2	39	50	9	9.23	295,599	12	22
136	736	43.7	39	56	8.5	8.78	295,599	22	16
137	1120	43.9	24	44	9	9.95	593,598	10	85
138	743	44.3	24	41	6.1	6.02	579,593,598,	122	082
							618	0	0
139	1131	44.3	34	59	9.5	9.88	598,599	22	77
140	745	44.3	47	15	6.6	6.11	272,283,312	111	110
141	758	45.1	54	43	8	8.15	597,598	12	22
142	762	45.1	75	28	5.6	4.95	272,283,312,	501	530
							618,619,620,	002	868
							621	0	8
143	1155	45.3	24	55	9	9.75	593,598	21	33
144	759	45.4	43	57	6.7	6.31	272,283,312	210	035
145	782	45.5	86	26	7.5	8.24	590,591,592	011	006
146	769	46.1	51	32	5.6	5.00	272,283,312	212	797
147	1190	46.8	44	55	9.5	9.70	295,600,619,	413	455
							620,621	32	52
148	780	47.2	44	15	6.9	6.64	272,283,312	020	212
149	791	47.7	24	33	5.8	5.50	579,593,598,	011	251
							618	2	1
150	810	48.6	70	3	6.5	6.56	579,597,599	202	420
151	811	48.7	70	3	7.8				
							618	2	1
152	1254	48.9	64	43	9	9.46	597,599	32	55
153	825	49.4	63	25	6.0	5.57	272,283,312	123	065
154	839	49.4	84	17	8.8	7.96	590,591,592	010	552
155	824	49.5	55	8	7.5	7.70	597,598	11	21
156	833	49.7	75	12	7.8	7.78	597,599,619,	230	040
							620,621	13	00
157	1277	50.1	50	0	9	9.38	598,600	01	46
158	841	50.6	44	55	8.2	8.02	295,600	00	00
159	860	51.2	70	4	5.5	5.37	272,283,312	001	453
160	869	51.6	74	51	6.6	6.87	597,599	10	31
161	872	52.3	29	54	9.5	9.48	593,599	00	55
162	897	53.5	44	41	8.5	8.36	295,600	00	11
163	902	53.8	29	54	4.2	4.46	252,272,283,	130	011
							312,579,618,	001	151
							619	1	3

0h — 1h

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
164	*1362*	53.9	34 58	8.5	9.78	598,599	22	n8
165	907	54.2	29 57	9	9.58	593,599	22	86
166	916	54.7	35 11	7.2	7.82	598,599	23	36
167	*1391*	55.0	24 59	8.8	8.80	593,598	00	00
168	*1399*	55.2	49 58	9	9.58	598,600	10	66
169	925	55.3	44 45	9.5	9.72	295,600,619,	411	222
						620,621	30	75
170	932	55.9	24 49	8.8	8.55	593,598	10	12
171	*1415*	56.0	24 58	9	9.40	593,598	00	44
172	943	56.7	39 28	5.6	5.39	272,283,312	101	465
173	*1454*	57.5	64 46	9	8.70	597,599	00	31
174	954	57.6	50 12	8	8.18	598,600	10	22
175	953	57.7	32 6	5.6	5.56	272,283,312	001	232
176	959	57.8	57 33	6.3	5.86	272,283,312	220	220
177	956	57.9	34 55	9	8.92	598,599	01	44
178	965	58.3	46 56	5.9	5.18	272,283,312	101	566
179	968	58.5	30 4	6.5	6.43	579,593,599,	123	402
						618	2	4
180	976	59.0	44 47	9	8.92	295,600	11	11
181	*1496*	59.1	44 42	9.5	9.76	295,600	00	33
182	*1497*	59.1	54 42	9	9.65	597,598	23	66
183	*1503*	59.4	24 19	9	8.90	593,602	11	11
184	*1504*	59.5	34 59	9.2	9.28	598,599	11	33
185	992	0.1	40 0	8	7.80	295,599,619,	320	333
						620,621	31	33
186	1020	1.5	39 57	8.8	9.08	295,618	11	33
187	1024	1.6	47 15	3.3	3.39	252,283,312,	345	994
						579,618,619,	122	1n9
						620	0	4
188	1035	2.3	30 9	7.5	8.08	593,600	11	66
189	*40*	2.8	29 49	9	F	593,600	FF	RR
190	1052	3.2	42 1	5.4	5.15	252,283,312	012	728
191	1057	3.4	62 19	5.6	5.23	252,283,312	101	066
192	1075	3.4	83 47	8.5	8.19	590,591,592	212	020
193	1059	3.6	24 47	8.2	8.25	593,602	01	00
194	*72*	3.7	59 35	9	8.98	602	A	5
195	1064	4.0	34 51	9	8.98	602,605	11	55
196	1069	4.2	55 47	4.2	4.07	252,283,312,	103	312
						579,618,619,	262	116
						620	0	1
197	*90*	4.5	64 51	9.5	9.57	619,620	00	13
198	*102*	5.0	64 52	10	10.00	597,599	00	43
199	1087	5.6	45 2	9	9.16	295,605	00	22
200	1114	5.9	84 8	7.5	7.40	590,591,592	211	303
201	1110	6.1	82 11	8	7.79	590,591,592	101	202
202	*135*	6.2	64 54	9	8.96	597,599	10	02
203	1106	6.7	30 1	9.5	9.68	593,600	11	77
204	1119	7.3	59 44	8.5	8.48	598,602,605	211	300
205	1125	7.7	45 2	8.5	9.12	295,605	01	11
206	1126	7.9	29 43	7.8	8.58	593,600	00	64

S. M. P.	Design.	R. A. 1900	S. Dec 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid Phot.	Resid Est.
		m.	° ′					
207	1129	8.0	49 49	8.8	8.68	598,600	01	12
208	1132	8.2	35 44	6.9	6.82	252,283,312	210	322
209	1133	8.2	38 23	6.1	5.86	252,283,312	001	110
210	1143	8.8	40 4	7.2	7.44	295,618	12	24
211	*200*	9.0	24 47	9.5	9.60	593,602	11	44
212	*207*	9.3	24 56	9.5	9.75	593,602	10	33
213	1153	9.5	24 50	9	9.30	593,602	22	12
214	*229*	10.1	29 55	9	9.08	593,600	00	13
215	1166	10.1	45 0	9.2	9.56	295,605	10	44
216	1174	10.6	46 4	5.3	4.92	252,283,312,	313	479
						618,619,620,	111	579
						621	0	5
217	1184	10.6	74 48	9	8.62	597,599	11	21
218	1188	11.5	34 41	7.8	7.93	602,605	10	11
219	*268*	11.7	29 44	9.5	9.53	593,600	10	55
220	1210	12.3	69 24	5.5	4.90	252,283,312	202	313
221	1220	13.5	34 40	7.8	7.63	602,605	10	24
222	1231	13.6	66 55	6.5	6.19	252,283,312	100	211
223	*324*	13.7	49 52	9	9.47	599,600	12	55
224	1229	13.8	29 48	9	9.63	593,600	10	66
225	1234	13.8	54 46	9.2	10.10	597,618	11	66
226	*340*	14.0	44 43	8.5	8.32	295,605	01	23
227	*344*	14.3	29 43	8.8	9.03	593,600	21	25
228	1244	14.7	35 1	8	7.83	602,605	10	32
229	1254	15.0	39 53	7.8	7.68	295,618	00	23
230	*365*	15.1	39 43	9	8.78	295,618	22	02
231	*366*	15.3	24 42	9.2	9.40	593,602	11	42
232	1276	16.4	50 5	6.6	8.07	599,600	12	n3
233	1304	16.7	82 4	7.8	8.09	590,591,592	112	111
234	*430*	17.7	54 59	9	9.60	597,618	00	46
235	1305	17.9	35 11	7.8	7.53	602,605	10	00
236	1312	18.4	59 39	7.5	7.48	598,602	00	03
237	1320	18.8	24 52	6.5	6.77	579,593,618	001	563
238	1321	18.8	24 52	8.5				
239	1323	18.9	31 28	6.1	5.52	252,283,312	212	354
240	*467*	19.0	54 42	8.5	8.56	597,618	10	11
241	1343	19.7	69 36	7.5	7.66	597,599	21	22
242	1344	20.0	34 40	6.6	6.53	602,605	12	01
243	1345	20.2	42 1	5.8	5.31	252,283,312	131	263
244	*497*	20.4	34 43	9.5	9.88	602,605	00	44
245	1347	20.4	45 3	6.4	6.32	579,597,618	131	021
246	1350	20.6	39 54	8.5	7.74	295,618	21	33
247	1365	21.5	60 1	7.2	6.98	598,605	00	02
248	1366	21.5	60 1	9.2				
249	1373	21.7	64 53	6.3	5.76	252,283,312	222	021
250	*539*	22.0	59 51	8.5	8.48	598,605	11	03
251	1374	22.2	29 59	8.8	8.38	593,600	11	64
252	1377	22.4	33 4	var.	var.	579,618,619,	204	640
						620,621	22	22
253	*552*	22.7	49 47	8.5	8.67	599,600	12	25

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S. M. P.	Design.	R. A. 1900.	S Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m	° ′					
254	583	22.9	79 44	9.5	9.22	590,591	10	02
255	592	23.9	59 47	9	9.23	598,605	21	24
256	1407	24.0	24 51	8.5	8.80	593,602	00	20
257	1411	24.0	43 50	3.4	3.32	252,283,312,	120	542
						579,618,619	011	322
258	1440	24.7	80 25	7	8.48	590,591,592	000	000
259	616	25.2	34 57	9.5	10.18	602,605	11	77
260	639	25.8	29 47	9.5	9.33	593,600	21	33
261	665	26.3	60 1	9	9.18	598,605	22	22
262	1462	27.0	49 35	4.0	3.92	252,283,286,	120	013
						579,618,619	211	144
263	1461	27.1	30 48	6.0	5.62	252,283,312	120	425
264	1486	27.1	79 33	7.2	8.09	590,591	22	63
265	1466	27.3	45 10	8	7.90	597,605	11	31
266	1468	27.4	35 1	8.5	8.73	602,605	01	22
267	1471	27.5	35 0	9.5				
268	1493	28.4	37 22	5.8	5.32	252,283,286	021	574
269	1495	28.4	50 2	7.2	7.92	599,600	00	61
270	1492	28.5	24 41	7.0	6.85	593,602	21	22
271	754	29.0	74 45	9.5	9.67	597,599	10	52
272	748	29.5	29 49	9.5	9.43	593,600	01	22
273	1517	29.6	44 51	8.5	8.65	597,605	00	12
274	758	29.7	34 50	9	9.28	602,605	11	53
275	759	29.8	29 54	9.5	9.53	593,600	12	00
276	1519	29.8	44 54	8.5	8.65	597,605	00	12
277	783	30.2	74 49	9.5	9.97	597,599	10	55
278	781	30.4	59 49	8.5	8.48	598,605	00	50
279	785	30.9	25 1	9	9.05	593,602	10	20
280	1551	31.5	58 39	6.0	6.08	252,283,286	011	111
281	805	31.6	29 54	8	8.58	593,600	11	64
282	1546	31.6	30 25	7.5	5.69	252,283,286	110	121
283	1547	31.6	30 25	6.5				
284	1566	32.5	29 54	8.5	8.13	593,600	10	11
285	834	32.6	29 58	10	10.28	593,600	11	68
286	1586	32.9	79 0	6.3	5.99	252,283,286	100	041
287	1580	33.1	58 47	6.2	6.01	252,283,286	102	021
288	1597	33.2	80 26	7.1	7.18	590,591,592	121	222
289	1590	34.0	37 2	6.2	5.89	252,283,286	000	122
290	1594	34.0	57 44	1	0.51	252,283,286,	332	p77
						579,619,620,	221	505
						621,623	42	55
291	1601	34.5	45 6	7.2	7.95	597,605	02	02
292	1604	34.8	39 56	9	9.58	597,618	00	66
293	1623	35.8	34 59	7.8	7.88	602,605	00	11
294	1633	36.0	56 42	6.2	5.26	252,283,286	111	365
295	1634	36.0	56 42	6.2				
296	1660	37.6	32 49	5.6	5.16	252,283,286	111	455
297	1661	37.6	37 20	5.9	5.72	252,283,286	111	233
298	1677	38.4	61 17	6.0	5.48	252,283,286	001	533
299	1681	38.7	54 14	5.9	5.52	252,283,286	110	444

S. M. P.	Design.	R. A. 1900.	S Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
300	1011	39.0	79 49	9.5	9.26	590,591	00	11
301	1714	39.3	82 47	8.2	7.19	590,591,592	000	066
302	1715	39.3	82 47	8.8				
303	1691	39.5	24 48	9	9.30	593,602	22	55
304	1699	40.1	34 54	6.8	6.78	602,605	00	20
305	1738	40.5	83 29	6.2	5.88	252,283,286,	001	110
						579,591,592,	010	31p
						619	1	1
306	1031	40.8	49 59	8	8.57	599,600	12	14
307	1736	41.3	79 39	6.5	6.06	252,579,591	122	021
308	1757	41.5	83 45	7.2	7.36	590,591,592	200	213
309	1754	42.1	80 33	8.5	7.71	590,591,592	112	555
310	1733	42.2	51 19	5.8	5.40	272,283,286	302	536
311	1737	42.3	54 1	5.4	5.07	272,283,286	202	767
312	1768	42.6	80 24	8.2	7.88	590,591,592	110	331
313	1747	42.9	50 8	8	8.47	599,600	12	55
314	1800	43.1	85 16	6.1	5.64	272,283,286,	200	444
						579,591,592,	031	326
						619	1	2
315	1108	44.1	29 46	8.8	9.18	593,600	00	44
316	1110	44.1	44 49	9	8.85	597,605	20	20
317	1112	44.2	34 44	9.5	9.48	602,605	22	30
318	1799	44.6	80 14	8.5	8.48	590,591,592	011	030
319	1126	44.7	34 47	9.5	9.63	602,605	01	11
320	1787	45.1	44 44	8.2	7.90	597,605	11	31
321	1786	45.2	34 57	8.5	8.33	602,605	12	52
322	1798	45.5	64 50	8.2	8.10	597,599	11	11
323	1145	45.6	25 2	8.5	8.70	593,602	11	22
324	1809	46.4	54 57	7.8	8.00	597,618	11	00
325	1807	46.6	24 55	9	8.85	593,602	01	00
326	1817	46.8	64 52	7.8	7.76	597,599	01	20
327	1816	47.1	50 42	6.1	5.90	272,283,286	201	111
328	1822	47.3	54 46	7.2	7.56	597,618	01	42
329	1199	47.7	24 48	9.5	9.70	593,602	22	25
330	1836	48.1	39 54	8.2	7.98	597,618	00	00
331	1844	48.6	34 46	9.5	9.68	602,605	00	55
332	1846	48.7	24 41	8	8.25	593,602	10	00
333	1869	48.7	80 41	6.1	6.05	272,283,579,	010	101
						591,592,619,	112	050
						620	0	2
334	1864	49.6	46 48	4.8	4.11	272,283,286	120	51p
335	1868	49.7	59 55	8.5	8.72	605,623	01	12
336	1893	49.8	83 11	8.5	8.25	590,591,592	021	111
337	1871	50.2	43 0	5.5	4.95	272,283,286	111	699
338	1885	51.3	29 37	7	7.38	593,600	00	42
339	1926	51.4	81 51	7.8	7.52	590,591,592	110	553
340	1890	51.7	24 44	7.8	7.95	593,602	12	02
341	1896	51.8	44 47	9.5	9.95	597,605	00	55
342	1323	51.9	59 46	9	9.38	600,605	00	44
343	1905	52.0	52 7	3.9	3.62	272,283,286,	101	284

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						579,619,620	001	423
344	1900	52.1	24 58	8.5	8.60	593,602	22	14
345	1924	52.4	68 9	4.9	4.65	272,283,286	100	992
346	*1342*	52.5	54 54	9	9.20	597,618	11	44
347	*1351*	52.8	49 54	8.5	8.47	599,600	01	00
348	*1353*	52.8	54 45	8.5	8.54	597,618	10	30
349	*1358*	53.1	49 44	8.5	8.37	599,600	12	22
350	1932	53.1	52 16	6.2	5.97	272,283,286	220	210
351	1931	53.2	47 53	5.1	4.65	272,283,286	121	p2p
352	*1387*	53.9	39 50	8.5	8.68	597,618	00	22
353	1958	54.5	59 50	8.2	8.83	600,605	21	30
354	*1425*	55.3	34 56	9	8.73	602,605	01	12
355	1973	55.5	42 31	5.9	5.35	272,283,286	210	535
356	1981	55.6	62 4	2.9	2.96	272,283,286,	213	030
						579,619,620	111	085
357	*1448*	55.8	30 0	9.5	9.13	277,600	12	63
358	*1462*	55.9	45 2	9.5	9.10	597,605	11	11
359	*1463*	55.9	45 2	10				
360	1985	56.1	24 55	7.0	6.97	593,602,619	120	425
361	*1468*	56.4	25 0	9.5	9.15	593,602	01	00
362	*1475*	56.4	34 55	9	9.18	602,605	11	22
363	*1491*	56.4	69 55	9	9.50	597,599	11	35
364	*1492*	56.4	70 3	8.7	8.76	597,599	10	00
365	*1484*	56.6	54 55	8.5	9.00	597,618	00	22
366	1999	56.8	30 0	8.5	8.48	277,600	00	00
367	1998	56.8	30 29	5.5	5.19	272,283,286	110	776
368	2013	57.7	39 48	8.8	8.53	597,618	10	33
369	2016	57.7	45 12	5.6	4.91	272,283,286	133	767
370	2024	58.0	30 9	6.7	6.43	277,600	10	64
371	*1520*	58.1	24 44	9	9.35	593,602	01	24
372	*1523*	58.3	24 47	9.5	10.04	593,602,619,	420	555
						620,621	22	55
373	2034	58.5	39 54	8.8	8.78	597,618	11	33
374	2038	58.5	49 54	7.8	7.42	599,600	00	11
375	*1548*	58.5	70 2	9.8	10.06	597,599	01	66
376	*1557*	58.7	69 48	8.7	9.06	597,599	10	33
377	2081	59.0	81 59	7.2	7.02	590,591,592	011	885
378	2057	59.3	49 59	9	8.22	599,600	00	60
379	2070	59.4	75 6	8	8.67	597,599	10	52
380	2065	0.0	29 47	4.9	4.79	277,600,619,	320	086
						619,620,621,	112	208
						623	2	4
381	2082	0.5	59 52	8.5	8.66	599,605	12	52
382	2085	0.8	54 50	7.8	8.26	597,618	10	11
383	2099	0.8	74 56	6.9	7.07	597,599	10	14
384	*1608*	0.9	54 52	9.5	10.06	597,618	01	66
385	2151	1.0	85 31	8	8.06	590,591,592	122	141
386	2083	1.0	24 52	8.8	8.20	593,602	11	43
387	2084	1.1	24 51	8.5				
388	2096	1.3	50 10	7.5	7.82	599,600	00	88

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
389	*15*	1.5	44 58	9.5	9.65	598,605	20	14
390	2141	1.8	82 47	8	8.42	590,591,592	001	112
391	2110	2.0	40 1	7.2	7.28	598,618	11	23
392	*35*	2.0	54 44	9	9.40	597,618	00	44
393	*38*	2.0	59 59	9	9.12	599,605	11	31
394	*57*	3.1	29 49	9	9.13	277,600	23	13
395	*60*	3.2	25 2	8.8	8.90	593,602	22	44
396	2202	3.2	85 14	7.3	7.17	590,591,592	101	3p3
397	*68*	3.4	39 52	9	9.13	598,618	10	13
398	*80*	4.0	24 54	9.5	9.70	593,602	11	22
399	2147	4.1	44 50	9	9.70	598,605	11	92
400	2155	4.3	60 9	7.8	7.56	599,605	22	12
401	2149	4.4	24 50	8.5	8.65	593,602	32	21
402	2205	4.4	82 59	8.2	7.89	590,591,592	110	311
403	2163	4.7	44 58	8.5	8.50	598,605	11	33
404	2164	5.0	24 49	6.4	6.45	593,602	12	46
405	*116*	5.2	24 53	9.5	N	593,602	NN	NN
406	2174	5.2	43 59	6.1	5.78	272,283,286	101	103
407	*124*	5.4	54 57	9.5	10.00	597,618	00	55
408	*134*	5.8	39 44	9.5	9.58	598,618	11	41
409	*138*	5.8	54 59	9	9.80	597,618	11	33
410	2194	6.2	24 59	9.5	9.80	593,602	11	33
411	*156*	6.7	25 2	9	9.35	593,602	10	22
412	*187*	6.9	75 2	8.8	8.57	597,599	12	22
413	2211	7.0	34 46	9.2	9.78	602,605	11	86
414	2212	7.2	24 49	8.8	8.55	593,602	01	41
415	2221	7.2	64 54	8.8	9.36	598,599	20	44
416	2228	7.4	64 50	7.5	7.61	598,599	22	44
417	2229	7.7	49 48	8	8.07	599,600	12	36
418	2230	7.7	49 48	8.8				
419	2232	7.8	59 57	8.2	9.06	599,618	11	36
420	2235	8.1	59 37	7.5	7.46	599,618	10	50
421	2237	8.5	31 12	5.4	5.22	272,283,286	201	357
422	2241	8.5	44 50	8	8.30	598,605	10	11
423	2278	8.5	82 47	8	7.89	590,591,592	110	111
424	2242	8.6	35 0	7.1	7.13	304,605	21	11
425	*220*	8.9	44 58	8	7.75	598,605	00	22
426	*241*	9.8	59 45	8.5	8.62	599,618	01	41
427	2266	10.1	34 47	8.8	9.28	304,618	33	21
428	*251*	10.2	60 2	8.5	9.26	599,618	11	86
429	2274	10.5	41 38	6.1	5.85	272,283,286	222	121
430	2298	10.6	74 58	7.0	7.44	597,599,620	230	414
431	*260*	10.7	45 2	8.5	8.75	598,605	00	03
432	2287	11.1	29 53	9.5	9.38	277,600	00	44
433	*285*	11.5	54 55	9	9.40	597,618	00	44
434	*294*	12.1	24 54	8.8	9.15	593,602	10	44
435	2331	12.1	68 19	5.9	5.38	272,283,286,	225	244
						619,620,621,	021	820
						623	0	1
436	2323	12.3	25 6	8	8.50	593,602	11	53

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S. M. P.	Design	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
437	2326	12.5	24 49	8.8	8.65	593,602	01	*44*
438	2339	12.9	51 58	3.5	3.74	272,283,286	52*3*	2p5
						619,620,621,	*103*	*212*
						623	3	*2*
439	2352	13.4	68 13	5.9	5.41	272,283,286	01*1*	264
440	2368	14.0	69 54	7.5	7.55	599,600,619,	550	*111*
						620,621	0*2*	*14*
441	*347*	14.1	34 56	10	9.70	304,618,619,	R01	*272*
						620,621	*11*	*25*
442	2384	14.9	69 56	8.5	8.93	599,600,619	1*1*1	*1*11
443	*377*	15.4	24 56	8.5	8.80	593,602	00	*33*
444	*401*	15.8	64 45	9.2	9.71	598,599	*22*	*55*
445	2412	16.7	56 24	6.1	5.39	272,283,286	23*4*	778
446	2462	17.4	79 39	8	7.94	590,591	01	33
447	2425	17.6	29 48	8.5	7.83	277,600	*12*	40
448	2427	17.6	29 48	10				
449	*467*	18.1	64 58	9.5	9.16	598,599	*10*	0*2*
450	2451	18.3	49 59	7.5	7.52	599,600	00	00
451	*481*	18.3	69 53	8.8	8.83	600,619	01	02
452	2455	18.5	39 52	7.5	8.03	598,618	01	*58*
453	*475*	18.8	25 2	9.2	9.85	593,602	01	*68*
454	2477	19.3	60 13	7.3	7.53	600,618	*12*	*55*
455	*503*	19.3	64 47	9	9.92	598,599,600,	*4*21	*444*
						620,621	02	*44*
456	2471	19.4	29 56	9.2	9.53	277,600	*12*	0*3*
457	2475	19.4	51 33	6.2	5.93	272,283,286,	32*4*	11*1*
						619,620,621,	01*2*	11*1*
						623	2	3
458	2473	19.6	29 53	8.5	8.43	277,600	01	64
459	2486	19.8	54 59	7.2	8.30	597,618	*22*	*88*
460	*510*	19.9	49 52	9	9.42	599,600	1*1*	*24*
461	2498	19.9	69 7	4.1	4.24	272,282,286,	10*2*	266
						619,620,621	120	*2*62
462	2497	20.3	55 0	7.5	8.60	597,618	*11*	*66*
463	2495	20.5	44 50	9.5	10.00	598,605	00	*55*
464	2500	20.6	44 47	8.2	8.45	598,605	00	*22*
465	2510	20.7	54 49	7.2	7.96	597,618	*2*1	*85*
466	*536*	20.9	35 1	8.8	8.88	304,605	*22*	*11*
467	*539*	21.0	30 0	8.5	8.98	277,600	*11*	05
468	2537	21.5	69 55	8.8	9.03	600,619	01	*20*
469	2541	22.1	60 45	5.8	5.35	272,282,286	*222*	645
470	2552	22.2	74 6	6.2	5.97	272,282,286	1*2*0	*300*
471	2544	22.5	29 52	9.2	9.58	277,600	00	*36*
472	2547	22.7	40 2	8.2	8.52	598,618,620,	*251*	*333*
						621,623	*42*	*33*
473	2556	23.3	48 9	4.2	4.28	272,282,286,	10*1*	4p*3*
						619,620,621	1*1*0	111
474	2562	23.5	54 59	9	9.60	597,618	*22*	*46*
475	2565	23.8	34 15	5.2	5.16	272,282,286	021	472
476	*617*	24.2	29 43	9	9.68	277,600,620,	1*3*0	*557*

S. M. P.	Design	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						621,623	*24*	*77*
477	2576	24.3	31 33	6.4	5.92	272,282,286	11*1*	041
478	2590	23.8	74 53	7.8	7.97	597,599,620	*133*	000
479	2647	24.8	83 24	7.2	7.85	590,591,592	021	244
480	2622	25.8	64 45	6.4	6.32	598,600,620	*1*01	*311*
481	2634	26.3	69 58	7.5	7.28	598,619	*22*	*17*
482	2681	28.9	35 5	6.0	5.66	272,282,286	*122*	213
483	2686	29.1	39 47	8.5	8.78	598,618	*11*	*63*
484	2695	29.1	59 33	7.8	8.23	600,618	*23*	*44*
485	2696	29.6	29 52	8	8.13	277,600	10	*11*
486	*818*	30.9	70 2	8.5	8.78	598,619	*11*	*33*
487	2745	31.1	63 1	6.9	6.64	272,282,286	31*3*	*344*
488	2762	31.8	64 55	8.5	8.43	598,600	1*1*	14
489	2752	31.9	30 28	5.7	5.69	272,282,286	4*31*	102
490	*838*	32.1	59 48	9	9.88	600,618	*22*	*77*
491	2761	32.2	50 0	8.2	8.58	600,619	*2*1	*16*
492	2766	32.4	45 11	7.7	8.10	598,605	1*1*	*43*
493	2775	32.8	35 0	5.9	5.74	272,282,286,	00*1*	011
						304,620	3R	31
494	2783	33.4	29 45	8.8	8.53	277,600	01	30
495	3149	33.4	88 50	7.8	7.88	304,591,592	*1*00	111
496	2790	33.6	34 58	8.2	8.78	304,605	*11*	0*3*
497	2824	33.8	79 33	5.6	5.27	272,590,591	*111*	353
498	2797	34.0	30 37	5.7	5.62	272,282,286	*1*11	223
499	*906*	34.0	59 50	9	9.08	600,618	*11*	*13*
500	2802	34.1	52 58	5.6	5.11	272,282,286	3*2*0	317
501	2809	34.6	24 46	8	8.25	277,602	*12*	*20*
502	2817	34.8	45 9	7.5	7.95	598,605	*24*	*20*
503	2815	34.8	45 10	7.2	7.35	598,605	00	14
504	*967*	35.3	74 55	8.5	8.80	597,600	00	*33*
505	*935*	35.4	24 54	8.5	8.45	277,602	01	1*2*
506	2825	35.4	34 57	8	8.04	304,605	*23*	35
507	2928	35.5	86 10	7.5	7.76	304,591,592	10*2*	*303*
508	2837	36.0	24 34	8	7.45	277,602	*12*	4*2*
509	2838	36.0	43 20	5.0	4.72	272,282,286	100	779
510	2842	36.0	49 35	7.8	7.83	600,619	*11*	*30*
511	*963*	36.1	44 54	8.5	8.95	598,605	2*4*	*25*
512	*972*	36.5	54 50	9	9.00	597,618	1*1*	08
513	*976*	36.5	59 49	9	9.03	600,618	*12*	*52*
514	2848	36.6	24 56	8.5	8.70	277,602	*11*	*22*
515	*1002*	36.6	74 49	9	8.77	597,600,620,	3*3*1	0*3*0
						621,623	*20*	00
516	2851	36.7	40 17	4.2	3.92	272,282,286,	10*3*	*171*
						619,620,621	41*1*	*139*
517	2860	37.0	60 0	7.0	7.18	597,618	*11*	*44*
518	2861	37.1	60 0	7.2				
519	2868	37.3	64 43	6.6	6.48	598,600	0*1*	03
520	*1048*	37.3	80 3	8.5	8.56	590,591	1*1*	*11*
521	2866	37.6	54 59	5.5	5.23	272,282,286	*2*1*1*	265
522	2872	38.1	38 49	6.1	5.69	272,282,286	11*2*	243

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
523	2887	38.1	68 42	4.2	4.17	272,282,286,	203	232
						619,620,621,	013	022
						623	3	4
524	1037	38.4	50 1	9	9.43	600,619	11	44
525	1038	38.5	44 55	9	8.85	598,605	20	00
526	2898	39.1	51 14	5.6	5.31	272,282,286	111	651
527	2903	39.3	50 10	7.5	7.69	600,619,620,	423	212
						621,623	30	12
528	2918	39.3	69 40	6.7	6.63	598,619	01	20
529	2905	39.5	40 58	6.8	6.16	272,282,286	012	200
530	2906	39.5	40 58	7				
531	2913	39.7	45 5	7.5	7.50	598,605	11	30
532	2948	39.8	80 15	7.2	7.74	590,591,592	211	321
533	1078	40.0	49 50	8.5	8.43	600,619	11	42
534	2919	40.1	32 57	6.4	6.09	272,282,286	022	211
535	1127	40.2	79 55	9	9.06	590,591	11	13
536	2982	40.6	82 40	8.5	7.49	590,591,592	000	057
537	2935	41.0	53 0	6.2	6.14	272,282,286	301	211
538	2959	41.0	74 45	7.5	8.20	597,600	00	62
539	2965	41.7	67 8	6.5	6.19	272,282,286	101	022
540	2958	41.9	40 9	8.0	7.98	598,618	11	05
541	2973	42.1	69 35	6.8	6.58	598,619	22	22
542	2977	42.3	69 49	8	8.33	598,619	12	52
543	2992	43.3	64 8	6.1	5.58	272,282,286	012	344
544	2986	43.5	25 13	8	7.90	277,602	11	11
545	1190	43.9	64 49	9	9.08	598,600	10	11
546	1178	44.0	29 47	9.5	9.83	277,600	10	53
547	2994	44.0	29 52	9	9.43	277,600	10	32
548	3003	44.0	68 3	5.2	4.79	272,282,286	101	281
549	3000	44.5	25 2	8	8.10	277,602	00	14
550	3009	44.9	32 50	4.5	4.16	272,282,286	111	4p3
551	1206½	45.0	29 59	9	9.03	277,600	23	00
552	3017	45.4	24 59	6.4	6.28	277,602,621,	122	121
						623	2	1
553	1227	45.4	54 49	9.5	9.76	597,618	21	68
554	3029	45.6	64 47	9.5	9.28	598,600	23	33
555	1230	45.8	24 58	9	9.45	277,602	01	14
556	3030	46.2	36 16	6.1	5.69	272,282,286,	202	023
557	3037	46.3	49 57	9.5	9.91	600,619,620,	423	747
						621,623	20	49
558	3033	46.4	24 46	9.5	9.60	277,602	11	66
559	3039	46.6	36 5	5.4	5.29	272,282,286	431	055
560	1261	46.8	60 4	9	9.63	597,618	21	66
561	3054	46.8	63 14	5.7	5.28	272,282,286,	113	757
						619	3	3
562	3045	47.0	40 21	6.5	6.32	272,282,286	201	621
563	3172	47.9	85 27	7.2	7.29	304,591,592,	211	331
						593,620,621,	000	521
						623	1	2
564	3077	48.3	54 51	8.5	8.16	597,618	10	24

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
565	3096	49.2	34 54	8.2	7.98	304,605	22	00
566	1327	49.4	45 0	9	9.35	598,605	02	44
567	3103	49.7	38 51	6.0	5.79	272,282,619	112	220
568	3107	49.9	30 2	9	9.13	277,600	34	11
569	3120	50.2	45 1	8	7.85	598,605	22	22
570	3123	50.3	44 55	9	9.50	598,605	11	35
571	3124	50.6	30 2	10	9.13	277,600	12	11
572	3125	50.6	30 2	8				
573	3135	50.8	34 57	9.2	9.24	304,605	12	20
574	3141	50.9	51 17	6.3	5.93	272,282,619	331	111
575	3171	51.1	75 29	5.1	4.66	272,282,619	111	889
576	3165	51.7	64 45	9	9.33	598,600	00	33
577	3167	51.7	64 45	9.5				
578	3190	51.9	74 49	8.8	8.50	597,600	00	03
579	3189	52.5	64 51	6.9	6.40	272,282,619	101	361
580	3180	52.7	39 51	8.5	7.98	598,618	11	00
581	3181	52.7	39 51	9				
582	3198	52.8	64 25	7.0	6.52	272,282,619	111	331
583	3209	53.7	38 36	6.2	6.49	272,282,619	123	530
584	3223	54.5	40 42	3	3.13	272,282,619,	531	211
585	3224	54.5	40 42	5.2				
						620,621,623	134	141
586	3232	54.9	34 35	6.8	6.58	621,623	22	22
587	1477	54.9	49 51	8.5	9.08	600,619	10	63
588	3245	55.5	32 54	6.2	6.39	272,282,619	220	526
589	1496	55.7	49 51	8	8.43	600,619	11	41
590	1503	56.4	25 2	8.5	9.20	277,602	11	47
591	3279	56.9	64 28	5.2	4.98	272,282,619	000	7p0
592	3289	57.8	60 13	7.2	7.83	597,618	01	32
593	1552	58.0	39 51	10	10.13	598,618	10	46
594	1556	58.0	39 55	9.5	9.73	598,618	12	22
595	3378	58.4	85 34	7.5	8.42	304,591,592	011	112
596	3295	58.5	44 47	9	9.10	598,605	11	31
597	3400	58.9	86 16	7.8	8.13	304,591,592	100	141
598	3312	59.6	47 22	6.3	5.67	272,282,619	021	253
599	3349	59.7	79 59	7.8	7.96	304,591,592	201	022
600	3319	0.1	24 49	9	9.55	277,602	21	66
601	3321	0.2	24 55	9	9.35	277,602	21	44
602	3323	0.2	34 48	9	9.03	605,618	12	22
603	3332	0.8	24 49	9.8	9.45	277,602	34	44
604	3356	1.1	70 4	7.8	7.78	618,620	11	34
605	3352	1.3	60 7	5.3	5.06	272,282,612	212	547
606	77	1.4	79 52	9	9.29	304,591	00	33
607	3357	1.9	39 41	8	8.22	605,620	01	22
608	3375	2.0	72 17	5.8	5.36	272,282,612	211	372
609	58	2.6	49 54	9	9.18	620,621	23	22
610	3451	2.6	85 9	9	8.60	304,591,591,	021	244
						592	0	2
611	3372	2.7	40 10	8	7.48	605,620,621,	154	555
						623	0	5

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m	° ′								m.	° ′					
612	62	2.8	39 46	9.5	9.58	605,620	00	46	661	3655	17.5	54 54	8.5	9.60	605,618,619	R00	668
613	95	3.4	69 54	9.5	9.82	618,620	10	33	662	511	18.4	54 45	9.5	9.16	618,619	21	44
614	3381	3.5	35 2	8.5	8.78	605,618	11	33	663	3704	18.4	77 46	5.9	5.53	272,283,612	101	433
615	3715	4.0	88 35	7.5	8.35	304,591,592	221	412	664	509	18.5	35 0	8.8	8.99	383,618	22	52
616	3389	4.1	44 51	9	9.30	602,619	11	35	665	3689	19.0	60 0	8	8.18	383,621,623	451	102
617	127	5.1	40 0	9.5	9.52	605,620	01	33	666	3702	19.7	55 3	8.5	8.26	618,619	01	83
618	3466	5.4	81 29	7.5	7.65	304,591,592	212	111	667	3698	19.8	44 36	8	8.20	602,619	00	22
619	3442	5.6	74 42	7	7.10	386,620	22	11	668	3696	19.9	24 40	7.8	7.05	277,382	01	58
620	148	5.8	44 50	8.5	8.95	602,619	20	22	669	3780	20.0	83 54	7.5	7.59	304,592,593	101	611
621	3439	6.6	29 49	8.5	8.42	277,620	23	11	670	3774	20.8	81 15	7.5	8.37	304,591,592	120	421
622	3438	6.6	34 56	8.5	8.49	383,618	11	53	671	3721	21.0	30 12	7.2	7.18	277,620	00	00
623	3440	6.8	25 13	7.5	8.15	277,602	21	47	672	576	21.1	24 50	8.8	9.10	277,382	00	21
624	3450	7.1	35 0	9	9.14	383,618	12	31	673	578	21.1	24 56	8.5	8.95	277,382	32	23
625	3461	7.1	64 57	6.9	6.98	618,620	10	22	674	3731	21.3	45 3	8.2	8.32	381,602	21	23
626	3465	7.1	69 39	6.5	5.99	618,620,621	123	255	675	3782	21.3	81 11	9.5	9.27	304,591,592	120	313
627	3454	7.2	49 6	6.4	5.99	272,282,612	011	002	676	613	22.0	44 53	9	9.42	381,602,621,	321	444
628	206	7.7	34 50	9.2	9.09	383,618	00	13							623	4	4
629	3477	7.8	65 14	8	8.28	618,620	01	33	677	3744	22.1	36 17	6.2	6.22	272,283,612	212	102
630	3474	8.1	39 44	7	7.08	605,620	11	11	678	3749	22.2	29 54	8.8	8.88	277,620	33	11
631	3487	8.9	44 47	6.2	5.87	272,283,612	211	113	679	3784	22.6	74 57	7.5	8.08	386,620	22	11
632	3491	9.1	34 45	8.8	8.79	383,618	00	33	680	660	23.5	34 51	8.5	9.31	618,621,623	012	588
633	3490	9.1	36 19	6.1	6.15	272,283,612	010	010	681	3781	23.5	54 57	9.2	9.70	618,619	11	77
634	3496	9.4	30 10	6.4	6.04	277,620,621	110	382	682	3801	23.6	69 59	6.4	6.36	382,618,623	221	110
635	3511	10.0	49 42	7.5	7.71	385,620	22	21	683	3778	23.7	36 2	5.6	5.42	272,283,612	313	534
636	3514	10.0	57 41	6.3	5.71	272,283,612	221	361	684	3786	23.9	40 14	7.3	7.18	385,620	22	22
637	3522	10.8	35 55	6.7	6.82	272,283,612	111	466	685	3788	24.0	29 47	8.8	9.12	277,620	12	11
638	3568	10.9	79 22	6.2	5.65	272,304,591	221	432	686	3790	24.0	40 11	7.2	7.58	385,620	11	44
639	3561	11.1	74 41	7	7.18	386,620	11	80	687	3830	25.1	69 41	6.1	5.89	272,283,612	110	111
640	3535	11.3	39 52	8.2	9.52	605,620	10	55	688	720	25.4	34 42	8.5	8.50	383	A	3
641	3547	11.7	40 8	7.8	6.98	605,620	11	08	689	3831	26.0	42 49	7.2	7.47	272,283,612	001	5R5
642	3553	12.1	24 58	9.2	9.75	277,602	10	88	690	3849	26.0	69 57	9	9.40	382,618	11	62
643	3584	12.4	75 2	7.5	7.68	386,620	11	11	691	3840	26.5	42 59	6.1	5.87	272,283,612	011	111
644	3562	12.6	24 59	8.8	9.08	277,602,621,	304	333	692	782	27.0	45 5	8.8	9.08	381,619	201	33
						623	0	3	693	3854	27.2	29 48	9.2	9.58	277,620	22	34
645	3574	12.6	59 53	7	7.08	383,621	22	41	694	3864	27.4	47 43	6.1	5.94	272,283,612	433	101
646	3575	12.7	54 59	8.5	8.70	605,618,619	R11	222	695	3867	27.6	44 58	9	9.28	381,619	21	33
647	3594	13.6	64 48	7	6.90	386,620	22	31	696	3879	27.6	63 18	5.0	4.80	272,283,612	311	806
648	3595	13.6	64 48	9.5					697	3874	27.7	55 9	7.5	7.91	621,623	11	41
649	3598	14.2	48 7	6.2	5.84	272,283,612	110	110	698	3873	28.2	24 58	6.9	7.40	382,602	11	19
650	3614	14.4	70 9	7.5	7.36	382,618	12	11	699	3951	28.2	82 37	7.2	8.07	304,592,593	010	331
651	412	14.5	29 52	8.7	8.82	277,620	12	03	700	3892	28.9	44 45	8	8.08	381,619	21	31
652	414	14.5	45 4	9.5	10.15	602,619	00	77	701	3911	29.3	60 12	7	7.70	383,620	11	77
653	3604	14.7	49 39	8	8.51	385,620	11	73	702	3912	29.6	50 43	5.9	5.59	272,283,612	011	342
654	3608	15.2	24 51	8.8	9.35	382,602	23	66	703	3927	29.7	64 59	8.5	8.61	386,618	00	14
655	3626	15.6	62 57	6.0	5.47	272,283,612	200	353	704	3984	29.7	82 50	8	8.00	304,592,593,	212	220
656	450	15.7	59 58	9	8.98	383,621	00	50							623	4	0
657	3623	15.9	43 27	4.4	4.27	272,283,612	101	553	705	3932	29.8	66 50	6.1	5.72	272,283,612	211	343
658	3634	16.0	62 53	5.7	5.13	272,283,612	110	793	706	3914	30.0	24 54	9	9.60	382,602	33	61
659	499	16.5	79 46	8.5	8.84	304,591	10	30	707	3926	30.2	44 55	8.5	8.48	381,619	01	53
660	3651	16.9	67 17	6.2	6.06	272,283,612	010	711	708	3935	30.7	35 10	6.8	7.19	383,618	22	27

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S. M. P.	Design.	R. A. 1900.	S. Dec 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
709	3936	30.8	24 39	7.8	7.55	382,602	23	42
710	3945	31.2	24 54	8.5	8.95	382,602	01	55
711	3960	31.4	44 59	8.5	8.12	381,619	11	36
712	3963	31.5	54 51	7.4	7.50	385,619	00	05
713	3982	31.5	74 56	7.5	7.74	386,619	10	22
714	3964	31.6	54 57	8.8	8.90	385,619	22	11
715	*915*	31.7	24 51	9	9.15	382,602	10	22
716	3970	32.1	54 39	7	6.85	385,619	10	00
717	3971	32.3	49 45	7.5	7.96	385,620	01	52
718	3975	32.7	24 59	8.8	9.75	382,602	01	86
719	3987	33.0	30 10	7.2	7.22	277,620	01	24
720	4010	33.2	65 2	7.2	7.91	386,618	00	31
721	4003	33.5	34 59	8.2	8.09	383,618	22	17
722	4006	33.5	40 36	4.8	4.48	272,283,612	321	8p1
723	4040	33.6	78 41	6.1	5.63	272,283,612	101	324
724	4013	33.9	44 48	8.2				
725	*993*	33.9	44 49	10	8.42	381,619,621,	143	644
						623	2	4
726	4075	34.5	81 3	7	7.67	304,591,592	111	251
727	4038	35.2	49 42	7.5	7.56	385,620	21	12
728	4047	36.0	24 51	8.5	8.70	382,602	22	15
729	4052	36.2	34 52	7.5	7.99	383,618	11	52
730	4062	36.2	60 6	6.8	7.26	383,620	10	65
731	4064	36.8	24 57	9	9.35	382,602	12	64
732	4082	37.7	24 58	7	6.75	382,602	12	43
733	4093	37.8	44 55	8.8	9.18	381,619	00	nn
734	4101	38.3	32 15	4.9	4.92	272,283,612	111	357
735	4104	38.5	24 46	8.8	9.20	382,602	22	22
736	*1122*	38.5	35 2	9.5	9.89	383,618	11	79
737	*1144*	39.0	44 53	9	9.36	381,619,621,	521	164
						623	0	2
738	4121	39.1	37 38	4.8	4.42	272,283,612	010	4p4
739	4125	39.1	49 45	7.5	8.06	385,620	12	31
740	4150	39.4	75 8	7.0	7.19	386,619	22	02
741	*1179*	39.6	70 2	9	9.16	382,618	01	72
742	4181	40.3	78 39	6.6	6.00	272,283,612	111	012
743	*1183*	40.4	49 53	8	8.41	385,620	00	22
744	4151	40.5	54 47	8.2	8.50	385,619	00	30
745	4155	40.7	55 1	8.8	9.10	385,619	11	33
746	*1211*	41.2	45 5	8.8	9.16	381,619,621,	123	244
						623	0	7
747	4176	41.7	54 47	7.2	7.20	385,619	22	36
748	4185	42.0	54 35	6.6	6.15	385,619	10	80
749	4187	42.2	47 40	6.1	5.60	272,283,612	000	042
750	4184	42.4	29 39	5.7	6.00	277,283,620,	322	032
						623	0	n
751	4190	42.5	25 10	7.5	7.65	382,602	32	14
752	*1260*	42.6	44 55	9.5	9.54	381,619,621,	331	300
						623	3	0
753	4304	42.6	85 3	8.2	8.09	304,396,592,	231	241

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						593,623	12	41
754	4196	42.9	25 3	8.5	8.95	382,602	23	02
755	4211	42.9	65 7	3.9	3.76	272,283,612,	112	013
						618,623	10	20
756	4205	43.2	30 12	6.9	6.58	277,620	22	60
757	4207	43.3	29 46	7.2	6.78	277,620	00	72
758	*1309*	43.4	70 0	9	9.40	382,618	11	44
759	4272	43.8	81 10	8.5	7.84	304,591,592	201	072
760	4279	44.0	81 10	9.2				
761	4219	43.9	30 28	5.6	5.55	272,283,612	201	430
762	4229	43.9	54 59	9.5	9.55	385,619	21	31
763	*1401*	44.6	79 47	8.5	8.40	304,592	11	14
764	4241	44.9	37 55	5.5	4.52	272,283,612	010	355
765	4242	44.9	37 55	4.8				
766	4256	45.7	36 30	4.1	4.12	272,283,612,	101	111
						619,623	20	11
767	*1358*	45.8	25 0	8.7	9.20	382,602	33	72
768	4267	45.9	54 36	7.0	7.04	386,619	10	02
769	4265	46.0	45 5	9	9.24	381,619,621,	142	444
						623	1	2
770	*1384*	46.4	29 58	9	8.78	277,620	33	26
771	4277	46.6	39 55	8	8.15	385,620,623	430	033
772	4302	46.8	65 8	7.8	8.01	386,618	11	00
773	4307	47.7	44 55	9	9.18	381,619	12	24
774	4322	47.7	70 11	7.3	7.56	382,618	23	14
775	4308	47.8	44 40	7.8	7.98	381,619	00	02
776	4359	48.0	80 20	8.2	7.87	304,592,593	351	111
777	4360	48.1	80 21	9				
778	4343	48.2	74 49	8	8.24	386,619	21	22
779	4353	48.8	74 33	3.2	3.12	272,282,612,	012	257
						619,623	20	14
780	4349	49.1	70 11	8	9.36	382,618,623	643	246
781	4341	49.4	45 15	7.8	7.68	381,619	11	31
782	4336	49.5	24 55	4.4	4.75	275,286,377,	334	232
						623	2	0
783	4346	49.9	35 2	5.3	5.12	272,283,612	111	745
784	4377	49.9	75 0	7.2	7.44	386,619	10	12
785	4352	50.1	39 50	8.5	8.18	385,620	22	40
786	4363	50.5	47 12	6.4	5.77	272,282,612	022	232
787	4368	50.9	40 40	6.2	5.55	272,282,612	111	450
788	4375	51.0	55 9	7.8	8.00	386,619	00	20
789	4395	52.0	52 59	6.6	6.29	272,282,612	101	111
790	*1574*	52.0	54 50	9	9.10	386,619	00	16
791	4393	52.1	29 57	7.8	7.39	277,378	00	p1
792	4403	53.0	24 56	7.5	7.35	275,377	10	41
793	4408	53.1	40 13	7.7	7.74	385,620	10	25
794	4409	53.1	40 13	7.1				
795	*1617*	53.5	44 55	9.5	9.77	381,619,623	320	636
796	4424	54.0	50 3	7.8	8.06	388,620	01	31
797	4421	54.1	34 48	8.8	9.54	383,618	32	n7

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S. M. P.	Design	R. A. 1900	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
798	1640	54.3	35	0	9.5	9.74	383,618	12	57
799	4431	54.5	45	2	8.5	8.77	381,619,623	144	330
800	1645	54.8	25	1	9.5	10.00	275,377	22	55
801	4444	54.8	63	46	6.6	5.98	272,282,612	201	012
802	4438	55.1	29	51	9	9.19	277,378	11	22
803	4448	55.4	49	54	7.2	7.10	388,620	11	11
804	4443	55.5	24	52	9.5	9.35	275,377	32	42
805	4546	55.5	84	23	7.5	7.80	304,395,396	201	330
806	1686	55.6	44	47	9.5	9.28	381,619	11	11
807	4468	56.7	30	47	5.9	5.94	272,282,378,	101	114
							612	2	1
808	4483	57.2	44	47	9	9.07	381,619,623	311	111
809	4487	57.2	61	41	4.7	4.31	272,282,286	011	9pp
810	4610	57.4	85	30	8.8	9.05	304,395,396	120	502
811	1778	57.9	69	49	8	8.65	382,618	10	46
812	4501	58.2	34	46	6.7	6.74	378,618	01	25
813	1781	58.3	59	57	9.5	9.92	383,618	12	64
814	4511	58.4	54	36	7.8	8.50	386,619	22	55
815	4515	58.6	54	41	7.2	7.54	386,619	10	37
816	4517	58.6	54	41	7.2				
817	20	59.0	80	6	9	9.00	304,593	11	10
818	1797	59.1	44	57	8.2	8.32	381,619	01	23
819	4523	59.3	24	44	7	7.75	275,377	01	63
820	4536	59.5	40	5	7	7.48	385,620	11	55
821	4545	59.5	62	27	4.7	4.41	272,282,286	000	p64
822	4538	59.6	39	39	7.5	7.54	385,620	01	33
823	4550	59.7	61	22	5.1	4.79	272,282,286,	410	582
							397	4	5
824	4540	59.8	44	40	8	8.22	381,619	00	24
825	4555	59.8	64	42	8	8.00	382,618	23	20
826	1818	59.9	44	52	8.8	8.98	381,619	10	22
827	1838	0.3	55	2	8.5	9.10	386,619	11	39
828	1845	0.6	35	1	8.2	8.79	378,618	22	00
829	4565	0.6	45	1	7.8	7.58	381,619	00	21
830	21	0.8	64	51	8.5	9.10	382,393	11	36
831	4672	0.9	85	34	6.5	6.40	304,395,396,	112	422
							592,618,619	201	224
832	3	1.0	40	2	9	9.15	385,390	21	22
833	4582	1.0	59	49	8.5	8.72	383,392	21	57
834	4583	1.0	59	51	7.8	7.98	383,392	22	55
835	4586	1.6	44	57	7.8	8.34	381,391	01	11
836	35	1.9	29	57	8.8	8.49	277,378	22	00
837	42	2.2	24	57	9	9.20	275,377,389,	430	272
							623	1	2
838	73	3.3	25	1	8.5	8.90	275,377	11	14
839	4620	3.7	49	55	9.2	9.79	388,392	22	66
840	4626	4.0	49	54	6.8	7.24	388,392	21	02
841	4637	4.5	60	9	7.8	8.16	383,392	01	44
842	4649	5.5	46	8	6.7	6.22	272,282,286	212	312
843	4657	5.6	60	0	8.5	8.24	381,392	12	33

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
844	4660	6.3	34	46	7	7.32	378,389,623	551	333
845	175	6.3	54	54	9.5	9.28	386,392	11	35
846	4683	6.3	70	8	7	7.82	382,393	22	66
847	4676	6.8	49	53	9	9.29	388,392	11	33
848	195	6.8	59	47	9	9.65	381,392,623	231	444
849	201	6.9	64	52	8.8	9.10	382,393	11	66
850	4686	7.4	42	15	5.3	4.78	272,282,286	211	p87
851	210	7.8	55	6	9.5	9.64	386,392	21	11
852	218	7.9	55	3	9.5	9.94	386,392	01	44
853	231	8.5	44	53	9.3	9.50	381,391	00	05
854	235	8.6	45	4	9.5	9.54	381,391	10	03
855	4729	9.4	44	37	7.0	6.73	381,391,393,	430	383
							623	3	3
856	4736	9.6	44	56	8.2	8.64	381,391	01	21
857	271	9.7	40	1	9.2	9.40	385,390	00	42
858	4757	10.7	42	32	3.8	3.79	272,282,286,	241	206
							397,399,619,	232	620
							623	0	3
859	4762	10.9	40	5	8.8	9.00	385,390	22	20
860	4776	11.3	49	50	8.5	8.64	388,392	10	12
861	338	11.4	45	4	9	8.94	381,391	10	41
862	350	12.0	25	2	9	9.30	275,377,389,	340	355
							623	1	3
863	364	12.2	44	52	9.5	9.14	381,391	12	33
864	369	12.2	54	58	8.5	9.07	392,393	11	66
865	376	12.6	44	55	9.5	9.54	381,391	12	30
866	4797	12.7	39	52	8.5	8.20	385,390	00	03
867	4798	12.8	25	4	8.5	8.95	275,377	32	02
868	4812	13.1	62	43	3.3	3.35	272,282,286,	122	141
							397,399,403	111	62p
869	4811	13.4	51	44	4.4	4.31	272,282,286	210	759
870	4820	13.5	62	26	6.0	5.34	272,282,286	111	567
871	4871	13.9	80	59	7.8	7.95	304,395,396	221	302
872	4821	14.1	34	2	3.3	3.76	272,282,286,	223	322
							393,397,619,	513	243
							623	2	2
873	441	14.7	39	49	9	9.00	304,385,390	231	302
874	4840	14.7	59	32	4.6	4.39	272,282,286	212	p8p
875	479	14.7	69	47	9	9.22	382,393	22	72
876	4845	14.9	61	11	6.7	6.35	272,282,286	112	242
877	4846	15.5	25	16	7.2	6.70	275,377	22	11
878	4859	16.1	44	30	5.8	5.05	272,282,286	101	297
879	499	16.1	50	4	9	9.09	388,392	11	23
880	491	16.2	24	53	8.9	9.05	275,377	23	02
881	4868	16.2	53	6	6.3	5.94	272,282,286	011	141
882	4867	16.5	24	58	8.5	8.67	275,377,389	421	112
883	4880	16.6	63	30	6.8	6.12	272,282,286,	422	031
							397,399	22	11
884	4898	17.1	69	58	7.2	7.42	382,393	00	21
885	4879	17.2	34	58	8	7.95	378,389	21	20

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
886	*538*	17.6	29	47	9.5	9.74	277,378	23	22
887	*560*	17.9	54	55	8.5	8.74	386,392	01	22
888	4902	18.3	35	8	7.8	8.50	378,389	11	03
889	4911	18.9	25	7	6.1	5.72	275,377,389,	550	3p3
							612,623	12	13
890	4912	19.0	29	59	8.8	9.01	277,378,390,	341	222
							623	1	2
891	*583*	19.1	29	58	9.5	9.43	277,378,390	331	111
892	*588*	19.2	35	3	9	8.95	378,389	01	02
893	*614*	20.1	40	2	9	9.64	385,390,393,	343	844
							623	0	6
894	4940	20.2	34	14	4.0	3.94	272,282,286,	211	601
							397,399,403	100	p61
895	4939	20.2	34	58	8.5	8.50	378,389	11	30
896	4951	20.2	60	3	9	9.39	381,392	00	44
897	4958	20.3	69	38	7	7.96	382,393	32	83
898	4962	20.8	63	37	5.8	5.18	272,282,286	212	752
899	4957	21.2	34	58	6.7	6.59	378,389,623	422	pp1
900	*669*	21.3	49	51	9.5	9.69	388,392	11	22
901	4968	21.8	35	4	8.2	8.30	378,389	22	55
902	4967	21.8	35	5	8.5	9.59	378,389,623	202	341
903	4969	21.8	44	57	8.5	8.90	381,391	11	44
904	4990	21.8	69	50	8.5	8.56	382,393	21	64
905	*724*	22.1	70	7	9	9.56	382,393	01	n6
906	4975	22.3	40	3	7.5	8.50	385,390	11	30
907	*695*	22.5	34	56	9.5	9.45	378,389	01	21
908	4991	22.7	45	4	7.8	7.54	381,391	01	00
909	5017	24.1	47	10	6.5	6.22	272,282,397	232	124
910	5021	24.6	29	59	7.5	8.04	277,378	01	22
911	5090	24.7	80	27	5.8	5.62	275,275,304,	122	442
							377,382,399,	200	244
							403,623	11	32
912	5096	25.0	79	45	6.9	6.99	304,395	11	25
913	5136	25.1	83	51	8.5	8.41	275,304,395	000	111
914	5111	25.5	79	49	8.2	9.24	304,395	12	22
915	*852*	26.2	49	49	8.5	7.84	388,392	10	42
916	*854*	26.2	49	50	9				
917	5066	26.3	46	44	6.5	6.32	272,282,397	023	223
918	5083	26.3	70	13	7.5	7.92	406,407	11	11
919	5081	26.6	62	45	6.1	5.84	272,282,397	012	104
920	*890*	27.4	25	4	9	9.58	377,389,393,	140	644
							623	2	1
921	*899*	27.6	24	47	9	9.48	377,389,393,	221	555
							623	2	3
922	5093	27.6	30	0	8.2	8.23	277,378,390	331	322
923	*910*	27.6	40	5	9	9.10	385,390	11	11
924	5100	27.7	24	59	8.8	9.45	377,389	12	42
925	5106	27.8	45	10	5.0	5.28	272,282,397	000	111
926	5126	28.0	69	59	8.5	9.02	382,393	11	25
927	*948*	28.2	64	47	8.2	8.60	382,393	00	61
928	*989*	28.5	74	56	9	9.58	386,393	11	66
929	5292	29.1	86	30	8.2	7.93	275,304,395	001	113
930	5157	29.5	69	50	7.5	8.42	382,393	00	62
931	5137	29.6	29	58	4.7	4.57	272,277,282,	002	2p6
							397,619	32	62
932	*977*	29.7	39	56	9	9.45	385,390	12	21
933	5144	29.8	39	42	8	7.90	385,390	22	11
934	5152	29.8	59	59	7.0	6.89	381,392	22	36
935	5219	29.8	81	49	5.7	5.81	275,277,304,	102	221
							399,403,404,	300	212
							623	1	0
936	5264	30.1	84	43	7.0	7.13	275,304,395	111	411
937	*998*	30.4	35	3	9.5	9.56	378,389,623	021	311
938	5161	30.7	25	15	7.5	7.55	377,389	32	44
939	5176	31.0	35	2	7.2	7.12	378,389,623	210	714
940	5171	31.1	24	44	6.9	6.53	377,389,623	542	073
941	5274	31.1	84	25	7.2	7.13	275,304,395	110	411
942	5187	31.7	30	46	3.7	3.78	272,282,397,	110	202
							399,403,404	111	222
943	5198	31.8	55	15	3.1	3.53	272,397,399,	311	030
							403,404,405	101	203
944	5205	31.8	65	4	8	9.10	382,393	11	66
945	5207	32.0	65	13	7.8	8.70	382,395	11	55
946	*1079*	32.5	60	1	8.5	9.09	381,392	11	13
947	5223	32.6	63	2	6.2	6.00	272,397,399,	402	211
							403	3	1
948	5215	33.0	30	55	6.3	6.43	272,282,397	122	222
949	*1106*	33.3	55	4	9.5	9.64	386,392	12	11
950	5233	33.3	55	6	7.5	8.08	386,392	22	13
951	5230	33.7	30	6	8.2	8.04	277,378	12	82
952	*1132*	33.9	65	1	9	9.35	382,395	20	44
953	5240	34.1	24	52	8.5	8.55	377,389	01	11
954	*1134*	34.3	54	49	9	8.78	386,392	22	66
955	5310	34.5	83	7	6.9	6.75	275,304,395,	002	042
							395	0	0
956	5257	34.8	44	59	8.5	8.70	381,391	22	22
957	*1155*	34.9	55	4	9.5	9.18	386,390	11	22
958	5263	35.1	44	50	7.8	7.84	381,391	12	23
959	5268	35.4	50	1	9	9.29	388,392	33	33
960	5276	35.6	62	16	var.	var.	272,397,399,	311	525
							623	1	5
961	5271	35.9	24	41	6.0	5.40	377,389,623	633	6p4
962	5273	36.1	24	57	9.2	9.90	377,389	00	44
963	*1196*	36.7	24	54	9.5	10.40	377,389	22	87
964	5295	37.3	42	3	4.6	4.55	272,282,397	111	126
965	5296	37.4	40	2	8.5	7.85	385,388	10	80
966	5298	37.4	40	3	8				
967	*1223*	37.4	44	56	9.2	9.50	381,391	22	50
968	5300	37.6	39	46	7.8	7.95	385,388	12	05
969	*1249*	38.1	34	54	10	9.96	378,389,623	432	555

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
970	*1247*	38.2	29 49	8.7	8.54	277,378	*23*	03	1020	5685	50.4	83 41	7	7.45	275,304,395	*320*	*224*
971	*1256*	38.4	29 54	9	8.99	277,378,390	*422*	020	1021	5627	51.4	70 0	7.2	7.76	382,393	*21*	*83*
972	5313	38.5	37 20	5.1	5.16	272,282,397	*111*	7n4	1022	5610	51.5	39 48	6.5	5.75	385,388	*21*	*97*
973	*1345*	38.5	80 4	9.5	9.64	304,405	10	*13*	1023	*1738*	51.5	44 56	9	9.92	379,391	*21*	*94*
974	*1278*	38.9	45 6	8.5	8.50	381,391	*11*	35	1024	5612	51.7	35 1	8.5	8.52	378,390,393,	*231*	03*3*
975	*1280*	39.1	34 48	9.5	9.65	378,389	*23*	*11*							623	1	*3*
976	5328	39.3	30 57	6.2	5.56	272,282,397	*223*	*112*	1025	*1755*	51.9	45 3	9.5	9.88	379,391	*11*	*44*
977	*1297*	39.5	35 2	8.5	8.75	378,389	*10*	*58*	1026	5622	52.0	39 55	8	7.45	385,388	*32*	44
978	*1302*	39.5	44 50	8.8	9.04	381,391	01	*02*	1027	5618	52.0	39 56	8.8				
979	*1301*	39.6	24 58	8	8.15	377,389	*10*	*20*	1028	5637	52.5	50 7	7.8	8.64	385,388	01	*64*
980	5343	39.8	54 59	7.5	8.38	386,392	*33*	*44*	1029	*1798*	52.9	60 7	8.5	9.09	381,392	00	*33*
981	5350	40.2	50 40	5.5	5.28	272,282,397	0*11*	331	1030	*1795*	53.3	25 8	9.2	9.58	377,389,393,	*311*	*468*
982	*1361*	40.9	54 54	9	9.08	386,392	*22*	*11*							623	*2*	*4*
983	5373	41.0	54 46	7	7.84	386,392	10	0*8*	1031	5721	53.3	80 49	8.8	7.91	275,304,395	0*12*	113
984	5367	41.0	50 5	9.2	8.43	385,388,392	*311*	*444*	1032	5720	53.3	80 49	9.5				
985	5369	41.1	50 4	7.5					1033	*1814*	53.6	40 1	8.8	8.55	385,388	0*1*	22
986	5382	41.8	44 44	7.8	8.28	379,391	*11*	*83*	1034	5653	53.7	25 13	8	8.07	278,377,389	*210*	*141*
987	*1380*	41.9	24 57	9	9.40	377,389	*11*	*42*	1035	5674	54.0	50 0	7.8	8.70	385,388	00	*25*
988	*1429*	42.9	40 5	9.2	9.35	385,388	*32*	41	1036	5670	54.1	35 3	7	7.96	378,390,393,	R*21*	n88
989	5418	42.9	59 55	5.6	5.41	272,397,399	*220*	*222*							623	0	*2*
990	5410	43.1	29 56	8.5	8.49	277,378	*11*	33	1037	5742	54.4	79 59	7.8	7.92	275,304,395,	14T	*411*
991	5419	43.1	50 14	7.8	7.70	385,388	00	*12*							396,623	22	*41*
992	5473	43.5	79 39	7.5	8.04	304,405	*12*	*52*	1038	5697	55.3	44 59	8.8	9.22	379,391	10	*44*
993	5431	44.0	30 12	6.7	6.25	277,378,623	2*4*4	233	1039	5705	55.8	25 13	7.5	7.20	278,377,389	*101*	336
994	*1471*	44.0	59 59	8.5	8.74	381,392	01	*22*	1040	*1912*	55.8	44 50	8.7	9.02	379,391	10	*25*
995	5456	44.0	71 7	5.6	5.75	272,397,399	*111*	*220*	1041	*1936*	56.4	49 53	9	8.64	385,388	01	*46*
996	*1480*	44.3	55 3	8.5	8.68	386,392	*11*	*27*	1042	5749	56.6	65 10	7.4	7.26	386,395	0*1*	*15*
997	*1464*	44.5	25 7	9	9.50	377,389	*11*	*57*	1043	5746	57.2	39 50	7.8	8.10	385,388	*22*	*11*
998	*1502*	44.7	60 5	8.5	9.14	381,392	10	*43*	1044	5756	57.8	44 55	9	10.12	379,391	*21*	*66*
999	*1508*	45.2	44 49	9.5	9.72	379,391	*12*	*25*	1045	5759	57.9	44 58	8.5	8.72	379,391	*21*	*22*
1000	5464	45.5	35 15	7.5	7.90	378,390	*11*	*74*	1046	5787	58.1	75 6	6.0	5.23	272,397,399	*120*	154
1001	5471	46.0	24 50	8.5	9.00	377,389	00	*55*	1047	5764	58.2	39 52	6.4	5.99	385,388,623	*202*	p72
1002	5478	46.0	49 58	7.2	7.40	385,388	00	*42*	1048	*2001*	58.6	24 56	9.5	9.32	278,377,389,	*301*	010
1003	5489	46.1	50 3	10.2	8.10	385,388	00	*61*							623	5	2
1004	5490	46.1	50 3	7.5					1049	5771	58.6	44 59	7.5	7.98	379,391	00	02
1005	5482	46.2	35 16	7	7.55	378,390	*10*	62	1050	5777	58.8	49 43	7.5	8.24	385,388	01	*32*
1006	*1546*	46.2	44 54	9	9.62	379,391	10	*14*	1051	5774	59.0	25 8	8.8	8.70	278,377	*22*	35
1007	*1543*	46.3	34 53	9.5	9.45	378,390	10	*11*	1052	*2017*	59.0	29 57	9	8.74	277,378	*12*	*32*
1008	*1556*	46.5	29 51	9.5	9.73	277,378,390	*331*	*222*	1053	*2055*	59.5	54 58	8.5	9.18	386,392	*11*	*74*
1009	*1575*	46.5	50 0	9	9.40	385,388	00	*21*	1054	5795	59.9	44 58	8.5	8.48	379,391	00	*30*
1010	*1581*	46.7	50 5	8.5	9.20	385,388	*22*	*21*	1055	*2063*	59.9	45 6	9	9.58	379,391	00	*44*
1011	5496	46.8	29 56	8.2	8.49	277,378	*11*	33	1056	5794	0.1	29 57	8.5	8.59	277,378	*11*	41
1012	5510	47.0	41 29	6.3	5.92	272,282,397	*313*	201	1057	5798	0.2	49 18	5.5	5.44	272,282,397	*222*	235
1013	5532	47.6	54 37	7.5	7.84	386,392	*21*	*30*	1058	5801	0.3	49 51	7.5	7.34	385,388	*12*	22
1014	5523	47.7	39 58	8.8	9.40	385,388	*11*	*94*	1059	5811	0.6	49 38	7	7.30	385,388	1*1*	*21*
1015	5524	47.8	35 4	6.2	5.89	272,282,397	*211*	00*2*	1060	5807	0.8	35 37	4.7	4.59	272,282,396,	*112*	829
1016	*1630*	48.0	45 5	9	9.12	379,391	10	*61*							623	2	0
1017	5555	48.7	53 38	5.8	5.63	272,282,397	*112*	*144*	1061	5832	1.5	45 5	8.8	9.32	379,391	10	*51*
1018	5550	48.9	24 55	9.2	9.70	377,389	00	*75*	1062	5837	1.8	49 45	7.8	7.74	385,388	01	55
1019	*1655*	49.1	29 58	10	9.80	277,378,390	F*22*	*233*	1063	*34*	1.8	49 49	9.5	9.40	385,388	*22*	*22*

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1064	60	1.9	65 3	9	9.36	386,395	22	44
1065	5868	2.2	69 38	7.8	8.32	382,393	00	33
1066	5850	2.3	49 43	5.3	4.91	272,282,396	012	767
1067	5847	2.4	45 6	9	9.52	379,391	01	52
1068	5871	2.6	64 40	7.8	8.96	386,395	00	85
1069	5853	2.8	35 10	7.2	8.10	383,390	22	16
1070	5860	2.9	44 55	7.5	7.82	379,391	01	08
1071	5893	3.8	57 37	4.8	4.70	272,282,396	211	357
1072	5919	4.0	71 27	5.7	5.25	272,396,397	112	524
1073	5907	4.1	64 41	7	8.06	386,395	01	31
1074	5900	4.4	44 57	6.9	7.18	379,391	00	44
1075	5914	5.2	24 54	9.5	9.35	278,377	21	14
1076	5923	5.2	44 57	9.5				
1077	5924	5.3	44 57	9.2	9.32	379,391	01	15
1078	5935	5.3	60 0	7.2	7.92	381,391,393	R01	441
1079	213	5.4	74 50	9	9.43	386,393	12	42
1080	5937	5.6	55 7	7	7.58	386,392	11	44
1081	199	5.6	69 50	9.5	9.46	382,393	10	55
1082	179	5.7	49 53	9.2	9.34	385,388	10	33
1083	5941	6.2	34 58	9	9.60	383,390	00	46
1084	5960	6.8	45 0	8.2	8.28	379,391	11	35
1085	5971	6.8	63 31	5.7	5.24	272,282,396	111	417
1086	211	7.0	29 52	8.5	8.74	277,378	12	12
1087	239	7.0	55 7	9.5	9.54	386,392	01	35
1088	238	7.2	44 59	8.5	9.08	379,391	00	13
1089	302	7.3	75 3	8.2	8.88	386,393	00	94
1090	5970	7.4	35 2	7.5	7.15	383,390	12	32
1091	243	7.4	44 56	8	9.18	379,391	11	22
1092	5974	7.7	24 59	8.5	8.97	278,377,389	320	202
1093	5972	7.7	30 21	7.0	7.15	272,282,396,	523	764
						397,399,403,	231	242
						404	1	4
1094	267	8.3	25 2	8.3	8.10	278,377,389	330	444
1095	285	8.4	45 4	9	9.72	379,391	32	77
1096	5993	8.6	30 6	8.5	8.09	277,378	00	72
1097	310	9.5	24 56	9	8.85	278,377	12	01
1098	6005	9.5	35 3	8.8	9.60	383,390	22	61
1099	6028	9.6	65 10	8	7.42	386,395	32	41
1100	6044	10.2	69 50	8.2	8.86	382,393	23	41
1101	6105	10.2	82 36	5.8	5.91	275,282,304,	313	111
						381,383,385,	320	110
						395,398,403,	231	120
						404	1	2
1102	441	10.6	79 50	9.5	9.46	405	A	5
1103	6036	10.8	40 9	neb.	8.10	388,392	00	93
1104	6038	11.0	36 5	6.1	5.79	272,282,396	220	811
1105	6047	11.5	29 52	7.5	7.14	277,378	21	74
1106	378	11.6	25 6	9	9.87	278,377,389	616	994
1107	443	11.7	74 57	8.5				
1108	444	11.7	74 58	9	8.63	386,393	01	11
1109	408	11.8	60 6	8.5	8.54	381,391	23	00
1110	387	11.9	29 53	9.2	9.39	277,378	00	11
1111	6068	11.9	59 42	7.5	7.14	381,391	23	71
1112	6058	12.0	25 5	8.8	9.03	278,377,389	322	020
1113	6060	12.2	29 51	8.8	8.74	277,378	12	55
1114	6062	12.2	35 2	6.9	6.80	383,390	33	40
1115	419	12.6	29 58	8.8	9.19	277,378	11	01
1116	6098	13.9	34 59	5.1	4.96	272,282,396	111	550
1117	6119	13.9	67 18	5.1	4.75	272,282,396	200	872
1118	6107	14.2	30 6	8.2	8.49	277,378	11	03
1119	6115	14.2	49 42	7.8	7.80	385,388	11	30
1120	507	15.0	24 52	9.5	9.60	278,389	22	11
1121	6127	15.4	25 13	7.5	7.23	278,389,390	122	833
1122	565	16.4	49 52	9	9.24	385,388	12	22
1123	556	16.6	29 55	9	9.19	277,378	11	02
1124	6158	16.7	34 48	6.7	6.50	383,390	22	73
1125	6157	16.8	30 1	8.8	8.44	277,378	12	44
1126	668	16.8	79 56	9	8.98	304,405	11	30
1127	6167	16.9	50 42	5.8	5.61	272,282,396	320	342
1128	6169	17.0	49 49	9	9.04	385,388	01	12
1129	6174	17.3	39 51	7	7.45	388,392	01	42
1130	6168	17.4	30 10	7	7.24	277,378	01	22
1131	6177	17.6	24 52	5.8				
1132	6178	17.6	24 52	7	5.20	278,389	11	65
1133	6181	17.7	24 52	9				
1134	622	17.7	60 7	9	9.28	381,391	11	33
1135	6205	18.3	49 52	8	8.34	385,388	21	21
1136	6276	18.3	80 32	7.8	7.68	275,304,395	000	211
1137	6201	18.7	29 48	9.5				
1138	6202	18.7	29 49	9.5	9.43	277,378,390	432	424
1139	6293	19.2	80 18	7.8	7.89	275,304,395	101	211
1140	691	19.9	39 56	9	8.75	388,392	10	33
1141	6246	20.1	39 46	6.2	5.69	272,282,396	211	521
1142	6258	20.6	35 14	8	8.00	383,390	22	82
1143	6266	20.7	45 7	8.5	8.48	379,391	11	33
1144	6312	21.2	74 48	7.5	7.83	386,393	12	36
1145	742	21.5	24 54	9.5	9.60	278,389	RA	31
1146	6289	21.7	34 57	7.5	7.35	383,390	23	41
1147	6388	22.1	81 39	6.8	6.51	275,304,395	111	335
1148	758	22.2	30 6	9.5	9.44	277,378	12	11
1149	6313	22.5	52 25	6.5	6.28	272,282,396	101	312
1150	6422	22.6	83 59	6.8	6.71	275,304,395	121	331
1151	6311	22.9	25 0	8.5	8.00	278,389	RA	85
1152	6335	23.7	30 3	9.5	9.49	277,378	00	00
1153	6340	23.7	34 42	7.0	6.80	383,390	11	47
1154	6347	23.8	45 8	8	8.38	379,391	11	22
1155	6348	23.9	41 2	6.1	5.94	272,282,377,	625	112
						396,397,398,	013	102
						399,403,404	112	200
1156	6349	24.0	35 5	9	9.30	383,390	11	33

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1157	6360	24.1	44 57	7	7.22	379,391	01	56
1158	*838*	24.4	30 7	8.8	8.89	277,378	11	11
1159	6369	24.7	30 4	9.2	9.04	277,378	12	35
1160	6372	24.9	37 19	5.9	5.66	272,282,396	001	033
1161	*869*	24.9	50 7	9.5	9.74	385,388	12	22
1162	6387	24.9	59 0	5.6	5.02	272,282,396	212	883
1163	*904*	25.1	70 7	9.5	10.02	382,393	33	55
1164	6379	25.2	24 51	9	9.95	278,389,393	R21	555
1165	6385	25.3	30 12	6.9	6.24	277,378	32	p7
1166	6415	25.5	75 6	8.5	8.78	386,393	00	63
1167	*881*	25.6	34 52	8.5	8.60	383,390	33	11
1168	*882*	25.6	40 6	9	9.05	388,392	01	20
1169	*891*	25.8	40 5	9.5	9.30	388,392	11	32
1170	6395	25.9	40 4	8.5	9.50	388,392	11	00
1171	*960*	25.9	75 6	9.5	9.88	386,393	00	44
1172	*922*	26.7	25 3	9.5	9.65	278,389,393	R12	116
1173	6447	27.2	74 43	7.5	8.03	386,393	01	22
1174	6423	27.4	47 9	5.7	5.55	272,282,396	001	422
1175	6419	27.5	24 53	8.8	8.40	278,389	RA	14
1176	6427	27.7	35 33	4.1	3.86	272,282,396	212	179
1177	6446	27.7	70 9	7.8	8.46	382,393	01	70
1178	6440	28.0	50 11	8	7.94	385,388	12	34
1179	*977*	28.1	34 50	9.5	9.80	383,390	22	83
1180	*1001*	28.2	60 5	9	9.48	381,391	33	53
1181	*989*	28.6	24 50	9.2	9.27	278,382,389,	R01	313
						393	0	3
1182	6454	28.7	46 0	6.5	5.85	272,282,396	020	140
1183	*1040*	28.8	65 5	8	8.46	388,405	01	50
1184	*1027*	28.9	54 59	9	9.08	386,392	11	11
1185	*1028*	29.0	50 8	8	8.10	385,388	00	11
1186	6465	29.4	38 35	5.8	5.33	272,282,396	012	157
1187	6466	29.6	35 13	6.4	5.60	383,390	00	94
1188	6475	30.0	30 1	7.8	7.94	277,378,392	21	11
1189	6476	30.1	29 55	6.6	6.46	277,378,392	230	334
1190	*1072*	30.2	35 4	9	9.55	383,390	01	61
1191	*1084*	30.6	34 50	9	9.65	383,390	21	61
1192	6522	31.7	45 3	9.2	9.88	379,391	00	44
1193	6527	31.0	70 3	8	8.54	388,393	12	50
1194	6584	31.1	81 7	7.5	7.15	275,304,395	010	633
1195	6515	31.6	33 9	6.0	5.69	272,282,396	000	212
1196	6520	31.8	33 20	6.8	6.73	272,282,396	221	542
1197	6530	31.8	54 58	6.6	6.28	386,392	00	30
1198	6553	32.4	64 18	5.9	5.34	272,282,396	120	424
1199	6561	32.7	62 33	3.9	3.70	272,282,377,	111	0p1
						397,398,399	011	133
1200	*1267*	32.9	79 50	9.2	8.76	304,405	01	20
1201	6549	33.0	34 47	7.8	7.95	383,390	01	02
1202	6551	33.0	35 7	7.0	6.65	383,390	32	69
1203	*1176*	33.7	60 1	8.5	9.18	381,391	11	77
1204	*1201*	34.0	25 0	9.2	9.45	382,389	21	24

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1205	*1209*	34.1	35 1	9.5	9.10	383,390	11	31
1206	*1212*	34.2	35 2	9				
1207	6583	34.2	34 45	7.0	6.55	383,390	12	94
1208	6597	34.6	39 52	8.5	8.35	388,392	01	11
1209	6600	34.9	25 7	8.5	9.00	382,389	11	02
1210	6603	35.1	24 56	8.2	7.85	382,389	21	22
1211	6612	35.4	29 46	8	8.04	277,378	10	00
1212	6623	35.5	40 46	5.7	5.93	272,282,396	100	121
1213	6647	35.6	65 1	9.8	9.66	388,405	11	22
1214	6674	35.8	76 25	5.6	4.97	272,282,396	100	686
1215	6643	35.9	54 52	8	8.34	386,392	10	21
1216	*1281*	36.0	29 50	9.5	9.44	277,378	12	21
1217	6633	36.0	34 8	2.5	2.74	272,275,282,	103	233
						377,397,398,	522	46p
						399	0	p
1218	6637	36.1	32 41	5.9	5.39	272,275,282	011	444
1219	6659	36.2	65 2	9	9.52	388,405	01	00
1220	6685	36.3	75 18	8	8.33	386,393	01	55
1221	6653	36.5	55 0	7.2	7.08	386,392	11	77
1222	6657	37.1	29 46	7.8	6.94	277,378	10	61
1223	6694	37.3	73 48	6.1	5.52	272,282,396	212	555
1224	6668	37.6	24 53	8.8	9.25	382,389	10	27
1225	*1347*	37.7	35 2	8.8	9.40	383,390	00	64
1226	*1386*	37.7	64 58	9.5	9.61	388,405	32	11
1227	*1368*	37.9	39 56	9.2	9.10	388,392	11	11
1228	*1363*	38.0	25 1	9.5	9.90	382,389	22	49
1229	6688	38.2	35 7	9	9.25	383,390	21	22
1230	*1373*	38.3	24 59	9.2	9.45	382,389	21	12
1231	6690	38.4	30 35	6.4	6.19	272,275,396	011	303
1232	6693	38.7	34 43	5.7	5.39	272,275,396	211	431
1233	6699	38.7	44 58	7.5	8.68	379,391	11	77
1234	*1434*	38.9	64 50	9	9.66	388,405	23	22
1235	6729	39.0	70 1	8	8.24	388,393	10	20
1236	*1401*	39.1	24 55	9	9.60	382,389	11	11
1237	6702	39.2	25 1	9.5	9.75	382,389	10	33
1238	*1427*	39.3	50 3	9	8.90	385,388	33	71
1239	*1432*	39.6	40 4	9.5	9.30	388,392	00	33
1240	*1429*	39.8	25 0	9.2	9.80	382,389	11	33
1241	6722	39.8	29 54	9.5	9.74	277,378	10	42
1242	6732	39.9	45 17	7.5	7.52	379,391	01	50
1243	6741	40.3	39 58	8.5	8.40	388,392	00	11
1244	6751	40.9	29 57	8	8.24	277,378	21	09
1245	6764	40.9	49 53	8	7.60	385,388	00	44
1246	*1488*	41.0	29 52	9	9.24	277,378	10	02
1247	*1521*	41.4	54 51	9	8.58	386,392	00	11
1248	*1627*	41.4	79 53	9.2	9.38	304,405	11	10
1249	*1514*	41.5	29 57	9	8.99	277,378	11	10
1250	6827	41.8	78 52	5.9	6.14	272,282,377,	404	211
						397,398,399,	200	212
						404	0	1

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.
		m.	° ′					
1251	6774	41.9	40 14	7.2	7.55	388,392	0*1*	*41*
1252	*1531*	42.0	30 1	9.5	9.49	277,378	*11*	00
1253	6780	42.3	32 20	5.4	5.36	272,282,396	*100*	*22*4
1254	*1560*	42.5	44 59	8.8	9.68	379,391	*22*	*79*
1255	*1595*	42.8	59 59	9.5	9.74	381,391,393	*433*	*552*
1256	6804	43.3	34 56	8.2	8.75	383,390	0*1*	00
1257	6817	43.7	46 38	5.8	5.12	272,282,396	0*12*	488
1258	6873	43.7	79 58	8.8	8.48	304,405	*11*	33
1259	6879	43.7	80 55	8	8.39	275,304,396	*110*	*141*
1260	*1624*	43.8	49 53	9.5	9.80	385,388	*22*	*33*
1261	*1644*	43.9	59 58	9	9.41	381,391,393	*340*	*222*
1262	6828	44.1	44 50	7.8	7.98	379,391	*11*	*22*
1263	*1659*	44.2	59 51	8.5	9.04	381,391	*23*	00
1264	6852	44.6	65 46	4.5	4.49	272,282,396	21*3*	333
1265	*1647*	44.7	25 9	8.5	9.05	382,389	10	0*2*
1266	6838	44.8	34 58	7.5	7.55	383,390	3*4*	44
1267	*1664*	44.8	45 2	9.5	9.52	379,391	10	*50*
1268	6848	44.9	51 6	3.9	3.92	272,282,377,	*103*	996
						397,398,399	312	*319*
1269	6907	45.1	80 34	5.8	5.61	275,275,304,	00*1*	246
						375,397,398,	*112*	.41
						399,403	*11*	33
1270	*1667*	45.2	24 56	8.5	8.90	382,389	00	*11*
1271	*1685*	45.2	44 52	9.5	9.92	379,391	*21*	*44*
1272	*1687*	45.3	39 58	9	9.20	388,392	*11*	*47*
1273	*1698*	45.3	50 4	8.5	9.24	385,388	01	*72*
1274	*1707*	45.3	54 52	9	9.18	386,392	00	*42*
1275	*1716*	45.6	55 4	9	8.78	386,392	*11*	*30*
1276	6886	45.7	70 14	8	8.34	388,393	*12*	*31*
1277	*1766*	45.7	74 54	9.3	9.43	386,393	*21*	*44*
1278	6928	45.7	81 40	7.5	7.24	275,304,395	*121*	333
1279	6859	45.9	25 1	9	8.90	382,389	*11*	*14*
1280	*1788*	46.1	74 57	9.3	9.53	386,393	10	*33*
1281	6877	46.4	44 43	8	8.18	379,391	*33*	*22*
1282	6883	46.6	44 55	7.0	6.42	379,391	01	8p
1283	6878	46.8	29 53	8.5	8.84	277,378	*21*	02
1284	6896	47.5	35 49	2.9	3.06	272,282,377,	004	n*15*
						397,398,399	110	*343*
1285	6898	47.5	39 47	8	8.15	388,392	0*1*	*40*
1286	*1800*	47.7	54 57	9.5	9.24	386,392	*12*	*22*
1287	6900	47.8	25 15	7.1	7.25	382,389	*32*	*32*
1288	6915	48.0	56 12	4.7	4.29	275,282,377	*121*	*3*p5
1289	6920	48.3	55 7	7.5	7.44	386,392	*43*	64
1290	6929	48.3	65 12	7.5	7.61	388,405	00	*11*
1291	6922	48.4	55 5	7.5	7.39	386	A	6
1292	*1844*	48.4	59 52	8.8	8.78	381,391	*11*	00
1293	6925	48.7	52 8	5.6	4.75	275,282,377	*322*	872
1294	6931	49.2	37 40	6.2	5.59	275,282,396	000	062
1295	6937	49.5	33 50	5.2	5.00	275,282,396,	*313*	758
						397,398	10	82

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.
		m.	° ′					
1296	7097	49.6	84 50	6.1	6.25	277,304,377	*232*	03*1*
						386,395,398,	0*2*0	*220*
						403	1	*2*
1297	6972	50.0	66 56	5.1	4.98	275,282,377	10*1*	58*2*
1298	*1885*	50.1	25 4	8.5	8.85	382,389	*32*	*33*
1299	*1922*	50.2	59 59	9	9.24	381,391	01	*20*
1300	6981	50.4	65 17	8	7.96	388,405	00	*22*
1301	6979	50.6	57 11	6.6	5.94	275,282,377,	*123*	311
						399,403,404,	121	214
						405,406,407	124	*111*
1302	*1924*	50.8	40 1	9	9.55	388,392	0*1*	*11*
1303	6974	51.0	35 6	8.2	8.10	383,390	00	*11*
1304	*1942*	51.3	25 10	9	9.10	382,389	00	*63*
1305	6996	51.6	39 59	5.8	5.49	275,282,396	*101*	434
1306	6997	51.8	29 56	8.2	7.89	277,378	*22*	61
1307	6999	51.8	29 59	8.2	8.34	277,378	01	47
1308	7044	52.0	69 56	7	7.94	388,393	10	*47*
1309	*1971*	52.1	29 53	9	9.40	385,390	*11*	*44*
1310	7011	52.1	37 8	5.4	4.93	275,282,396	0*12*	917
1311	*2042*	52.1	75 3	9.5	9.48	386,393	*11*	*33*
1312	7017	52.4	35 7	8.2	8.60	383,390	*11*	*11*
1313	7021	52.5	31 24	5.6	5.54	275,282,396,	*412*	145
						397,398	32	43
1314	*2020*	52.6	60 6	9	9.34	381,391	*23*	*35*
1315	7034	52.7	52 40	5.8	5.25	275,282,377	011	542
1316	7054	52.8	60 3	7	7.24	381,391	01	33
1317	7041	53.2	30 5	8.8	8.65	385,390	01	22
1318	7045	53.3	24 59	8.2	8.40	382,389	*22*	*44*
1319	7066	53.4	63 8	4.9	4.41	275,282,377	*111*	8*44*
1320	7062	53.9	35 1	9.2	9.80	383,390	*22*	*83*
1321	7077	53.9	59 56	7.5	8.04	381,391	10	22
1322	7064	54.0	35 18	4.5	4.49	275,282,396	*11*2	570
1323	*2066*	54.2	35 7	9.2	9.60	383,390	*22*	*11*
1324	7076	54.4	25 9	8.2	9.20	382,389	*22*	*2*n
1325	*2077*	54.4	40 8	8.8	8.25	388,392	10	*22*
1326	7078	54.6	24 50	9	9.35	382,389	*10*	*42*
1327	7093	55.1	35 1	8.8	8.95	383,390	*12*	02
1328	7113	55.3	60 9	9.2	10.17	381,391,393	5*32*	*277*
1329	7120	56.1	42 49	4.0	4.00	275,282,397,	*310*	000
						398,399,403	*221*	*200*
1330	*2159*	56.6	45 8	9.8	10.18	379,391	*22*	*77*
1331	*2156*	56.8	30 5	8.5	8.70	385,390	*11*	11
1332	7209	57.0	79 23	5.5	5.53	277,304,377	02*1*	543
1333	*2286*	57.2	80 9	9	9.24	304,405	01	*20*
1334	7153	57.3	39 57	8.5	8.65	388,392	01	*12*
1335	*2196*	57.4	54 53	9.5	9.68	386,392	*11*	*22*
1336	7159	57.6	33 55	5.9	5.39	275,282,397	0*22*	523
1337	*2195*	57.9	29 53	9	9.00	385,390	*22*	*20*
1338	7170	58.1	35 3	7.2	7.45	383,390	10	44
1339	7168	58.2	29 58	8.5	8.75	385,390	*2*1	00

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
1340	*2220*	58.5	25 3	9.2	9.60	382,389	22	68							399,403	11	50
1341	7178	58.5	30 1	8.5	8.40	385,390	11	41	1389	7601	6.2	85 56	6.8	6.78	304,395,396	120	720
1342	7184	58.5	51 13	6.2	5.81	277,282,397	100	031	1390	7398	6.3	29 48	8	7.35	385,390	01	81
1343	7189	58.6	55 5	8.5	8.88	386,392	22	11	1391	7416	6.9	40 20	6.0	5.53	375,397,399	201	214
1344	7187	59.0	30 0	8	7.90	385,390	00	96	1392	7414	7.0	34 48	6.9	6.75	383,406	01	7p
1345	7200	59.0	54 57	7.5	7.58	386,392,392	431	222	1393	*277*	7.3	30 0	9	9.10	385,390	11	11
1346	7202	59.5	25 9	9.5	10.30	382,389	FA	57	1394	*298*	7.4	44 54	9	9.30	381,391	11	11
1347	7235	59.5	69 52	8.5	8.54	388,393	12	50	1395	7441	7.6	49 58	9	9.18	385,409	11	22
1348	7207	59.7	25 8	8.8	9.25	382,389	21	40	1396	7444	7.8	45 15	6.5	6.20	381,391	33	86
1349	*2285*	0.0	25 5	8.6	9.43	382,389,405	331	201	1397	7456	8.1	44 51	7.8	8.00	381,391	11	03
1350	*2297*	0.4	25 6	9.5	9.60	382,389	FA	21	1398	7447	8.2	25 13	7.5	7.60	382,405	00	21
1351	7231	0.4	35 7	8.8	9.05	383,390	21	20	1399	7460	8.3	44 53	7	7.24	381,391	12	63
1352	*2310*	0.4	44 52	8.8	8.74	379,381,391	R12	311	1400	7467	8.4	54 56	5.2	4.84	377,397,399	322	296
1353	7234	0.6	32 10	5.8	5.82	275,277,282,	R03	112	1401	*463*	8.5	79 51	9	9.84	304,405	01	98
						397	4	3	1402	7491	8.7	65 4	8.5	8.54	388,409	10	00
1354	*46*	0.8	69 52	9.5	9.60	388,406	22	11	1403	7470	9.0	29 53	9.2	9.15	385,390	32	20
1355	7259	0.9	60 6	7.0	6.51	389,407	11	75	1404	7513	9.3	68 49	5.2	5.21	377,397,398	120	370
1356	*53*	0.9	69 58	9.5	9.30	388,406	11	02	1405	7484	9.4	30 3	8	8.10	385,390	11	15
1357	7243	1.2	25 1	8.5	7.80	382,405	22	32	1406	*382*	9.7	30 1	9.5	9.65	385,390	01	11
1358	7244	1.2	25 1	8.2					1407	*383*	9.8	29 52	8.8	9.00	385,390	11	22
1359	*30*	1.3	44 56	9.5	9.80	381,391	33	33	1408	*387*	9.8	30 6	9.5	9.60	385,390	11	11
1360	7289	1.5	64 51	7	6.99	388,409	11	04	1409	7523	9.9	65 17	7.5	7.59	388,409	11	12
1361	7266	1.6	45 2	5.8	6.42	282,375,397	120	322	1410	7526	10.1	60 2	8.8	8.62	389,407	10	11
1362	7268	1.6	45 11	7.5	6.80	381,391	33	72	1411	7525	10.5	44 54	9	9.30	381,391	22	31
1363	7277	1.8	45 5	9.2	5.82	282,375,397	111	224	1412	7529	10.5	45 2	8.5	8.70	381,391	11	72
1364	7279	1.8	45 5	6.5					1413	7535	10.7	45 0	8.2	8.04	381,391	23	05
1365	7270	1.9	24 55	8.5	8.75	382,405	10	00	1414	7533	11.0	30 8	8.8	9.10	385,390	22	13
1366	7274	1.9	35 30	6.2	6.10	282,375,397	341	112	1415	7550	11.0	60 13	8	8.56	389,407	22	61
1367	7283	2.0	44 54	8.2	8.34	381,391	12	22	1416	7557	11.1	65 34	5.5	4.81	377,397,398	001	66p
1368	7288	2.2	40 3	8	7.80	388,392	00	22	1417	*468*	11.3	45 0	9.5	9.76	381,391,407	614	323
1369	*128*	2.2	75 10	8.7	8.43	395,396	32	42	1418	7546	11.4	25 9	9	9.65	382,405	10	44
1370	7285	2.3	29 45	5.9	5.70	378,385,390	011	133	1419	7562	11.5	59 54	8.2	7.77	389,407	11	00
1371	7322	2.3	70 1	8.2	8.44	388,395	21	21	1420	7556	11.8	34 55	8.2	8.55	383,406	34	44
1372	7298	2.6	24 55	7.2	7.20	382,405	00	63	1421	*486*	11.9	24 58	9	9.15	382,405	12	02
1373	*90*	2.9	24 54	9.5	9.80	382,405	11	33	1422	*521*	11.9	59 53	9.5	9.47	389,407	11	30
1374	7321	3.5	34 18	6.1	6.16	282,375,397	232	312	1423	*491*	12.0	25 2	9	9.40	382,405	22	12
1375	*121*	3.6	40 5	9	9.50	388,392	22	57	1424	7561	12.1	29 45	7.2	6.35	385,390	10	38
1376	*241*	3.7	80 6	9.2	9.08	304,405	22	11	1425	*511*	12.2	39 50	9	9.20	388,392	00	77
1377	7337	3.9	35 13	8	7.85	383,406	21	02	1426	7600	12.3	69 44	8	8.19	388,395	11	20
1378	7343	4.1	37 14	5.3	5.36	282,375,397	100	242	1427	*530*	12.6	40 8	9	9.15	388,392	21	44
1379	7346	4.1	45 5	7.0	6.34	381,391	12	97	1428	7571	12.7	24 54	8	8.60	382,405	22	22
1380	7364	4.4	60 5	8.8	9.11	389,407	11	11	1429	7586	13.0	35 6	4.8	4.50	375,397,399	022	939
1381	7360	4.8	39 58	8.2	8.20	388,392	11	23	1430	7639	13.2	74 43	5.3	5.20	377,396,397	210	638
1382	7359	4.8	42 8	5.8	5.53	375,377,397	133	005	1431	7606	13.6	37 42	5.8	5.67	375,397,399	102	212
1383	7363	4.8	44 43	6.7	6.86	381,391,407	430	011	1432	7609	13.8	37 12	6.4	6.07	375,397,399	102	112
1384	*179*	5.1	35 0	9	8.65	383,406	21	14	1433	7634	14.8	24 58	7.2	7.25	382,405	21	02
1385	7394	5.8	49 44	8	7.98	385,409	22	00	1434	7655	14.9	59 9	6.5	6.51	377,397,399	111	535
1386	7388	5.9	34 56	8.5	8.35	383,406	12	46	1435	7644	15.1	24 55	7.2	7.30	382,405	11	55
1387	7413	6.0	66 1	6.0	5.84	377,397,398	121	001	1436	7646	15.2	24 54	8.2				
1388	7410	6.1	62 8	5.7	4.97	377,397,398	313	230	1437	7695	15.2	75 4	7.8	7.43	395,396	12	46

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1438	690	15.9	54 57	9.2	9.73	389,392	10	24
1439	7754	16.1	81 3	7.0	7.31	304,395,396	102	232
1440	7769	16.1	81 58	7.8	8.28	304,395,396	110	333
1441	7689	16.3	50 19	7.0	6.88	385,409	11	13
1442	7676	16.4	29 59	8.2	7.80	385,390	11	77
1443	7678	16.5	25 2	8.5	8.40	382,405	22	11
1444	7681	16.5	30 2	3.2	3.25	375,377,397,	110	473
						398,399,403	230	276
1445	7697	17.0	34 6	6.0	5.57	375,397,399	210	634
1446	742	17.0	34 53	9	9.45	383,406	32	22
1447	737	17.0	34 55	9.5	9.90	383,406	00	44
1448	765	17.6	35 5	8.5	8.20	383,406	11	30
1449	767	17.6	35 5	9				
1450	7730	18.2	44 43	7.8	7.58	391,407	00	12
1451	7736	18.4	44 44	8.5	8.39	381,407	11	4.
1452	801	18.4	29 55	9.2	9.45	385,390	12	12
1453	7731	18.4	33 23	3.9	3.84	377,393,397,	120	202
						399,403,404,	002	p22
						405	2	0
1454	7734	18.5	35 0	7.5	7.35	383,406	12	64
1455	844	18.5	65 4	9.5	9.74	388,409	01	22
1456	7737	18.7	24 50	8	8.15	382,405	12	20
1457	7835	18.7	81 1	8.5	8.81	304,395,396	012	003
1458	7741	18.8	24 56	8.5	8.55	382,405	01	41
1459	7845	18.8	82 1	7.2	7.44	304,395,396	101	114
1460	854	19.1	54 53	8	8.73	389,392	10	12
1461	7760	19.2	45 6	9	9.10	381,391	33	11
1462	855	19.6	29 58	8.7	8.50	385,390	11	03
1463	857	19.7	24 52	9.5	9.60	382,405	11	14
1464	7767	19.7	29 49	7.5	7.00	385,390	00	82
1465	7770	19.7	34 57	6.8	6.55	386,406	01	6p
1466	7779	19.9	25 6	8	8.25	382,405	21	32
1467	7882	20.0	82 8	7.2	7.61	304,395,396	001	242
1468	885	20.1	35 5	9	9.30	386,406	11	11
1469	919	20.1	59 59	7	7.36	407,410	11	46
1470	906	20.2	50 3	8.5	8.14	385,409	12	64
1471	7817	20.2	69 45	7.1	6.94	388,395	02	31
1472	888	20.3	24 57	8.5	9.25	382,407	10	02
1473	887	20.3	25 0	9	9.30	382,407	00	13
1474	7801	20.6	36 40	6.6	R	377,397,399	201	633
1475	928	20.9	40 10	9	9.35	388,392	01	64
1476	7827	21.1	56 19	6.0	5.77	377,397,398	320	101
1477	7836	21.3	60 10	6.8	6.61	389,407	10	64
1478	960	21.4	50 10	8.5	8.74	385,409	01	23
1479	7824	21.5	40 14	6.5	6.30	388,392	00	31
1480	7843	21.8	52 39	0.4	−0.96	377,397,398,	221	ppp
						399,403,404,	115	p55
						405,406,407,	210	555
						412,413,711	011	55p
1481	7920	21.8	81 31	8	8.04	304,395,396	222	222

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1482	7839	21.9	35 1	6.8	6.20	377,397,399	202	023
1483	7841	22.1	34 59	9	7.15	386,406	23	86
1484	7842	22.1	34 59	8				
1485	984	22.1	50 1	9	9.54	385,409	12	35
1486	986	22.1	50 2	8.5	8.64	385,409	12	12
1487	7844	22.2	25 4	9	9.95	382,407	10	58
1488	7859	22.3	58 30	6.7	6.65	397,398,403	211	461
1489	982	22.4	25 4	9.5	9.75	382,407	21	33
1490	7849	22.4	35 17	7.5	7.00	386,406	33	p5
1491	7898	22.4	75 11	8.5	8.83	395,396	01	30
1492	1001	22.7	24 58	9	9.50	382,407	00	35
1493	7880	23.0	60 14	6.2	6.04	389,397,398,	001	801
						403,407	12	2p
1494	7874	23.1	48 7	5.9	5.98	397,399,403	211	100
1495	7891	23.2	60 11	8	8.62	389,410	01	11
1496	7911	23.6	69 56	6.1	5.60	398,399,403	000	316
1497	1076	23.9	44 55	9	9.40	381,391	11	64
1498	7893	24.1	30 0	8.8	8.65	385,390	01	11
1499	7904	24.4	32 31	4.7	4.60	397,399,403	110	999
1500	7913	24.5	45 2	8.5	8.50	381,391	33	73
1501	7952	24.5	75 4	8	8.13	395,396	12	17
1502	1114	24.8	44 58	9.5	9.74	381,391	23	52
1503	7914	24.9	32 18	6.5	6.00	397,403,404	110	011
1504	1124	24.9	49 53	9	9.26	385,409	24	33
1505	7926	25.0	54 58	8.2	8.43	389,392	21	42
1506	7950	25.0	70 8	7.5	7.89	388,395	11	13
1507	1118	25.1	35 6	9.5	9.80	385,386,406	112	333
1508	7940	25.5	57 56	6.3	5.77	398,399,403,	221	321
						711	0	4
1509	1163	25.7	54 56	8.5	9.85	389,392,412	332	666
1510	1186	25.9	60 3	8	8.27	389,410,412	211	222
1511	7939	25.9	40 18	7.5	7.35	388,392	10	14
1512	7942	26.0	40 19	7.8				
1513	1160	26.1	30 6	9.5	9.35	385,390	12	22
1514	7957	26.2	50 1	8.5	8.44	385,409	01	21
1515	1188	26.2	54 55	9.5	9.78	389,392	00	33
1516	7985	26.3	69 38	5.9	5.44	398,399,403	010	355
1517	7955	26.5	34 56	9.2	9.05	386,406	10	20
1518	1195	26.8	29 57	9	9.00	385,390	00	20
1519	7979	27.3	34 56	7.8	7.10	386,406	22	7p
1520	7990	27.3	50 10	8.5	5.34	398,403,404	121	456
1521	7991	27.3	50 10	5.5				
1522	1221	27.5	24 58	9.2	9.70	382,407	11	52
1523	7997	27.5	49 55	8.2	8.24	385,409	12	03
1524	8005	27.6	59 42	8	8.08	389,410	00	11
1525	7992	27.7	35 11	6.5	5.65	386,406	21	77
1526	8007	27.7	56 47	6.9	5.25	398,399,403	100	651
1527	8014	28.1	59 42	7.2	8.42	389,410	21	11
1528	8017	28.9	31 57	6.2	5.93	397,403,404	111	222
1529	8023	29.0	37 37	5.8	5.23	397,403,404	212	454

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1530	8034	29.0	51 45	6.1	5.68	398,399,403	110	232
1531	8022	29.1	25 5	9	9.65	382,407	12	64
1532	8039	29.4	45 14	7.8	7.20	381,391	00	33
1533	8057	30.3	36 9	5.9	5.30	397,403,404	011	536
1534	*1378*	30.5	44 59	8.5	8.34	381,391	32	55
1535	8071	30.5	58 41	6.0	5.82	397,399,404	201	131
1536	*1380*	30.8	35 8	9	9.15	386,406	10	20
1537	*1404*	30.8	55 0	8	8.23	389,392	01	43
1538	8068	30.9	32 38	6.1	5.93	397,403,404	201	012
1539	*1409*	30.9	54 53	9	9.58	389,392	11	63
1540	8070	31.1	30 1	7.2	6.80	385,390	00	27
1541	8083	31.4	34 58	7.2	7.40	386,406	11	24
1542	*1452*	31.9	45 6	9	9.50	381,391	33	55
1543	8117	31.9	65 14	7.8	7.74	388,409	21	22
1544	8093	32.0	36 42	6	5.73	398,403,404	021	220
1545	*1443*	32.1	29 59	9	9.15	385,390	32	22
1546	*1471*	32.3	50 2	8.5	8.54	385,409	01	00
1547	*1474*	32.3	54 51	9.2	9.63	389,392	12	66
1548	8119	32.3	54 54	9.5	9.78	389,392	11	63
1549	8113	32.4	35 5	7.5	7.65	386,406	10	14
1550	*1487*	32.4	55 9	8.5	8.88	389,392,412	231	114
1551	8116	32.6	25 8	9	9.45	382,407	01	44
1552	*1490*	32.6	44 59	8.5	8.64	381,391	12	21
1553	8133	32.8	52 53	4.8	4.46	397,399,404	112	505
1554	8128	33.0	34 54	9.5	9.70	386,406	22	22
1555	*1515*	33.0	55 3	9.5	9.73	389,392	10	12
1556	8137	33.1	40 9	9.5	9.70	388,392	00	22
1557	8144	33.1	50 13	7.3	6.78	385,409	11	70
1558	8140	33.4	25 4	8.8	8.60	382,407	00	11
1559	*1514*	33.4	35 4	8.5	8.80	386,406	00	20
1560	*1524*	33.7	29 56	9.2	9.55	385,390	21	64
1561	8155	33.8	36 54	6.3	5.80	398,403,404	112	212
1562	8154	33.9	30 1	9.5	9.60	385,390	22	11
1563	*1539*	34.0	29 57	9.8	10.00	385,390	11	33
1564	8160	34.0	32 15	5.7	5.17	398,403,404	111	777
1565	8165	34.0	44 53	8.8	9.52	381,391,413	340	375
1566	8166	34.0	50 14	7.4	7.24	385,409	10	53
1567	*1564*	34.5	24 52	9	9.00	382,407	22	52
1568	8178	34.5	44 53	8.2	7.99	381,391,413	211	55.
1569	8181	34.7	43 6	3.5	3.23	375,399,403,	311	033
						404,405,406,	332	485
						711	0	p
1570	*1617*	34.7	64 55	8.5	8.39	388,409	00	11
1571	*1608*	35.0	54 51	8.5	9.33	389,392	12	33
1572	*1637*	35.4	54 53	8.5	9.23	389,392	01	22
1573	8204	35.5	35 3	7.5	8.15	386,406	23	22
1574	8230	35.5	64 47	8	8.14	388,409	10	11
1575	*1621*	35.6	34 55	8.5	9.10	386,406	11	31
1576	8222	35.7	55 15	7.2	6.88	389,392	11	36
1577	8217	35.8	44 58	9.2	R	381,391	12	13

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1578	8218	35.8	44 58	7.8	R	R	R	R
1579	8212	35.9	30 22	5.9	5.73	375,403,404	201	353
1580	8215	36.0	30 4	9.8	10.00	385,390	01	33
1581	8224	36.0	44 57	9	9.14	381,391	23	11
1582	8226	36.0	44 57	10.5				
1583	8227	36.0	48 8	5.8	4.99	375,399,404	101	868
1584	8235	36.3	39 57	8.5	8.75	388,392	01	33
1585	*1722*	36.7	60 1	9.5	9.72	389,410	01	22
1586	*1751*	36.7	70 0	9	9.09	388,395	22	13
1587	*1689*	36.8	25 0	9	9.25	382,407	23	22
1588	*1739*	36.9	64 57	8.8	8.79	388,409	00	00
1589	8331	37.0	80 27	8.2	8.96	304,395,396	311	855
1590	*1710*	37.2	25 9	9	9.60	382,407	11	41
1591	8279	37.3	60 5	7.1	7.16	389,410	11	32
1592	*1775*	37.7	60 2	9	9.42	389,410	01	11
1593	8350	37.7	80 30	8	8.72	304,395,396	001	522
1594	8285	38.0	40 11	8	7.95	388,392	21	22
1595	8282	38.0	40 15	6.5	6.15	388,392	10	10
1596	*1853*	38.0	75 7	9.2	9.18	395,396	11	44
1597	*1783*	38.3	45 1	8.5	8.74	381,391	01	21
1598	8302	38.3	60 18	7.2	7.76	389,410	11	24
1599	*1779*	38.4	34 51	8.8	9.00	386,406	11	02
1600	*1784*	38.4	45 10	9	9.00	381,391	00	02
1601	*1800*	39.0	30 9	9	9.75	385,390	10	63
1602	*1825*	39.3	30 10	9	9.55	385,390	32	41
1603	*1874*	39.3	65 10	8.5	8.09	388,409	00	61
1604	*1842*	39.7	24 54	9.5	9.90	382,407	11	44
1605	8352	40.3	50 21	7.0	6.94	385,409	10	11
1606	8345	40.6	30 4	8.2	8.70	385,390	00	21
1607	8351	40.7	30 58	5.7	5.05	375,403,404,	211	577
						707	0	8
1608	8371	40.9	55 1	8.5	7.88	389,392	11	11
1609	*1965*	41.3	55 1	8.8	9.18	389,392	11	24
1610	*1969*	41.3	55 7	8.2	8.63	389,392	12	21
1611	8372	41.4	35 2	8.2	8.20	386,406	33	42
1612	*1963*	41.7	35 3	9.5	9.85	386,409	10	32
1613	*1961*	41.7	35 5	9.2	9.50	386,409	11	33
1614	8382	41.8	30 51	6.2	5.97	375,403,404	102	110
1615	*1977*	42.0	25 9	8.8	9.55	382,407	12	66
1616	*2012*	42.0	55 6	8.2	8.93	389,392	10	11
1617	8391	42.1	25 15	8	8.20	382,407	00	42
1618	8408	42.1	54 38	6.8	6.85	397,399,403	201	640
1619	8412	42.2	54 36	6.4	6.69	397,399,403	111	752
1620	*2009*	42.5	25 7	9.5	9.85	382,407	01	33
1621	*2024*	42.7	25 4	8.5	9.00	382,407	11	00
1622	8435	43.5	24 50	8.2	8.10	382,393	00	11
1623	*2068*	43.5	25 3	8.8	9.00	382,393	11	02
1624	*2075*	43.6	24 59	8.8	9.30	382,393	11	13
1625	*2106*	43.8	44 52	8	8.24	381,391	01	20
1626	8455	44.0	37 50	5.3	5.30	398,403,404	112	457

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.		S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.						Cat.	S. M. P.		Phot.	Est.
		m.	°	′								m.	°	′					
1627	8466	44.0	54	56	8.5	8.48	389,392	11	33								409	2	1
1628	8473	44.5	51	10	6.1	5.28	397,403,404	202	647	1671	2634	51.9	64	58	10	9.79	388,409	22	33
1629	8488	44.5	60	10	8.8	8.92	389,410	01	11	1672	2632	51.9	65	8	9.2	9.24	388,409	12	22
1630	2136	44.6	29	53	9	9.20	385,390	22	27	1673	2593	52.0	29	59	9	9.05	385,390	12	00
1631	2144	44.7	24	54	9.2	9.50	382,393	11	35	1674	8695	52.3	40	3	8.8	8.67	388,392,406	340	131
1632	2183	45.0	45	7	9.5	9.72	381,391,413	441	222	1675	2629	52.3	50	11	10	10.08	385,409,413	642	664
1633	8510	45.0	64	56	7.8	7.34	388,409	01	32	1676	8697	52.4	34	50	8	8.45	386,407	10	24
1634	8491	45.2	34	50	7.2	6.95	386,407	01	22	1677	8715	52.4	59	56	8.8	9.12	389,410	12	11
1635	2211	45.2	55	10	9	9.44	389,392,413	112	444	1678	8719	52.6	60	4	9.2	9.52	389,410	10	55
1636	2207	45.4	39	59	9.5	9.85	388,392,413	1R0	333	1679	8738	52.6	70	50	5.6	5.53	396,398,399	001	543
1637	8511	45.4	55	26	6.3	5.69	397,399,403	110	324	1680	8704	52.7	24	50	7.5	8.40	382,393	22	42
1638	2208	45.5	40	2	8.5	8.27	388,392,413	142	252	1681	8722	52.9	55	8	8.2	8.37	389,413	11	44
1639	2209	45.6	35	6	9.2	9.65	386,407	01	11	1682	8711	53.0	25	1	7.8	8.30	382,393	00	12
1640	2227	45.6	55	10	8.5	8.52	389,413	21	30	1683	8712	53.0	25	1	8.8				
1641	8503	45.7	24	53	8	8.45	382,393	12	24	1684	8720	53.2	35	13	6.7	6.25	386,407	12	p3
1642	8545	46.0	70	20	6.5	5.82	391,395	11	67	1685	8739	53.6	48	35	5.5	4.91	396,398,399	201	91p
1643	8518	46.1	32	24	4.0	3.90	397,399,403,	211	150	1686	8736	53.7	35	23	6.5	6.32	398,403,404,	302	331
							405,406,407	011	111								711	0	1
1644	8528	46.6	31	36	6.3	5.70	398,403,404	101	225	1687	2707	53.9	34	56	8.5	8.85	386,407	10	30
1645	8565	46.8	64	59	8	8.74	388,409	32	22	1688	8743	54.0	35	20	7.5	6.85	386,407	10	p4
1646	2289	46.9	44	56	8	8.34	381,391	10	31	1689	2722	54.0	40	0	9	9.30	388,406	11	13
1647	8550	47.0	45	20	6.9	6.44	381,391	01	44	1690	8747	54.5	25	17	6.0	6.15	382,393	01	64
1648	8554	47.1	46	31	5.4	5.12	397,399,403,	323	365	1691	2765	54.5	49	56	8	8.14	385,409	10	11
							711	2	9	1692	2739	54.6	30	8	9	9.25	385,390	12	22
1649	8551	47.2	34	15	5.5	4.93	398,403,404	201	486	1693	8757	54.7	33	59	5.4	5.20	398,403,404	101	264
1650	8570	47.2	61	50	3.5	3.29	397,399,403,	010	154	1694	8755	54.7	35	17	7.8	7.65	386,407	10	22
							404,405,406	110	244	1695	2786	55.1	34	53	8	8.95	386,409	12	55
1651	2329	47.3	50	2	8.5	8.54	385,409	10	00	1696	8775	55.1	54	55	7.8	7.72	389,413	12	33
1652	2308	47.4	35	2	9	9.55	386,407	21	66	1697	2840	55.8	50	3	8	8.28	385,409,413	264	312
1653	8568	47.4	50	30	3.2	2.76	397,399,403,	301	305	1698	8792	56.1	29	57	8.8	9.00	385,390	11	22
							404,405,406	212	073	1699	8795	56.2	29	56	8	6.95	385,390	01	pp
1654	8573	47.6	53	31	4.8	4.35	397,399,403	221	6pp	1700	8805	56.3	45	5	7.8	7.94	381,391	01	11
1655	8577	48.2	36	7	6.2	6.10	398,403,404	022	134	1701	8832	56.3	70	21	7.5	7.22	391,395	22	33
1656	2357	48.3	24	55	9.5	9.70	382,393	00	22	1702	8888	56.3	80	57	7.5	7.35	304,395,396	133	611
1657	2388	48.3	54	58	8.5	9.32	389,413	01	33	1703	2861	56.5	30	1	9.5	9.65	385,390	10	14
1658	8667	48.4	80	43	5.8	5.62	304,395,396,	500	312	1704	2892	56.6	50	11	8.5	8.84	385,409	12	00
							399,404,405,	100	443	1705	8833	56.8	60	9	8.5	8.36	389,410	00	11
							707,711	21	.4	1706	2920	56.9	50	1	9	9.28	385,409	22	33
1659	8610	48.7	60	8	6.4	6.16	389,410	11	34	1707	2921	56.9	50	6	9	9.64	385,409	01	44
1660	2550	48.7	80	1	9	8.99	304,395	22	00	1708	8815	57.0	25	4	6.0	5.80	382,393	00	44
1661	8591	48.8	35	10	9.2	8.35	386,407	01	11	1709	2901	57.1	25	5	9.5				
1662	8593	48.8	35	10	9.5					1710	2923	57.1	45	11	9	9.64	381,391	12	41
1663	2446	49.5	44	56	8.5	8.80	381,391	11	00	1711	2915	57.2	25	4	9.5	9.55	382,393	21	11
1664	2452	49.6	44	53	9	9.54	381,391	01	03	1712	2926	57.3	35	0	8.8	9.15	386,410	01	74
1665	2616	49.7	79	57	9.5	9.44	304,395	12	11	1713	8942	57.4	82	46	7.8	7.63	304,395,396	113	244
1666	2478	50.2	25	5	9.2	9.50	382,393	22	35	1714	3004	57.5	59	54	9	9.48	389,410	00	55
1667	2492	50.4	35	1	9.5	10.10	386,407	11	66	1715	2955	57.7	25	4	8.8	9.20	382,393	00	32
1668	2536	51.1	40	4	9	9.10	388,392,406	220	313	1716	8919	57.7	80	0	8.2	8.89	304,395	11	41
1669	8694	51.3	69	52	7.2	6.68	391,395	10	85	1717	8855	58.0	35	12	7.8	7.75	386,410	12	40
1670	2564	51.5	40	2	9	9.40	388,392,406,	011	424	1718	8864	58.3	25	3	8.5	8.75	382,393	32	02

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
1719	8869	58.3	44 46	8	8.24	381,391	12	40	1766	9088	3.8	80 41	7.8	7.98	304,395,396	011	000
1720	8874	58.4	51 16	5.8	5.04	396,398,399	200	555	1767	230	3.9	44 53	8	8.40	381,414	11	11
1721	8881	58.8	50 19	7.2	7.28	385,409	22	22	1768	9028	4.0	60 0	8.5	8.12	389,407	12	11
1722	3030	59.0	25 11	8.2	8.25	382,393	01	16	1769	245	4.2	35 12	9	9.30	386,410	22	35
1723	3075	59.3	54 58	8.5	8.87	389,413	11	44	1770	286	4.7	45 5	9.5	9.99	381,414,417,	433	5n5
1724	3067	59.6	24 56	7.5	7.20	382,393	00	30							707,710	11	53
1725	8904	59.6	50 17	7.8	7.74	385,409	10	13	1771	9046	4.8	51 48	6.7	6.04	397,398,399	211	022
1726	3087	59.8	35 10	8.5	8.60	386,410	22	11	1772	287	5.0	25 1	9	8.98	382,393,707,	331	220
1727	8905	59.8	40 13	7.2	7.50	388,406	11	05							710,711	22	02
1728	8909	59.8	49 55	8	8.28	385,409	00	22	1773	9064	5.2	59 50	8	8.07	389,407	22	11
1729	3106	0.1	25 2	9	9.20	382,393	11	32	1774	320	5.4	35 0	9.2	9.65	386,410	01	61
1730	8920	0.1	49 47	7	7.28	385,409	22	21	1775	9060	5.5	39 29	5.3	4.87	397,398,403	001	198
1731	8934	0.1	67 47	5.7	5.02	396,398,399	311	075	1776	344	5.5	45 10	10	F	381,414	FF	RR
1732	8916	0.2	39 49	8	8.20	388,406	00	33	1777	9058	5.6	25 2	8.5	8.55	382,393	32	11
1733	3128	0.2	44 52	8.8	9.14	381,391	10	11	1778	9057	5.6	25 4	6.3	5.93	382,393,707	212	356
1734	3156	0.3	55 0	9	8.77	389,413	11	30	1779	9076	5.8	49 56	7.8	7.84	385,417	12	24
1735	3153	0.5	45 3	8.5	9.40	381,391	33	44	1780	352	5.9	35 7	8.5	8.65	386,410	10	12
1736	3162	0.8	34 53	9.5	9.55	386,410	10	31	1781	9079	6.0	45 10	7.2	6.94	381,414	01	19
1737	3161	0.9	25 1	9.2	9.85	382,393	10	33	1782	374	6.4	25 9	9.2	9.45	382,393	23	14
1738	8935	0.9	42 11	5.5	5.25	397,403,404	211	466	1783	9084	6.5	29 53	8.5	7.85	385,390	01	20
1739	8936	0.9	43 28	5.8	5.48	397,403,404	011	225	1784	390	6.7	29 54	9.5	9.70	385,390	11	00
1740	3166	1.0	24 57	8.5	8.50	382,393	22	33	1785	9099	7.0	40 12	8.5	8.35	388,406	12	14
1741	30	1.0	54 59	9	9.82	390,418	01	33	1786	9104	7.0	50 10	8.8	8.39	385,417	22	14
1742	8948	1.3	49 26	5.3	5.18	397,398,399	101	63n	1787	427	7.2	34 52	9.5	9.65	386,410	10	11
1743	8946	1.4	40 20	7.3	7.05	388,406	23	55	1788	429	7.2	35 11	8.5	8.75	386,410	01	30
1744	9075	1.4	83 52	8.2	7.75	304,395,396	311	222	1789	550	7.4	75 4	8.3	8.53	395,396	10	35
1745	8973	1.7	59 2	6.5	5.85	396,398,403	011	121	1790	443	7.5	30 2	9	9.60	385,390	11	44
1746	62	1.8	25 9	9	9.20	382,393,417,	432	222	1791	471	7.9	30 5	9.5	9.85	390,412	01	21
						707,710	10	22	1792	514	8.0	54 54	8.5	8.97	390,418	00	55
1747	8970	1.9	50 13	8	7.54	385,417	23	35	1793	9135	8.1	48 46	5.5	5.08	397,398,399	000	661
1748	108	2.3	45 11	9.5	9.14	381,414	01	31	1794	9139	8.1	60 13	7.2	6.91	389,407	11	93
1749	116	2.4	45 10	8.8					1795	523	8.2	55 0	8.5	8.80	390,418,709,	242	306
1750	8984	2.5	56 36	5.7	5.31	397,398,403	100	224							710,711	22	00
1751	8978	2.6	25 10	9.2	9.45	382,393	23	21	1796	9130	8.3	30 6	9	8.85	390,412	01	22
1752	114	2.6	30 7	9	9.05	385,390	12	00	1797	524	8.6	34 55	9.5	9.80	386,410	11	33
1753	8979	2.7	24 48	6.7	6.20	382,393	11	38	1798	528	8.6	44 56	9	9.90	381,414	11	49
1754	8990	2.7	50 12	7.1	6.49	385,417	11	pp	1799	9152	8.9	40 19	5.7	5.50	397,398,403	110	433
1755	133	2.8	34 53	9	9.35	386,410	10	42	1800	9160	9.2	40 10	8.2	8.45	388,406	10	14
1756	152	2.8	49 54	8.5	9.04	385,417,707,	431	002	1801	9164	9.5	30 10	9.8	9.75	390,412	32	31
						710,711	30	22	1802	9171	9.6	40 13	8	8.00	388,406	11	28
1757	128	2.9	29 59	9.5	9.60	385,390	22	11	1803	9199	9.6	70 20	6	3.62	304,395,398,	111	412
1758	9054	2.9	79 16	5.6	5.46	395,396,399	001	253	1804	9206	9.6	70 20	4.5				
1759	171	3.1	45 6	9	9.34	381,414	12	13							399,403,404	000	224
1760	175	3.1	50 9	9	9.28	385,417,707,	430	331	1805	9176	9.7	46 35	4.8	4.54	304,398,399	301	573
						710,711	21	13	1806	601	9.8	39 58	8.5	8.50	388,406	11	30
1761	8992	3.2	25 15	8	8.30	382,393	11	22	1807	612	9.9	39 54	9.5	9.60	388,406	11	44
1762	158	3.3	25 8	9.5	9.90	382,393	00	44	1808	9188	9.9	50 8	7.5	7.99	385,417	00	55
1763	9004	3.3	45 10	9	9.50	381,414	00	35	1809	9175	10.0	30 54	6.9	6.60	304,398,403,	321	112
1764	9005	3.6	25 7	8.5	8.45	382,393	10	41							404,405,711,	312	101
1765	9013	3.8	40 44	6.2	5.97	397,399,403	001	240							713	2	4

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1810	619	10.0	44 59	10	N	381,414	NN	NN
1811	9180	10.1	30 10	6.8	6.47	383,412,417	122	5p5
1812	625	10.2	35 8	8.5	8.65	386,410	43	21
1813	9194	10.2	45 0	5.3	5.08	304,398,399	101	343
1814	9191	10.4	25 7	8	7.70	382,393	00	53
1815	9197	10.5	44 29	var.	var.	304,398,399,	343	144
						403,404,405,	411	646
						406,407,711,	067	462
						713	8	1
1816	9208	10.6	40 1	8	8.00	388,406	00	00
1817	691	11.1	35 5	8.5	8.65	386,410	10	22
1818	9234	11.1	63 1	6.3	6.05	398,399,403	111	101
1819	689	11.2	30 1	8.5	8.65	383,412	10	12
1820	784	11.2	70 11	9	9.18	391,395	21	70
1821	9230	11.4	50 17	7.0	6.84	385,417	10	34
1822	9267	11.4	75 9	8	8.38	395,396	11	44
1823	9221	11.5	30 30	6.1	5.47	304,398,399,	241	137
						403,404,711,	112	455
						713	1	5
1824	791	11.9	59 54	8.5	8.92	389,407	01	14
1825	9243	11.9	46 41	6.2	5.84	398,399,403	112	232
1826	9244	11.9	48 6	5.0	4.88	398,399,403	011	434
1827	9269	12.0	69 57	7.5	7.02	391,395	11	p5
1828	766	12.2	24 57	9.5	9.50	382,393	11	30
1829	781	12.2	45 0	9.5	9.60	381,414	11	34
1830	788	12.3	44 59	9.5				
1831	9246	12.3	29 58	8	8.32	383,412,417,	461	252
						707,710	11	13
1832	9245	12.3	30 16	7.5	7.15	383,412	01	62
1833	842	12.6	59 56	9	9.36	389,407,710,	230	444
						711,713	12	44
1834	9258	12.7	24 59	8	7.20	382,393	11	62
1835	816	12.9	30 4	9	9.25	383,412	32	30
1836	9262	12.9	30 8	8.2	8.15	383,412	10	63
1837	833	12.9	45 2	9.5	9.57	381,414,707,	242	111
						710,711	01	11
1838	9278	13.0	50 20	8	7.54	385,417	12	3p
1839	9266	13.1	30 43	6.7	6.53	304,398,403	120	333
1840	9276	13.3	36 25	5.6	5.20	304,403,404	202	735
1841	869	13.3	45 0	9	9.00	381,414	00	52
1842	9283	13.4	46 36	6.1	5.61	398,399,404	122	363
1843	906	13.5	60 6	8.5	8.90	389,407,710,	213	144
						711,713	12	11
1844	880	13.6	35 6	9.5	9.60	386,410	00	11
1845	9288	13.6	36 55	2.7	2.49	304,399,403,	601	25p
						404,405,406,	023	p80
						713	0	0
1846	888	13.6	44 56	9.5	9.90	381,414	11	44
1847	9285	13.7	24 59	9.5	9.85	382,393	12	33
1848	895	13.8	35 1	8.5	9.20	386,410	11	00

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1849	9294	13.8	49 53	7.8	7.49	385,417	11	53
1850	9302	13.8	54 47	7.5	7.52	390,418	01	00
1851	9418	13.9	83 36	7.8	7.59	304,395,396	101	442
1852	948	14.3	40 5	9	9.25	388,413	23	44
1853	962	14.3	50 8	8.5	9.09	385,417	11	61
1854	967	14.4	50 3	8.5	9.04	385,417	23	50
1855	9313	14.5	24 47	4.6	4.52	382,390,393,	333	p70
						707	2	p
1856	9326	14.8	36 33	5.3	4.80	304,403,404	112	779
1857	9333	14.8	39 54	8	8.15	388,413	01	01
1858	9334	15.0	24 47	7.8	7.30	382,393	00	7p
1859	9339	15.0	43 49	6.3	5.98	398,399,404	110	122
1860	9338	15.1	36 34	5.4	5.33	304,403,404	212	256
1861	9341	15.2	39 2	5.8	5.33	398,403,404	111	544
1862	9344	15.5	35 0	8.2	7.75	386,410	12	42
1863	1046	15.9	39 56	9	9.25	388,413	12	22
1864	9355	15.9	44 53	9.5	9.54	381,414	01	00
1865	1045	15.9	44 59	9.5	9.80	381,414	22	33
1866	9357	16.0	45 7	7.5	7.14	381,414	12	19
1867	1053	16.2	30 3	8.8	9.10	383,412	11	11
1868	9362	16.3	34 53	8.5	9.15	386,410	11	40
1869	1137	16.3	65 13	10	9.82	413,417	00	33
1870	1075	16.5	30 6	9	9.55	383,412	21	44
1871	9369	16.5	34 54	8.5	8.40	386,410	11	11
1872	9390	16.6	55 6	8	7.82	390,418	01	02
1873	9381	16.7	49 48	7.8	7.39	385,417	22	14
1874	9407	16.9	67 47	4.1	3.92	398,399,404,	311	545
						711,713,721	112	477
1875	1131	17.0	45 10	8.5	8.64	381,414	01	14
1876	1142	17.1	39 59	9	9.40	388,413	22	41
1877	9403	17.6	45 2	8.2	8.24	381,414	01	33
1878	9401	17.7	29 55	8.8	8.82	383,412,707,	321	003
						710,711	01	33
1879	1179	17.8	35 7	9.5	9.45	386,410	12	11
1880	1200	17.9	45 2	8.5	9.24	381,414	23	02
1881	1207	18.2	24 43	8	7.40	393,407	00	48
1882	1213	18.2	35 7	9	9.40	386,410	00	21
1883	9433	18.2	51 54	5.9	5.54	398,399,404	211	555
1884	1225	18.3	45 0	9	9.04	381,414	10	22
1885	1286	18.5	65 2	9.5	9.69	413,417	10	24
1886	1241	18.6	35 0	9	9.25	386,410	01	00
1887	9454	18.7	55 12	9	9.17	390,418	00	47
1888	1266	18.8	44 59	9	9.44	381,414	12	12
1889	9455	19.2	31 44	5.9	5.56	304,403,404	111	344
1890	9456	19.3	24 46	8	8.33	382,707,710	001	021
1891	1299	19.4	25 12	9.2	9.20	382,393	22	00
1892	1301	19.4	29 53	9	9.05	383,412,418,	660	220
						707,710,711	030	020
1893	1308	19.6	30 11	9	9.60	383,412	11	44
1894	9466	19.8	30 15	7.3	7.05	383,412	12	55

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
1895	9464	19.8	32	1	5.8	5.46	304,403,404	111	334
1896	1384	19.9	60	4	9	9.66	389,407	11	77
1897	1340	20.0	25	10	9.5	9.45	382,393	23	11
1898	9473	20.0	30	2	6.9	6.65	383,412	10	99
1899	9518	20.1	70	1	8.5	8.22	391,395	11	03
1900	1372	20.4	29	57	9	8.30	383,412	00	35
1901	9483	20.4	29	57	8.5				
1902	1389	20.4	39	53	9	9.50	388,413	11	77
1903	9527	20.8	60	7	8.5	9.21	389,407	10	22
1904	9503	20.9	31	37	5.8	5.30	304,403,404	112	374
1905	9544	20.9	69	59	9	9.08	391,395	10	11
1906	1425	21.0	35	9	9.5	9.95	386,410	01	55
1907	1433	21.0	45	2	9.5	9.94	381,414	12	44
1908	1474	21.0	60	3	8.8	9.51	389,407	11	30
1909	1439	21.1	45	4	9	9.54	381,414	32	35
1910	9514	21.2	25	1	6.4	6.00	382,393,707,	133	04p
							710	1	5
1911	1457	21.3	34	56	9	9.70	386,410	11	55
1912	1471	21.4	40	9	9	9.35	388,413	10	62
1913	1485	21.4	55	3	9	9.02	390,418	10	22
1914	1483	21.6	45	2	9	9.24	381,414	10	02
1915	9542	21.8	44	58	9	9.34	381,414	01	11
1916	1499	21.8	49	58	9	9.24	385,417	10	22
1917	1596	21.9	75	3	9	8.58	395,396	11	46
1918	9770	22.0	86	52	6.7	6.34	395,396,397,	101	523
							713,824	11	02
1919	1507	22.3	30	5	8.5	8.40	383,412	11	24
1920	9571	22.6	65	16	7.5	8.09	413,417	12	33
1921	9557	22.7	34	59	7.8	7.80	386,410	22	22
1922	1580	23.3	35	11	9.5	9.75	386,410	10	33
1923	9653	23.3	81	2	8.2	8.45	304,395,396	121	212
1924	9580	23.7	29	55	9.8	F	383,412	FF	RR
1925	9595	23.7	55	10	8.8	8.72	390,418	01	52
1926	9594	23.8	50	49	5.7	5.04	398,399,404	211	307
1927	9584	23.9	29	54	10	F	383,412	FF	RR
1928	1642	24.2	24	55	8.5	8.80	382,393	22	62
1929	9601	24.4	29	55	9.8	F	383,412	FF	RR
1930	9615	24.5	55	2	8.5	8.32	390,418	01	82
1931	1778	24.6	75	9	8.8	8.78	395,396	11	35
1932	9610	24.7	35	3	7	7.55	386,410	01	12
1933	1683	24.9	24	59	8.5	9.25	382,393	12	40
1934	1691	25.0	24	59	9				
1935	9616	25.1	31	39	7.2	6.47	398,403,404	111	324
1936	9617	25.1	31	38	7.8				
1937	1708	25.1	45	9	9.2	9.30	381,414	11	01
1938	9646	25.2	65	7	9	9.29	413,417	11	55
1939	9621	25.3	31	15	6.4	6.10	398,403,404	011	142
1940	1717	25.4	29	59	9.5	9.95	383,412	10	45
1941	9642	25.4	55	12	7	8.57	390,418	00	61
1942	1729	25.5	35	10	9.5	9.60	386,410	11	11

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
1943	9632	25.6	22	49	5.7	4.93	398,403,404	100	8p5
1944	9634	25.7	24	57	9.8	10.30	382,393	FA	56
1945	1735	25.7	30	3	8.9	9.40	383,412	00	14
1946	9637	25.7	38	36	5.9	5.63	398,403,404	010	211
1947	1753	25.7	44	57	9.5	9.90	381,414	00	46
1948	9640	25.8	24	56	7.5	7.45	382,393	23	16
1949	1743	25.8	29	59	9	9.10	383,412	11	41
1950	9670	25.8	70	12	7.8	8.08	391,395	01	11
1951	9652	26.1	43	6	3.5	2.99	398,399,403,	112	852
							404,405,406,	012	355
							713	2	0
1952	1792	26.5	25	6	9.5	9.70	382,393	00	22
1953	9664	26.9	30	45	5.3	4.72	398,403,404,	201	805
							705	0	2
1954	1854	27.2	44	55	9	9.64	381,414	32	46
1955	9683	27.3	34	46	7.5	7.85	386,410	32	20
1956	9691	27.3	55	6	10	8.27	390,418	00	15
1957	9692	27.3	55	6	9				
1958	9684	27.4	30	11	8.2	8.35	383,412	23	14
1959	1862	27.4	35	3	9.5	9.75	386,410	21	33
1960	1871	27.6	25	5	8.5	N	382,393,412	NNN	NNN
1961	9697	27.6	52	26	6.4	5.94	398,399,403	101	206
1962	1880	27.8	24	56	9.5	9.62	382,412,710,	432	111
							711,713	22	11
1963	9690	27.8	25	12	8.5	8.00	382,412	22	20
1964	9819	27.8	84	17	8	7.64	395,396,397	112	414
1965	1894	27.9	24	57	8.8	8.80	382,412	22	00
1966	1907	27.9	45	10	9.5	10.00	381,414	22	55
1967	9703	27.9	49	55	9	9.66	385,417,707,	501	255
							710,711	23	55
1968	9706	28.2	49	53	10	F	385,417,707,	FNF	RNR
							710	F	R
1969	1928	28.3	35	3	9	9.30	386,410	11	21
1970	1972	28.3	59	54	8	8.37	389,407	11	44
1971	9760	29.0	75	23	8	7.98	395,396	11	02
1972	9728	29.2	39	47	8	8.21	388,413,709,	412	078
							711,713	22	00
1973	2039	29.9	30	10	8.3	8.05	383,412	10	25
1974	9742	29.9	39	50	6.6	6.40	388,413	22	11
1975	2061	30.1	30	0	9.5	9.45	383,412	01	11
1976	2063	30.1	35	0	9.5	9.80	386,410	11	23
1977	9751	30.2	36	7	6.0	5.63	398,403,404	201	133
1978	2091	30.6	30	8	9.5	9.70	383,412	00	22
1979	9769	30.6	54	57	9.5	7.97	390,418	11	25
1980	9775	30.8	54	57	8.5				
1981	9771	30.9	50	22	6.9	6.79	385,417	33	70
1982	2119	31.0	25	5	9	9.05	382,412	01	00
1983	9843	31.2	78	53	6.0	5.43	395,396,397	111	466
1984	9777	31.3	25	10	8.2	8.25	382,412	21	33
1985	9832	31.4	75	11	9	8.93	395,396	01	14

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
1986	*2154*	31.5	25 7	9	8.85	382,412	*12*	20
1987	*2173*	31.6	35 3	10	F	386,410	FF	RR
1988	*2221*	32.0	45 10	9.5	9.84	381,414	10	*33*
1989	*2219*	32.1	35 2	9.5	F	386,410	FF	RR
1990	9812	32.3	25 6	8	7.00	382,412	*11*	pp
1991	*2235*	32.4	35 2	9.5	F	386,410	FF	RR
1992	9836	32.6	60 1	8	7.98	389,407	00	*02*
1993	9829	32.9	40 18	7.8	7.50	388,413	*11*	30
1994	*2280*	33.2	30 3	9	9.50	383,412	00	*55*
1995	9841	33.2	44 44	7.3	7.00	381,414	*11*	52
1996	9845	33.2	52 18	5.5	4.91	398,399,403	100	78p
1997	9850	33.6	34 44	4.8	4.67	398,399,404	00*1*	751
1998	9848	33.6	39 58	7.5	7.10	388,413	*11*	44
1999	9851	33.6	44 45	7.5	7.04	381,414	01	85
2000	*2328*	33.6	45 3	9	8.90	381,414	*22*	11
2001	9855	33.8	45 12	8	7.10	381,414	*11*	14
2002	9863	33.9	48 36	6.1	5.91	399,403,404,	100	*122*
2003	9856	33.9	44 48	8	7.84	381,414	01	72
2004	9859	34.0	35 3	7.5	6.40	386,410	*11*	pp
2005	*2334*	33.9	25 8	9	4.67	382,412,707	00*1*	ppp
2006	9857	34.1	25 8	5.4				
2007	*2374*	34.3	45 12	9	9.04	381,414	*12*	20
2008	*2383*	34.5	35 1	9	9.75	386,410	*10*	*33*
2009	9887	35.0	25 13	9	8.30	382,412	*11*	*35*
2010	9893	35.0	39 45	7.0	6.65	388,413	*21*	24
2011	*2418*	35.1	29 54	8.5	8.35	383,412	*10*	*11*
2012	9895	35.1	36 16	6.3	5.97	398,399,404	00*1*	*210*
2013	*2514*	35.2	70 9	8	8.32	391,395	*11*	*21*
2014	*2523*	35.3	69 55	8.8	9.18	391,395	*10*	*42*
2015	*2457*	35.4	35 5	9.5	9.60	386,410	00	*11*
2016	9906	35.4	45 19	8	8.00	381,414	*11*	00
2017	9917	35.5	48 22	6.0	5.61	399,403,404	001	353
2018	*2548*	35.6	70 1	8.2	8.52	391,395,709,	*242*	200
						711,713	10	*50*
2019	*2487*	35.8	34 59	9.5	9.70	386,410	*22*	*22*
2020	*2507*	36.0	34 54	9	9.70	386,410	00	*22*
2021	9925	36.0	38 4	5.4	5.13	398,399,403	*210*	877
2022	9930	36.1	29 56	7.5	7.35	383,409	*01*	41
2023	9934	36.2	37 54	6.6	5.93	398,399,403	20*1*	143
2024	9942	36.2	50 21	7.5	7.64	385,417	*23*	24
2025	9935	36.3	38 1	6.5	5.97	398,399,403	*111*	344
2026	*2532*	36.3	45 4	9	9.60	381,414	*11*	*64*
2027	9967	36.3	70 17	7.6	7.38	391,395	*21*	14
2028	*2534*	36.4	40 2	8.5	8.40	388,413	00	11
2029	9938	36.5	29 51	7.0	6.95	383,409	*10*	22
2030	9941	36.5	29 49	7.3	7.40	383,409	00	64
2031	*2578*	36.7	49 58	8.8	9.09	385,417	00	*11*
2032	*2564*	36.8	29 56	9.2	9.50	383,409	*11*	00
2033	*2594*	37.0	44 56	8.5	8.54	381,414	01	03
2034	9963	37.1	45 7	7.8	7.40	381,414	00	66

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2035	9962	37.2	29 58	9.5	9.45	383,409,467,	*161*	11*4*
						709,710	*21*	11
2036	9978	37.8	38 18	6.2	5.67	399,403,404	00*1*	211
2037	9982	37.9	29 58	9.8	9.40	383,409	00	21
2038	*2651*	37.9	30 9	8.5	8.90	383,406	*11*	*11*
2039	*2663*	38.0	30 7	9	9.25	383,406	01	00
2040	9983	38.0	40 2	8.2	8.00	388,413	*33*	05
2041	9985	38.2	29 57	7.0	7.00	383,406	*22*	*82*
2042	*2671*	38.2	29 58	9.2				
2043	*2692*	38.3	40 4	9	9.50	388,413	*11*	*53*
2044	9992	38.4	30 0	8	8.05	383,406	*32*	20
2045	10040	38.4	75 19	8	7.58	395,396	00	*44*
2046	*2719*	38.6	45 5	9.5	9.30	381,414	*22*	22
2047	*2743*	39.0	34 55	9	9.45	391,410	*12*	*44*
2048	*2745*	39.1	25 9	9	9.60	412,467	00	*48*
2049	10024	39.4	25 16	7	6.85	382,412	01	*12*
2050	10031	39.5	35 49	6.2	5.80	399,403,404	11*2*	102
2051	*2798*	39.5	50 9	9.5	9.74	417,467,707,	2R*2*	*4*R*1*
						710,711	00	*11*
2052	10051	39.6	59 46	7.8	7.87	389,407	*11*	*11*
2053	*2808*	39.9	39 54	9	9.20	388,413	*22*	*42*
2054	10042	39.9	44 55	5.6	5.08	398,399,404	10*1*	972
2055	10058	40.0	54 57	7.2	6.92	390,418	10	11
2056	*2830*	40.1	34 56	9.5	9.55	391,410	*21*	*43*
2057	10074	40.1	60 3	8.8	8.81	389,407	00	*30*
2058	*2905*	40.1	70 13	9	9.28	391,395	*12*	58
2059	10060	40.2	40 42	5.8	5.10	399,403,404	10*1*	86*3*
2060	*2841*	40.3	30 5	9	9.35	383,406	0*1*	*22*
2061	*2847*	40.4	30 0	8.2	7.70	383,406	00	*21*
2062	*2844*	40.4	30 1	9				
2063	10064	40.4	40 5	7.0	6.80	388,413	00	02
2064	10072	40.4	49 46	6.8	6.49	385,417	*22*	5p
2065	10067	40.5	35 50	6.3	5.87	399,403,404	00*1*	023
2066	10087	40.7	55 5	7.8	7.57	390,418	*11*	*11*
2067	*2893*	40.9	35 2	9.2	9.51	391,410,709,	*141*	*303*
						711,713	0*1*	00
2068	*2906*	41.1	35 4	9.5	9.65	391,410	*21*	*10*
2069	10110	41.1	60 4	9	9.56	389,407	*10*	*66*
2070	*2926*	41.2	50 7	9	9.49	385,417	*22*	*55*
2071	*2954*	41.5	50 7	9	9.84	385,417	01	*23*
2072	*2948*	41.6	40 14	8.5	8.50	388,413	*22*	00
2073	10116	41.6	50 14	6.8	6.91	385,417,467,	*652*	*116*
						707,710	*15*	16
2074	10121	41.6	50 14	7.8	7.89	385,417	*11*	11
2075	10113	41.7	37 44	3.6	3.40	398,399,403,	300	664
						404,405,406,	*102*	6*1*6
						713	0	6
2076	10120	41.8	34 0	6.0	5.40	399,403,404	*1*01	465
2077	*2988*	41.9	35 7	9.2	9.65	391,410	*12*	*11*
2078	*3002*	41.9	50 9	9.5	9.51	385,417,467,	R11	*303*

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						707,710	10	00
2079	*3014*	42.2	35 7	8.5	8.25	391,410	10	76
2080	10144	42.4	50 3	8.2	7.49	385,417	22	37
2081	10147	42.7	25 8	8.2	8.36	382,412,707,	341	411
						711,713	00	11
2082	10203	43.0	72 22	4.3	3.82	398,399,404,	112	220
						711,713,721,	044	2p5
						826	3	2
2083	10169	43.1	39 49	7.0	6.85	388,413	12	24
2084	*3103*	43.1	54 56	9	9.72	390,418	12	22
2085	*3087*	43.3	25 9	9	9.10	382,412	22	11
2086	10171	43.3	44 51	8	7.84	381,414	21	27
2087	*3109*	43.5	35 8	8.8	9.15	391,410	10	22
2088	*3145*	43.6	55 5	9.5	9.67	390,418	11	52
2089	10192	43.8	47 52	var.	var.	711,713,721	101	202
2090	10188	43.9	38 16	5.9	5.30	399,403,404	011	255
2091	10207	44.2	49 57	7.8	7.24	385,417	12	36
2092	*3188*	44.4	45 9	9	9.60	381,414	11	13
2093	*3189*	44.5	40 6	9.5	9.55	388,413	10	11
2094	10211	44.5	46 22	5.9	5.28	399,403,404	000	456
2095	*3196*	44.6	35 10	9.5	9.85	391,410	21	33
2096	*3195*	44.7	30 1	9.5	7.62	383,406,709,	623	221
2097	10216	44.8	30 1	8.2				
						710,711	11	12
2098	10223	44.9	35 7	9.2	9.75	391,410	10	32
2099	*3247*	45.1	34 57	9	9.40	391,410	11	21
2100	10248	45.1	58 40	8	8.02	398,399,404,	N01	.02
						826	0	0
2101	*3267*	45.3	45 1	8	8.44	381,414	32	14
2102	10249	45.3	46 50	5.1	4.68	399,403,404	101	6p1
2103	*3254*	45.4	30 0	9.2	9.65	383,406	32	11
2104	10241	45.5	30 19	8	7.70	383,406	22	p3
2105	10246	45.5	35 0	6.4	6.09	391,410,709	123	p99
2106	10251	45.5	45 13	8.2	7.90	381,414	00	13
2107	10259	46.0	40 0	7.5	7.65	388,413	10	46
2108	10268	46.2	46 8	4.3	4.11	399,403,404	001	491
2109	10277	46.2	56 13	7.0	6.22	398,399,404	220	201
2110	10269	46.3	46 37	6.5	5.98	399,403,404	011	120
2111	*3364*	46.4	40 2	9	9.40	388,413	00	24
2112	*3380*	46.6	39 57	9	9.00	388,413	22	00
2113	*3395*	46.8	39 55	9	9.45	388,413	01	22
2114	10301	46.9	56 10	5.9	5.62	398,399,404	001	343
2115	*3436*	46.9	59 55	9	9.17	389,407	11	74
2116	*3397*	47.0	30 6	8.7	8.95	383,406	12	22
2117	10312	47.4	54 50	7.5	7.22	390,418	01	28
2118	*3438*	47.5	24 57	8.5	8.55	382,412	11	41
2119	10320	47.5	60 2	6.2	5.85	398,399,404	001	122
2120	10316	47.7	50 15	6.4	5.85	385,417,707	231	p67
2121	10311	47.8	30 4	8	8.00	383,406	11	02
2122	10337	48.2	59 48	7	6.87	389,407	00	33

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2123	10330	48.3	45 2	9.5	9.84	381,414	01	33
2124	10335	48.5	34 28	5.8	5.03	399,403,404	201	456
2125	*3541*	48.6	45 9	9	9.24	381,414	01	02
2126	*3550*	48.6	50 11	8	8.59	385,417	22	24
2127	*3530*	48.7	30 13	8.8	8.50	390,406,825,	215	303
2128	*3532*	48.7	30 13	9				
						826,829	02	30
2129	10343	48.8	40 19	4.0	3.72	398,399,404,	120	123
						405,406,407,	215	133
						713,721	23	23
2130	10341	48.9	24 59	10.2	8.70	382,412	11	11
2131	10342	48.9	24 59	8.5				
2132	*3573*	49.0	50 9	9.5	9.74	385,417	01	12
2133	10372	49.0	65 57	6.2	6.00	398,399,404	101	011
2134	10350	49.1	38 36	4.9	4.67	399,403,404	021	123
2135	10357	49.4	36 6	6.0	5.43	399,403,404	010	433
2136	*3604*	49.5	25 9	9	9.45	382,412	32	44
2137	10374	49.9	30 4	9.5	9.45	390,409	01	12
2138	10381	50.1	44 58	8.5	8.12	381,414,709	111	144
2139	10387	50.1	50 16	7.8	7.24	385,417	01	36
2140	10389	50.1	54 7	6.1	5.95	398,399,404	100	121
2141	10477	50.1	82 20	7.2	7.58	395,396,397	112	411
2142	10390	50.2	49 21	5.0	4.81	398,403,404	100	2p6
2143	10392	50.3	47 51	4.5	4.28	398,403,404	000	531
2144	10391	50.5	35 37	6.1	5.57	399,403,404	111	204
2145	*3712*	50.8	45 7	9.5	9.65	381,414,709,	330	111
						710,711	30	11
2146	*3722*	51.0	34 59	9	9.80	391,410	11	33
2147	10411	51.0	45 2	8	8.14	381,414	01	14
2148	10410	51.1	39 52	8	8.00	388,413	14	20
2149	*3738*	51.2	35 4	8.8	9.00	391,410	11	01
2150	*3787*	51.3	65 2	9	9.73	413,472	12	97
2151	*3750*	51.4	35 7	9	9.65	391,410	10	41
2152	10508	51.4	82 6	7.8	7.88	395,396,397	110	121
2153	10419	51.5	25 1	7.5	8.15	382,412	23	23
2154	10421	51.5	30 5	7.8	7.35	390,409	01	46
2155	10430	51.6	49 55	7.5	7.59	385,417	11	21
2156	*3766*	51.8	30 12	9.5	9.70	390,409	11	12
2157	*3780*	52.0	25 6	9	9.25	382,412	01	22
2158	10447	52.4	30 1	6.8	6.82	390,409,709,	R61	463
						710,711	42	02
2159	10445	52.4	25 9	7.8	7.85	382,412	10	33
2160	*3825*	52.5	25 8	8.7				
2161	*3833*	52.6	30 12	9	9.35	390,409	21	11
2162	*3876*	52.7	55 6	9	9.27	390,418	22	33
2163	10470	52.8	57 2	6.1	5.52	398,403,404	111	554
2164	10459	52.9	30 7	9.2	9.55	390,409	32	11
2165	*3864*	53.0	25 1	9.5	9.70	382,412	11	22
2166	11013	53.0	88 35	7.8	7.75	396,397,398	102	003
2167	*3890*	53.3	39 57	9	9.15	388,413	10	47

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2168	3908	53.3	34 57	8	8.05	391,410	10	22
2169	3912	53.3	44 55	9.5	9.54	381,414	12	33
2170	10479	53.4	35 7	8.8	8.15	391,410	12	00
2171	10482	53.7	30 4	5.5	4.91	399,403,404,	001	655
						409,707,709,	130	919
						710,711,713	121	668
2172	10489	53.7	43 14	6	5.58	399,403,404	101	234
2173	3933	53.8	24 59	10	F	382,412	FF	RR
2174	10486	53.8	25 21	8	8.45	382,412	32	41
2175	10578	53.9	81 43	8.2	7.84	395,396,397	002	222
2176	10496	54.1	43 50	5.7	5.21	398,403,404	100	478
2177	4033	54.1	60 12	9	9.16	389,407	00	00
2178	10507	54.2	52 43	3.7	3.56	398,399,403,	311	112
						404,405,406,	021	311
						713	2	4
2179	3991	54.3	29 58	9.5	9.80	390,409	11	33
2180	10499	54.3	39 51	7.8	7.50	388,413	00	05
2181	4049	54.3	59 58	9	9.42	389,407	10	24
2182	10521	54.6	60 15	6.3	5.64	389,407,710,	221	976
						711,713	03	66
2183	4030	54.7	29 59	8.5	9.00	390,409	11	22
2184	10516	54.7	45 18	5.6	5.14	398,403,405	110	p85
2185	4174	54.8	75 8	9	9.63	395,396	10	66
2186	4041	54.9	25 0	9	9.35	382,412	12	44
2187	10518	55.0	30 4	8.8	9.25	390,409	23	00
2188	4093	55.1	45 3	8.8	8.74	381,414	01	11
2189	10527	55.3	35 2	8.5	8.25	391,410	21	22
2190	10534	55.3	48 58	5.0	4.50	398,403,405,	302	371
						406,407,711,	122	535
						713	1	5
2191	4096	55.4	40 4	9	9.10	388,413	22	66
2192	10637	55.5	81 20	6.8	6.98	395,396,397	011	200
2193	4133	55.7	44 55	9.2	9.31	381,414,709,	R42	332
						710,711	12	32
2194	4124	55.8	30 8	7.8	7.60	390,409	22	99
2195	4127	55.8	40 11	8.5	8.30	388,413	11	22
2196	10547	55.9	44 57	6.6	5.95	381,396,399,	521	015
						414,709,710,	000	225
						711	1	2
2197	10561	55.9	60 2	6.1	5.72	398,403,405	010	323
2198	4401	55.9	79 54	9.0	9.14	395,396	21	31
2199	10543	56.0	30 6	7.5	7.65	390,409	12	97
2200	4145	56.0	35 9	9	9.55	391,410	01	64
2201	10546	56.0	39 1	5.9	5.20	399,403,405	110	7p7
2202	10550	56.2	25 7	8.5	8.90	382,412	11	10
2203	4165	56.2	35 13	8.5	8.15	391,410	01	00
2204	4168	56.2	40 13	8.5	8.90	388,413	11	11
2205	10559	56.3	35 0	9.2	9.65	391,410	10	64
2206	10566	56.4	49 42	6.8	5.98	398,399,405	022	241
2207	10568	56.4	49 42	7				

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2208	10570	56.6	35 3	9	9.25	391,410	01	20
2209	10583	56.9	44 45	8	7.10	381,414	00	99
2210	10579	57.1	25 8	7.8	7.35	382,412	01	44
2211	10681	57.1	80 56	9	9.04	395,396,397	101	005
2212	10596	57.2	39 55	7.8	7.50	388,413	00	33
2213	10599	57.2	45 11	7	6.60	381,414	11	44
2214	4298	57.4	45 4	8.2	7.44	381,414	23	64
2215	4297	57.5	40 13	8.8	7.85	388,413	10	77
2216	10631	57.5	60 19	8	8.56	389,407	22	12
2217	10604	57.6	30 19	8	7.55	390,409	32	46
2218	4307	57.6	39 56	9	9.50	388,413	11	35
2219	10633	57.6	60 9	9.5	9.76	389,407	00	23
2220	10617	57.7	35 6	8	7.65	391,410	01	44
2221	4314	57.9	25 5	9.5	9.40	382,412	11	11
2222	10634	57.9	54 56	7.5	7.12	390,418	12	44
2223	10639	57.9	59 56	6.9	6.52	389,407	10	p5
2224	10641	57.9	60 19	5.5	5.06	398,403,405	201	795
2225	4337	58.0	35 7	9.5	9.60	391,410	22	61
2226	10636	58.0	50 13	9	9.20	385,417,825,	152	744
						826,829	05	44
2227	4357	58.2	35 1	8	8.60	391,410	11	21
2228	10635	58.4	24 45	8	7.35	382,412	10	48
2229	4372	58.4	30 8	8.5	8.45	390,409	12	14
2230	4383	58.4	40 13	9.5	9.65	388,413	01	14
2231	4390	58.4	44 57	8.5	7.74	381,414	01	85
2232	4388	58.5	29 56	9	9.75	390,409	21	66
2233	4472	58.6	65 10	9.5	9.23	413,467,710,	041	474
						713,721	21	42
2234	10659	58.8	50 19	7.5	7.39	385,417	22	11
2235	10678	59.1	63 17	5.2	4.97	398,403,405,	112	256
						711,713,714,	220	544
						721	3	0
2236	10675	59.2	55 10	6.6	6.43	390,418,711	110	662
2237	10668	59.3	41 2	6.2	5.71	399,403,405	201	232
2238	4530	59.3	65 1	8.5	9.47	413,467,710,	152	7n5
						713,721	31	55
2239	10671	59.4	39 57	8	7.75	388,413	10	44
2240	10673	59.5	40 7	7.8	7.10	388,413	00	77
2241	4479	59.6	25 12	9	9.55	382,412	01	14
2242	4521	59.8	44 55	9	9.22	381,414,467,	525	422
						709,710	32	22
2243	10692	59.8	55 19	7.5	7.47	390,418	00	33
2244	4512	59.9	30 13	9	9.20	390,409	33	32
2245	10698	59.9	55 15	7.2	6.82	390,418	01	44
2246	4531	0.0	45 0	8.8	8.64	381,414	01	12
2247	4532	0.1	35 14	8.5	8.30	391,410	00	22
2248	10691	0.1	39 43	2.5	2.33	399,403,404,	221	325
						405,406,407	122	242
2249	4543	0.2	40 6	9	9.00	388,413	11	20
2250	4565	0.2	50 8	9	9.49	385,417	00	35

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
2251	10699	0.4	32	23	5.8	5.20	399,403,405	312	376
2252	*4575*	0.4	50	5	9	9.64	385,417,467,	555	666
							711,713,721	20	64
2253	*24*	0.4	65	2	9	9.73	413,467,710,	150	575
							713,721	31	55
2254	*4586*	0.5	50	3	8.5	9.24	385,417	01	22
2255	*1*	0.7	50	10	8	8.19	385,417	11	03
2256	10712	1.4	24	56	8.5	8.50	382,418	11	30
2257	*53*	1.6	30	4	8.5	8.04	409,472	32	35
2258	10746	1.7	69	45	8	6.82	395,418	22	22
2259	10736	1.9	50	18	6.6	6.04	385,417	23	p5
2260	*83*	1.9	45	6	9.5		381,414	00	22
2261	10733	2.0	45	7	8.2	7.80			
2262	10735	2.0	45	7	8.5		388,413	22	33
2263	*86*	2.0	39	58	9.5	9.50			
2264	*142*	2.0	65	2	9.5	9.26	413,467	11	55
2265	10748	2.5	44	53	7.2	6.94	381,414	01	9p
2266	*127*	2.6	40	10	9	9.05	388,413	12	52
2267	*238*	2.6	75	13	9.5	9.58	414,705	10	14
2268	10750	2.7	40	3	8.5	8.00	388,413	11	22
2269	10756	2.8	40	3	8.2				
2270	*140*	2.8	30	5	9	9.34	409,472	10	33
2271	10754	2.8	39	48	7.5	7.45	388,413	10	44
2272	*179*	2.8	60	12	9	9.16	389,407	10	22
2273	10760	2.9	45	6	8.5	8.70	381,414,710,	622	511
							823,824	12	23
2274	10936	3.0	85	39	9	8.51	395,396,397	110	533
2275	10772	3.2	60	6	7.2	7.36	389,407	10	66
2276	10779	3.3	62	33	6.8	6.40	398,403,405	000	461
2277	10769	3.5	44	58	5.8	4.82	405,406,407	012	p98
2278	10813	4.1	70	3	7.6	7.22	395,418	22	33
2279	10791	4.2	34	55	7.3	7.45	391,410	21	41
2280	*247*	4.3	25	3	10	9.80	382,418	FA	23
2281	*271*	4.4	35	11	9.2	9.20	391,410	11	24
2282	*279*	4.7	34	21	9.5	8.78	710	A	2
2283	*321*	4.9	50	10	9	9.53	385,417,711,	443	555
2284	*323*	5.0	50	10	9				
							713,823	10	55
2285	10815	5.1	30	1	7.0	6.84	409,472	21	22
2286	*316*	5.2	30	2	9.5				
2287	*353*	5.2	55	2	8.5	8.80	418,418,705	010	033
2288	10820	5.3	35	9	6.8	6.20	391,410	22	7p
2289	*382*	5.4	50	4	8	8.44	385,417	12	21
2290	10832	5.5	45	6	9	8.44	381,414	12	44
2291	10831	5.5	45	7	9				
2292	*376*	5.6	39	59	9.5	9.90	388,412	22	47
2293	*405*	5.6	60	0	8.5	8.81	389,407,713,	041	303
							823,824	31	30
2294	10843	5.6	60	3	7.8	7.96	389,407	10	00
2295	10948	5.6	83	26	8	8.39	395,396,397	011	222

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
2296	10848	5.9	50	12	8.8	8.44	385,417	10	12
2297	*413*	6.1	39	59	9	9.05	388,412	01	20
2298	10853	6.1	48	23	6.2	5.88	396,399,405	211	110
2299	*439*	6.2	50	13	8.5	8.69	385,417	22	13
2300	10856	6.3	43	49	5.9	5.21	398,399,405	021	456
2301	*448*	6.3	55	2	9.5	9.56	418,418,705	220	111
2302	*428*	6.4	29	56	8.5	8.54	409,472	12	33
2303	10861	6.4	47	3	6.5	4.91	396,399,403	111	pp1
2304	*444*	6.5	39	57	9	9.05	388,412	32	20
2305	10863	6.5	47	2	3	1.91	396,399,403,	212	6p6
							404,405,406,	033	666
							713,825,826	122	499
2306	*453*	6.5	45	3	9	9.40	381,414	11	64
2307	*474*	6.5	55	8	8.5	8.76	418,418,705	110	232
2308	10864	6.7	29	51	8	8.13	409,472,777,	522	414
							824,825	21	44
2309	10873	6.7	47	38	5.9	5.38	396,399,404	000	755
2310	10886	6.9	60	20	7.5	7.36	389,407	10	16
2311	*489*	7.1	30	1	9.5	9.58	409,472	11	44
2312	10889	7.2	55	47	6.0	5.75	398,399,404	001	202
2313	10904	7.3	60	59	5.3	4.82	398,399,404	110	267
2314	10923	7.6	68	19	4.8	4.45	397,403,405	201	26p
2315	*552*	7.7	35	7	8.5	8.65	391,410	21	11
2316	*592*	7.7	59	55	8.5	8.77	389,407	11	33
2317	*553*	7.8	30	1	9	9.14	409,472	01	11
2318	10901	7.8	39	19	4.8	4.27	396,403,404	212	173
2319	10900	7.9	29	54	8	7.74	409,472	10	85
2320	*560*	7.9	34	59	9	9.87	391,410,824,	413	434
							825,826	10	44
2321	10913	8.0	42	41	5.4	4.85	396,403,404	211	p7p
2322	*612*	8.4	34	55	9.2	9.60	391,410	11	11
2323	*627*	8.5	40	11	8.5	8.85	388,412	12	22
2324	*636*	8.7	29	59	9	9.18	409,472	11	02
2325	*647*	8.7	39	59	9	9.20	388,412	22	00
2326	10939	8.7	49	46	8	7.34	385,417	01	77
2327	*648*	8.8	40	12	8.5	8.10	388,412	11	77
2328	*701*	8.9	65	11	9.5	9.60	413,467,710,	0R1	411
							713,721	53	44
2329	10944	9.1	35	5	8.5	8.65	391,410	21	22
2330	*682*	9.2	40	9	9	9.05	388,412	10	22
2331	*676*	9.2	40	11	9	9.40	388,412	00	22
2332	10952	9.3	44	45	8	8.00	381,414	00	22
2333	*696*	9.4	40	13	9.5	9.60	388,412	11	11
2334	*717*	9.4	49	58	8.5	9.24	385,417	12	22
2335	10957	9.6	35	4	8.8	8.80	391,410	00	22
2336	10963	9.7	35	35	5.3	5.00	396,403,405	011	872
2337	*743*	9.7	55	9	9	9.23	418,418,705	020	440
2338	10977	9.8	59	46	7.8	7.22	389,407	12	33
2339	10987	9.8	69	57	10.5	F	395,418	FF	RR
2340	10988	9.8	70	4	9	9.67	395,418	01	77

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2341	10975	9.9	55 3	7.8	8.30	418,418,705	111	522
2342	*755*	10.0	49 56	8.5	8.54	385,417	12	55
2343	10969	10.1	34 54	7.8	7.05	391,410	21	8p
2344	10973	10.2	36 1	5.9	5.27	396,403,405	221	757
2345	*769*	10.2	44 57	9	8.90	381,414	11	11
2346	10990	10.3	60 0	8.8	9.35	389,407,713,	322	444
						823,824	01	44
2347	*754*	10.2	35 12	9.5	5.82	391,705,824	210	474
2348	10982	10.4	35 11	6.4				
2349	*779*	10.4	45 9	9	9.10	381,414	22	11
2350	10984	10.5	40 2	4.8	4.30	396,403,405	101	579
2351	10986	10.5	46 41	5.8	5.31	396,403,405	100	656
2352	*796*	10.5	50 2	9	9.24	385,417	10	02
2353	10996	10.7	49 53	6.0	5.45	397,399,405	222	244
2354	*817*	10.9	40 12	8.5	7.95	388,406	12	85
2355	*810*	11.0	30 6	8.5	8.04	409,472	12	50
2356	11004	11.1	35 23	7.2	6.75	391,410	01	pp
2357	11007	11.1	50 0	8.2	7.99	385,417	11	85
2358	*842*	11.2	44 57	9.5	9.40	381,414	11	11
2359	*846*	11.2	45 0	8.5	9.04	381,414	23	50
2360	*854*	11.3	44 55	8.5	8.24	381,414	01	33
2361	*873*	11.4	50 4	8.5	8.99	385,417	22	02
2362	*884*	11.5	50 12	9	9.09	385,417,823,	421	333
						824,825	10	11
2363	*876*	11.6	40 8	8.5	8.85	388,406	10	20
2364	11043	11.7	70 12	8	8.87	395,418	12	41
2365	11016	11.8	24 55	8.2	8.20	418,709	11	33
2366	11028	12.0	35 19	8	8.80	391,410	11	42
2367	11029	12.0	39 57	8.8	8.60	388,406	11	22
2368	*945*	12.3	50 8	9	9.38	417,707	11	42
2369	*1050*	12.3	75 3	9	9.48	414,705	10	53
2370	*968*	12.4	55 13	9	9.13	418,418,705	211	363
2371	*978*	12.4	59 59	9	9.32	389,407	10	33
2372	11045	12.5	50 8	7.0	6.52	417,707	10	35
2373	*932*	12.6	25 2	9.8	9.40	418,709	FA	31
2374	*956*	12.8	25 2	9.5	9.35	418,709	10	11
2375	*1021*	13.0	55 7	9.5	9.66	418,418,705	111	222
2376	*1003*	13.2	34 57	9.5	9.55	391,410	21	11
2377	*1024*	13.5	25 1	9	9.30	418,709	22	31
2378	*1018*	13.5	25 4	8.8	8.95	418,709	01	00
2379	*1027*	13.5	35 12	8.8	8.75	391,410	10	00
2380	11077	13.7	25 3	8.2	7.95	709,711	21	55
2381	*1042*	13.7	35 11	9.2	9.40	391,410	11	11
2382	11080	13.7	39 56	8.2	8.00	388,406	00	52
2383	11097	13.8	62 37	6	5.30	397,399,405	111	235
2384	11096	13.8	59 45	7.8	7.99	389,407,713,	041	020
						823,824	41	50
2385	11082	13.9	30 9	8.8	8.78	409,472	00	00
2386	*1078*	13.9	45 12	9	9.00	381,414	22	00
2387	*1081*	14.1	30 1	8.5	9.08	409,472	11	11

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2388	*1120*	14.4	45 9	9.5	9.64	381,414,714,	622	411
						777,823	61	11
2389	11104	14.5	35 9	6.3	5.63	396,404,405	100	306
2390	*1111*	14.5	35 10	9				
2391	*1150*	14.7	45 0	9	9.14	381,414	01	11
2392	*1136*	14.8	35 13	8.5	8.40	391,410	11	24
2393	11111	14.8	36 21	4.7	4.53	396,404,405	210	577
2394	*1149*	14.9	35 11	9.2	9.55	391,410	21	11
2395	*1154*	14.9	40 3	8.5	8.80	388,406	00	02
2396	11196	15.0	81 19	8	8.45	396,397,398	200	242
2397	11117	15.1	40 1	8.2	8.05	388,406	10	25
2398	*1171*	15.1	40 6	8	8.30	388,406	00	12
2399	11127	15.1	60 15	7.2	8.11	389,407	01	11
2400	11121	15.5	25 7	8.5	8.05	709,711	01	05
2401	*1214*	15.8	25 11	8.8	8.45	709,711	12	64
2402	*1237*	16.0	35 0	8	8.20	391,410	00	33
2403	*1253*	16.0	40 3	9.5	9.55	388,413	12	11
2404	*1245*	16.0	40 8	8	8.15	388,406	12	33
2405	*1276*	16.2	45 13	9	9.36	381,414,823,	402	444
						824,825	32	44
2406	*1285*	16.2	49 58	9.5	9.36	417,707,823,	432	124
						824	0	4
2407	11168	16.2	60 0	8.2	7.72	389,407	01	22
2408	*1301*	16.4	55 10	9	9.23	418,418,705	020	242
2409	11176	16.5	60 0	8.2	8.07	389,407	11	11
2410	*1366*	16.8	65 1	8.5	9.09	413,467,710,	340	663
						713,721	11	36
2411	11178	17.1	25 8	8.8	8.40	418,709	22	14
2412	*1524*	17.1	80 10	9	9.86	396,397	12	74
2413	11201	17.2	65 18	5.7	4.96	397,399,404,	212	757
						405	2	8
2414	*1348*	17.3	30 8	9.5	9.68	409,472	11	24
2415	11191	17.5	32 44	5.7	4.77	396,404,405	120	89p
2416	11194	17.5	36 10	5.9	5.33	396,404,405	100	525
2417	*1396*	17.6	50 0	9	9.48	417,707	11	55
2418	11213	17.8	59 47	7.2	7.82	389,407	10	30
2419	11206	17.9	40 12	8.8	8.78	388,406	22	00
2420	11220	17.8	64 58	8.8	8.96	413,467	21	55
2421	11273	17.9	81 15	9.5	9.49	396,397,398	110	200
2422	11198	18.0	25 19	8	8.75	418,709	12	20
2423	11211	18.1	40 8	8	7.60	388,406	11	24
2424	11209	18.2	25 5	9	8.65	418,709	10	14
2425	*1438*	18.2	39 59	9	9.30	388,413	11	03
2426	*1458*	18.5	40 15	9	8.90	388,413	11	11
2427	*1489*	18.8	39 55	8.5	8.70	388,413	00	11
2428	11239	19.0	57 39	6.4	6.14	397,399,404,	111	211
						405	0	1
2429	*1710*	19.0	80 15	9	9.42	396,397	11	42
2430	*1517*	19.3	29 58	9	9.34	409,472	21	34
2431	11233	19.4	25 7	8.5	8.75	709,711	21	22

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
2432	*1519*	19.4	25	10	9.5	9.45	709,711	12	11
2433	11248	19.5	48	10	5.4	4.83	396,399,404,	111	577
							405	1	7
2434	11243	19.6	30	4	7.5	7.34	409,472	12	55
2435	*1541*	19.6	30	7	9.5	9.99	409,472,777,	330	555
							824,825	11	58
2436	11244	19.6	40	4	7.5	7.60	388,413	22	44
2437	11293	20.1	71	12	5.2	5.41	382,399,404	121	186
2438	11264	20.2	45	18	7.5	7.44	381,414	10	14
2439	11297	20.2	71	11	5.7	5.71	382,399,404	110	253
2440	11263	20.4	35	11	8.2	7.40	391,410	00	11
2441	11285	20.4	59	11	2.1	1.74	397,399,403,	111	238
							404,405,406,	110	888
							826	3	3
2442	11288	20.8	44	55	8	7.74	381,414	10	53
2443	*1716*	21.0	65	10	9.5	9.72	413,467	10	27
2444	11334	21.1	76	36	4.2	4.06	382,399,404	212	367
2445	*1726*	21.1	65	12	8.2	8.27	413,467,710,	131	222
							713,721	31	11
2446	11301	21.2	55	0	7.5	7.51	418,705	33	05
2447	*1693*	21.3	39	55	9.2	9.45	388,413	01	24
2448	*1703*	21.5	29	55	9	9.64	409,472	12	66
2449	*1739*	21.6	49	59	8.5	8.88	417,707	11	41
2450	*1746*	22.1	30	2	9.5	9.98	409,472	00	57
2451	11327	22.1	55	2	6.8	6.86	418,705	01	31
2452	*1766*	22.3	30	3	9	9.14	409,472	01	11
2453	11326	22.4	41	50	6.0	5.48	397,404,405	202	155
2454	*1788*	22.6	29	58	8.5	9.54	409,472	23	55
2455	11342	22.6	55	9	7	6.76	418,705	00	74
2456	11340	22.7	51	24	5.7	5.31	397,404,405	210	447
2457	*1817*	22.8	35	13	9.5	10.15	391,410,777,	511	777
							824,825	03	77
2458	*1830*	22.8	40	4	9	9.60	388,413	11	66
2459	*1827*	22.9	30	5	9	9.74	409,472	01	72
2460	*1826*	22.9	35	11	8.8	9.05	391,410	32	00
2461	*1824*	22.9	35	12	9.8				
2462	*1869*	22.9	59	55	9	9.56	389,709	45	44
2463	11378	23.0	73	5	5.7	5.38	382,399,405	022	465
2464	11379	23.2	69	55	8	7.07	395,418	10	79
2465	*1866*	23.3	40	2	8.5	9.40	388,413	22	42
2466	*1874*	23.4	40	4	8.5	9.25	388,413	10	22
2467	*1892*	23.7	34	58	9.5	9.75	391,410	12	33
2468	11405	23.7	77	10	4.7	4.19	382,399,405	101	22p
2469	*1916*	23.8	40	14	9	9.55	388,413	10	46
2470	11375	24.2	34	47	6.3	5.95	391,410,777,	512	pp8
							824,825	13	pp
2471	*1939*	24.2	35	6	9	9.90	391,410	11	74
2472	11388	24.2	55	2	8	7.36	418,705	00	64
2473	*1956*	24.3	45	13	8.5	8.90	381,414	11	14
2474	*1970*	24.4	44	56	9	9.24	381,414	12	02

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
2475	11391	24.4	55	0	7.2	7.66	418,705	11	53
2476	11384	24.5	34	50	8	7.95	391,410	12	02
2477	*1994*	24.5	50	0	9.5	9.48	417,707	00	55
2478	*1966*	24.6	25	8	9.5	9.25	418,709	10	33
2479	*1975*	24.6	35	14	9.5	9.80	391,410	00	33
2480	11389	24.7	25	14	8.8	8.60	418,709	11	44
2481	11407	24.7	65	48	3.9	3.61	382,399,403,	311	324
							404,405,406	013	734
2482	11402	24.9	52	46	5.7	5.10	397,404,405	111	185
2483	*2053*	25.0	60	8	9.5	10.10	389,709	22	44
2484	*2028*	25.1	39	57	9.5	8.85	388,413	23	42
2485	*2037*	25.2	39	58	9.5				
2486	*2025*	25.2	30	2	8.5	8.34	409,472	12	22
2487	*2052*	25.3	45	13	8.2	8.84	381,414	10	33
2488	11415	25.8	30	0	8	8.04	409,472	23	58
2489	*2091*	25.8	45	13	8.2	7.74	381,414	12	38
2490	11424	25.9	47	36	6.0	5.51	397,404,405	100	554
2491	11429	26.0	44	23	6.2	5.15	397,404,405	021	264
2492	*2111*	26.0	45	8	9.2	9.20	381,414	22	20
2493	*2108*	26.1	30	9	9.5	9.64	409,472	10	13
2494	11425	26.1	35	12	8.5	8.55	391,410	01	22
2495	*2133*	26.2	45	13	9.5	9.84	381,414	12	33
2496	*2122*	26.3	30	11	9	9.20	409,472,710	1T1	022
2497	*2132*	26.5	25	0	9	8.80	418,709	11	22
2498	11433	26.5	25	6	9	8.65	418,709	21	42
2499	11434	26.5	31	49	6.1	5.47	397,404,405	001	554
2500	11451	26.7	59	47	7.5	7.46	389,709	10	00
2501	11449	27.0	40	10	7.8	7.85	388,413	21	32
2502	11447	27.0	40	11	7.2	7.15	388,413	12	00
2503	11458	27.0	54	51	7	6.41	418,705	00	42
2504	*2209*	27.0	55	5	8	7.61	418,705	12	72
2505	11474	27.1	69	46	6.0	5.58	382,395,399,	011	341
							404	1	3
2506	11448	27.2	25	21	8	7.60	418,709	11	96
2507	11453	27.4	25	10	9	8.75	418,709	23	20
2508	*2251*	27.8	40	7	9.2	9.30	388,413	33	22
2509	*2289*	28.2	50	2	9.5	9.62	417,707	10	64
2510	*2318*	28.5	50	15	9.5	9.52	417,707	10	33
2511	*2379*	29.0	60	8	9	9.25	389,709	32	22
2512	*2403*	29.0	65	2	9	9.26	396,467	10	35
2513	11551	29.2	75	1	6.9	6.83	414,705	11	22
2514	*2376*	29.5	30	6	8.5	9.18	409,472	11	44
2515	11525	29.7	24	45	7.2	6.85	418,709	21	70
2516	11527	29.7	29	56	9.5	9.78	409,472	00	35
2517	11530	29.7	45	25	7.0	6.60	381,414	00	44
2518	*2440*	29.7	60	8	9	9.35	389,709	01	22
2519	11539	29.8	55	4	8	7.86	418,705	11	31
2520	*2423*	29.9	40	2	9	9.40	388,413	11	44
2521	*2460*	29.9	60	3	9	9.35	389,709	23	24
2522	*2417*	30.0	29	58	9	9.58	409,472	11	46

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2523	11542	30.0	54 47	8	7.21	418,705	10	p3
2524	11548	30.1	55 8	7.2	7.36	418,705	*22*	44
2525	*2478*	30.1	60 5	9.5	9.60	389,709	*22*	*11*
2526	11555	30.1	65 11	7.8	7.50	396,467	00	00
2527	11537	30.2	35 0	9	9.15	391,410	*21*	*42*
2528	*2446*	30.3	30 12	9	9.60	409,710	00	*44*
2529	11598	30.3	80 35	6.2	5.57	382,396,397,	000	154
						403,404,405,	10*2*	444
						777	*1*	3
2530	11563	30.8	45 17	7.8	7.50	381,414	00	55
2531	*2498*	30.9	30 3	9	9.75	409,710	*10*	*33*
2532	11566	31.1	35 9	10	F	391,410	FF	RR
2533	11565	31.2	24 46	8	7.50	418,709	1*1*	53
2534	*2550*	31.5	40 10	9	9.45	388,413	01	*44*
2535	*2563*	31.7	30 13	9	9.40	409,710	1*1*	*44*
2536	11583	31.7	49 36	5.5	4.91	397,399,404	11*1*	378
2537	*2615*	31.9	60 11	8.8	9.30	389,709	1*1*	*35*
2538	11585	32.1	30 15	8.2	8.00	409,710	00	52
2539	11597	32.4	50 0	8.5	9.08	417,707	00	*36*
2540	*2674*	32.7	59 59	9.5	9.56	389,709	*12*	*31*
2541	*2678*	32.8	59 59	9.5				
2542	*2669*	33.0	45 4	9	9.24	381,414	01	*22*
2543	11624	33.0	57 40	5.4	4.76	397,404,405	00*1*	798
2544	11622	33.0	57 53	5.9	5.40	397,404,405	010	552
2545	*2714*	33.2	60 3	8.5	8.30	389,709	1*1*	22
2546	*2688*	33.4	29 58	9	9.60	409,710	*11*	*41*
2547	11625	33.4	30 9	8	8.00	409,710	*11*	06
2548	*2722*	33.5	45 10	9	9.14	381,414	01	*11*
2549	*2706*	33.6	34 58	8.5	8.50	391,410	00	00
2550	*2727*	33.6	44 56	9	9.14	381,414	10	*11*
2551	11640	33.7	39 48	7.2	6.55	388,413	*10*	96
2552	11638	33.7	40 20	7.8	7.35	388,413	0*1*	44
2553	*2767*	34.2	30 9	9.5	10.15	409,710	0*1*	*77*
2554	11653	34.2	42 38	4.6	4.08	398,404,405	10*1*	174
2555	*2811*	34.3	60 7	9.5	9.55	389,709	*45*	*44*
2556	*2819*	34.4	60 9	9.5	F	389,709	FF	RR
2557	*2788*	34.5	30 7	9.5	10.05	409,710	10	*55*
2558	11676	34.5	59 58	8	7.80	389,709	00	24
2559	*2810*	34.6	44 59	9.2	8.54	381,414,714,	*424*	*533*
2560	*2824*	34.7	44 59	8.5				
						777,823	*21*	*50*
2561	*2809*	34.7	30 2	8.5	8.20	409,711	00	33
2562	11675	34.8	45 14	7.5	7.54	412,414	*12*	35
2563	*2884*	35.2	60 7	9.5	F	389,709	FF	RR
2564	*2872*	35.3	50 9	8.5	8.72	417,707	10	*29*
2565	*2860*	35.4	30 14	8.5	8.55	409,711	*12*	*11*
2566	11697	35.5	40 4	8	7.15	388,413	*10*	36
2567	11711	35.5	62 30	6.0	5.38	397,404,405	020	545
2568	11712	35.9	52 44	7.0	6.45	397,399,405	110	466
2569	11740	36.1	70 19	7.0	6.87	395,418	*32*	66
2570	*2907*	36.1	30 12	10	9.60	409,711	*22*	*14*
2571	*2919*	36.2	30 12	9.5				
2572	11714	36.2	34 57	4.4	3.92	398,404,405,	20*2*	*4*63
						713,721,826,	*33*2	543
						829	0	5
2573	11745	36.3	70 5	9.2	9.72	395,418	FA	02
2574	11742	36.3	70 7	9.5	9.67	395,418	*10*	*22*
2575	11727	36.6	39 54	6.2	5.33	398,404,405	11*1*	332
2576	11733	36.6	53 5	6.2	5.56	382,397,399	*1*20	345
2577	11751	37.1	52 42	6	5.41	382,397,399	*1*20	56p
2578	11757	37.1	59 58	8	6.40	389,709	*22*	81
2579	11759	37.1	59 58	7.5				
2580	11750	37.2	44 50	6.5	5.62	412,414,714,	*2*00	999
						777,823	22	66
2581	*3086*	37.2	75 0	9.2	9.18	414,705	0*1*	*24*
2582	11755	37.3	46 17	4.1	3.71	398,404,405,	400	263
						713,721,826,	*514*	*2*18
						829	0	7
2583	11760	37.4	52 34	4.0	3.58	382,397,399,	120	266
						404,405,406	*102*	*1*46
2584	11770	37.9	46 57	5.2	4.81	398,404,405	100	286
2585	11773	38.2	30 12	9	9.30	409,711	1*1*	*33*
2586	*3075*	38.3	40 3	9.5	9.75	388,413	*21*	*33*
2587	11837	38.3	79 48	7.5	7.06	396,397	*12*	74
2588	*3092*	38.4	45 11	9	9.24	412,414	*23*	02
2589	11786	38.5	45 3	5.9	5.21	398,404,405	11*1*	886
2590	11790	38.5	59 24	4.7	4.40	382,399,405	20*1*	8pp
2591	*3093*	38.6	30 10	9.5	9.60	409,711	*11*	*11*
2592	11810	38.7	70 1	5.6	5.22	382,395,404,	10*2*	3*47*
						405	1	7
2593	*3121*	38.8	50 14	9.5	9.82	417,707	*32*	*33*
2594	*3125*	38.9	50 10	9	9.58	417,707	*22*	*44*
2595	11797	39.0	47 44	6.1	5.48	403,404,405	000	362
2596	*3164*	39.1	59 56	9.5	9.56	389,709	*12*	*11*
2597	*3133*	39.3	24 56	9.5	9.45	417,418	01	11
2598	*3152*	39.4	45 11	8.5	8.79	412,414	1*1*	20
2599	11814	39.4	52 44	6.6	5.68	397,399,404	*211*	655
2600	11817	39.5	52 45	6.3	5.05	397,399,404	110	ppp
2601	11982	39.5	86 14	6.9	6.97	396,397,398	*212*	*5*20
2602	11806	39.6	32 49	3.8	3.72	397,403,404,	T*21*	133
						405,406,407,	0*21*	331
						721,823,826,	*1*03	321
						831	2	7
2603	*3174*	39.6	45 6	8	8.19	412,414	*33*	66
2604	11818	39.7	45 12	8	6.89	412,414	*33*	pp
2605	11826	39.8	55 25	7.0	6.16	418,705	*10*	86
2606	*3198*	39.9	30 14	9.5	9.75	409,711	*12*	*36*
2607	*3225*	40.1	40 10	9.5	10.15	388,413,777,	3*41*	*777*
						824,825	00	*77*
2608	*3235*	40.2	40 6	8.5	8.95	388,413	*10*	*22*

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2609	3234	40.2	45 8	9.5	9.69	412,414	11	00
2610	3252	40.4	45 11	9	9.34	412,414	21	11
2611	3263	40.5	40 13	9.5	9.65	388,413	10	14
2612	3298	40.5	60 3	9.5	9.65	389,709	32	11
2613	11849	40.6	49 27	5.8	5.24	398,403,404	211	278
2614	11852	40.8	42 17	4.4	3.98	398,403,405,	301	50p
						713,721,826,	412	p40
						829	1	2
2615	3290	40.8	45 7	8.5	9.19	412,414	22	22
2616	11853	40.8	50 17	7.2	7.38	417,707	00	16
2617	3289	40.9	30 4	9	8.95	409,711	12	05
2618	3322	41.1	50 7	9	9.42	417,707	01	42
2619	3321	41.3	29 57	9.5	9.80	409,711	11	33
2620	11864	41.5	25 1	6.5	6.23	403,417,418,	202	122
						777,824,825	312	002
2621	11880	41.6	60 12	9.8	9.70	389,709	22	22
2622	3360	42.0	25 1	9.5	9.50	417,418	11	00
2623	11887	42.0	54 20	2.2	2.00	397,399,403,	621	p55
						404,405,406,	100	345
						713,721,826,	220	0pp
						829	0	2
2624	11885	42.1	40 15	7.5	7.50	388,413	00	53
2625	11888	42.2	39 56	8.8	8.40	388,413	22	14
2626	11964	42.2	82 13	6.9	6.86	396,397,398,	336	111
						704,824,825,	021	411
						826	1	9
2627	3412	42.5	30 12	8.5	8.90	409,711	00	11
2628	11899	42.6	40 1	8.5	7.80	388,413	22	42
2629	11900	42.6	45 40	4.1	4.01	398,403,405,	312	p8p
						406,407,721,	110	504
						826	0	8
2630	3428	42.7	35 13	8.7	8.90	*391,410	11	11
2631	3435	42.8	40 2	9	9.40	388,413	00	24
2632	3448	43.0	30 6	8.5	8.60	409,711	11	21
2633	11917	43.1	45 32	6.2	5.58	398,403,405	101	645
2634	3461	43.2	35 5	8.8	9.05	391,410	10	02
2635	3501	43.2	60 15	9.5	9.50	389,709	33	00
2636	3474	43.3	35 1	9.2	9.90	391,410	00	44
2637	3506	43.6	44 56	9.5	9.69	412,414	00	22
2638	3541	44.0	49 58	9	9.68	417,707	11	77
2639	11956	44.1	56 25	5.1	4.65	397,399,404,	422	944
						406,407,721,	120	849
						826	0	4
2640	3543	44.2	34 56	8.5	8.80	391,410	11	00
2641	11952	44.4	25 5	8.5	8.70	417,418	11	12
2642	3595	44.4	60 9	9.5	9.65	389,709	32	11
2643	3570	44.6	29 56	9	9.35	409,711	01	44
2644	3580	44.6	45 14	9	9.56	412,416,714,	322	446
						777,824	44	66
2645	12016	44.7	78 37	5.6	5.68	396,397,397	210	211

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2646	3626	45.1	45 12	9.5	9.59	412,416	22	11
2647	11972	45.2	35 2	9	9.05	391,410	01	22
2648	3660	45.3	60 9	10	F	389,709	FF	RR
2649	3658	45.5	50 0	9	9.38	417,707	11	44
2650	3649	45.6	30 8	9.5	9.65	409,711	10	11
2651	3674	45.7	45 16	9.5	8.49	412,416	11	00
2652	11988	45.8	32 25	5.8	5.17	398,403,405,	223	558
						406,407,721,	422	642
						826	1	6
2653	11996	45.8	55 5	8	7.56	418,705	12	42
2654	11994	45.9	39 57	6.2	5.50	398,403,405,	410	253
						713,721,826,	510	734
						829	2	7
2655	3681	45.9	44 59	9	9.54	412,416	21	30
2656	11995	46.1	30 3	8	7.55	409,711	01	96
2657	3706	46.2	40 1	8.5	8.35	388,406	01	44
2658	3723	46.2	49 57	8.5	8.38	417,707	11	11
2659	12013	46.4	44 57	5.7	4.94	398,403,405	211	198
2660	3737	46.5	40 14	8.5	8.65	388,406	21	12
2661	3744	46.6	40 14	9.5				
2662	3753	46.7	40 11	8.5	8.40	388,406	00	14
2663	3755	46.7	44 58	9	9.19	412,416	22	20
2664	3760	46.7	44 58	10				
2665	12021	46.8	24 59	9	9.55	417,418	12	43
2666	12022	46.8	25 0	9.2				
2667	3768	46.8	45 9	9	9.29	412,416	22	33
2668	12039	46.9	65 4	8	7.40	396,467	11	11
2669	3780	47.0	49 57	9	9.42	417,707	21	24
2670	12035	47.1	46 10	5.6	5.23	398,403,405,	312	548
						406,407,721,	231	666
						826	1	8
2671	3793	47.1	50 14	8.5	8.22	417,707	01	22
2672	3782	47.2	29 59	9.5	9.70	409,711	11	45
2673	3794	47.3	30 16	9	9.85	409,711	12	86
2674	3822	47.3	60 15	8.5	8.65	389,709	54	42
2675	3842	47.4	64 58	8.5	9.26	396,467	01	58
2676	3893	47.7	70 3	8	8.32	395,418	22	13
2677	3851	48.0	45 15	8	7.79	412,416	11	44
2678	12051	48.2	25 4	8.5	8.20	417,418	11	63
2679	3857	48.2	35 12	9	9.15	391,410	23	37
2680	12092	48.2	75 4	9.5	9.18	414,705	01	20
2681	3934	48.7	60 4	9	9.15	389,709	34	22
2682	12090	49.0	57 16	6.3	5.73	397,403,404	110	330
2683	12101	49.2	66 26	5.9	5.39	382,397,404	001	543
2684	12085	49.3	25 1	9	9.65	417,418	12	11
2685	3948	49.3	35 6	8.5	9.00	391,410	00	12
2686	3966	49.4	45 4	9.2	9.34	412,416	01	33
2687	4002	49.4	65 15	9.5	9.90	396,467	11	77
2688	3981	49.6	45 0	9.5	9.54	412,416,714,	342	353
						777,824	20	53

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2689	12104	49.6	54 58	7.3	6.86	418,705	11	61
2690	*4007*	50.0	35 7	8.8	9.20	410,413	11	44
2691	12111	50.1	40 4	7.2	6.35	388,406	01	66
2692	*4031*	50.4	35 2	9	9.15	391,410	21	22
2693	12117	50.5	25 11	8.8	8.55	417,418	01	21
2694	*4037*	50.5	45 0	8	7.74	412,416	12	p8
2695	12122	50.5	47 9	5.8	5.32	403,404,405,	111	466
						825,826	30	77
2696	*4057*	50.8	35 8	8	8.35	391,410	12	11
2697	*4079*	51.0	45 5	8.2	8.09	412,416	00	47
2698	*4119*	51.0	65 1	9.5	10.06	396,467	32	99
2699	*4151*	51.3	65 6	8.5	9.20	396,467	11	44
2700	*4098*	51.4	25 2	9	9.25	417,418	21	22
2701	*4108*	51.4	30 9	8.5	8.15	409,711	01	22
2702	12149	51.6	59 59	6.6	5.96	389,709	12	88
2703	*4154*	52.1	25 5	9	9.05	417,418	10	02
2704	*4185*	52.7	25 11	9.5	9.50	417,418	11	53
2705	*4207*	52.8	45 1	8.5	8.78	412,416,714,	240	003
						777,824	31	33
2706	12175	52.8	60 16	4.0	3.95	382,397,398,	011	205
						399,404,405,	124	001
						826	2	2
2707	12180	53.3	52 21	5.4	4.71	397,403,405	010	75p
2708	*4257*	53.4	50 9	9	9.28	417,707	00	53
2709	12185	53.4	55 8	8.5	8.51	418,705	01	53
2710	12186	53.4	55 9	7.5	7.86	418,705	01	11
2711	*4289*	53.8	45 11	9	9.49	412,416	00	75
2712	12197	53.8	49 59	7.8	8.12	417,707	12	11
2713	12208	54.0	60 5	8	7.45	389,709	01	68
2714	12211	54.3	50 22	7.8	7.38	417,707	00	12
2715	*4341*	54.3	59 56	8.5	8.66	389,709	01	23
2716	12207	54.4	35 3	8.8	9.15	410,413	12	44
2717	12221	54.5	58 51	5.5	5.09	397,403,405	311	527
2718	*4354*	54.7	45 11	9.5	9.59	412,416	11	14
2719	*4360*	54.9	35 14	8.8	8.40	410,413	11	11
2720	*4401*	55.0	60 12	9.5	9.65	389,709	10	11
2721	*4374*	55.1	30 15	9.5	9.80	409,711	11	33
2722	12233	55.3	49 52	7.5	7.58	417,707	22	41
2723	12234	55.3	50 25	7.5	7.98	417,707	11	02
2724	*4491*	55.3	74 58	9.5	9.73	414,705,714,	433	252
						777,824	31	52
2725	*4419*	55.3	60 12	9.5	9.60	389,709	11	11
2726	*4433*	55.4	60 12	10				
2727	12235	55.5	46 51	5.9	5.21	398,403,405	001	678
2728	*4435*	55.8	30 13	10	F	409,711	FF	RR
2729	12253	56.3	40 52	5.2	4.37	398,403,405	010	468
2730	*4504*	56.3	55 14	9	9.22	418,705,714,	242	242
						777,824	12	22
2731	*4511*	56.5	55 12	9	9.51	418,705	11	53
2732	*4510*	56.6	39 58	9.2	9.10	388,406	11	11
2733	*4520*	56.7	40 8	9	9.00	388,406	00	20
2734	*4457*	56.7	60 9	9.5	9.40	389,709	11	12
2735	12264	56.8	25 8	8.2	8.90	417,418	00	41
2736	*4555*	56.9	55 9	9.5	9.51	418,705	21	03
2737	12286	56.9	58 42	5.7	5.23	397,403,405	210	666
2738	*4591*	57.3	55 12	9.5	8.66	418,705	21	13
2739	12283	57.4	25 3	8.2	7.80	417,418	11	44
2740	12288	57.4	35 2	8.5	8.15	410,413	10	03
2741	*4580*	57.4	45 15	8.5	8.29	412,416	22	33
2742	*4591*	57.3	55 12	9.5	8.66	418,705	21	13
2743	12300	57.5	55 12	8.8				
2744	12297	57.6	41 28	6.2	5.68	397,403,405	202	222
2745	12303	57.7	50 3	8.2	8.08	417,707	11	14
2746	12299	57.8	25 1	8.5	9.15	417,418	01	20
2747	*4604*	57.8	35 15	9	9.40	410,413	11	46
2748	*4623*	57.8	50 7	9	8.92	417,707	01	41
2749	12316	58.3	40 10	7.3	6.75	388,406	23	07
2750	12323	58.6	25 14	8.5	8.10	417,418	11	44
2751	12330	58.7	51 48	5.9	5.41	397,403,405	111	624
2752	*4699*	58.7	55 15	9	9.06	418,705	11	11
2753	12325	58.8	25 7	6.9	6.97	382,417,418	001	925
2754	*4757*	59.6	44 59	9.5	9.39	412,416	00	24
2755	*4758*	59.6	45 16	9	9.39	412,416	22	26
2756	*4794*	59.9	55 13	8	8.61	418,705	22	44
2757	*4795*	0.0	55 2	8.5	9.01	418,705	10	20
2758	*4803*	0.2	45 13	9	9.59	412,416	00	11
2759	12365	0.4	25 16	8.2	8.34	417,418,467,	212	323
						777,824	21	51
2760	*4836*	0.4	60 14	9.5	9.95	389,709	34	35
2761	12372	0.7	46 42	4.6	3.74	398,399,405	110	251
2762	12378	0.9	66 0	4.2	4.13	397,399,405,	003	345
						826,829,830,	124	111
						831	1	4
2763	12393	1.1	75 20	7.8	8.23	409,714	11	44
2764	*49*	1.2	60 2	9.5	9.36	389,709	01	11
2765	*54*	1.3	59 59	9.5	9.56	389,709	12	10
2766	*80*	1.7	55 7	9.5	9.71	385,418,705,	353	222
						825,829	12	22
2767	12394	1.9	60 10	8.5	7.95	389,709	12	20
2768	*68*	2.0	25 0	9	8.70	467,777	00	27
2769	12396	2.2	49 53	8	7.40	472,707	11	66
2770	*123*	2.3	45 4	9.2	9.79	412,416	11	n5
2771	*140*	2.5	45 2	8.5	8.59	412,416	11	11
2772	*133*	2.6	30 13	9	9.50	409,710	00	55
2773	*156*	2.6	55 5	8.2	8.44	385,418,705	102	211
2774	12411	2.6	70 12	7.2	6.90	406,409	00	96
2775	12427	3.7	55 24	6.7	6.26	418,705	01	53
2776	*267*	3.8	59 56	9.5	9.60	389,709	33	11
2777	12438	4.3	43 2	2.5	2.10	397,399,403,	211	114
						404,405,406	001	194

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2778	*274*	4.4	24 57	9.5	9.90	467,777	00	*47*
2779	12437	4.4	30 8	8.5	8.80	409,710	00	02
2780	*300*	4.4	50 6	9	9.18	410,707	*11*	*24*
2781	*303*	4.4	50 14	9	8.83	410,707	*23*	*32*
2782	*307*	4.4	54 58	9.5	9.51	418,705	*21*	00
2783	12447	4.4	59 51	7.8	7.36	389,709	*23*	11
2784	12448	4.7	50 4	8.2	8.03	410,707	01	00
2785	*313*	4.8	30 0	9.2	9.55	409,710	*01*	*44*
2786	*325*	4.8	34 57	8	8.04	410,823	10	00
2787	12465	4.8	70 8	5.2	4.76	397,399,404	10*2*	5p6
2788	12472	4.9	72 12	4.8	4.53	397,399,404	100	385
2789	*371*	5.2	45 6	8.8	9.29	412,416	00	*33*
2790	*382*	5.2	54 59	9.5	9.77	418,705	AF	*11*
2791	*369*	5.3	40 12	9.3	9.28	388,721	00	*11*
2792	12460	5.4	25 24	7	7.50	467,777	00	*37*
2793	*391*	5.6	44 58	8.5	9.04	412,416	10	00
2794	12466	5.7	29 57	6	5.62	409,414,710,	02*1*	*184*
2795	*394*	5.8	29 58	9.5				
						711	0	6
2796	*434*	6.0	45 7	8.5	8.74	412,416	10	*12*
2797	*445*	6.3	34 57	9	9.64	410,823	*23*	*64*
2798	*466*	6.6	34 57	9	9.03	410,823,825,	502	*202*
						829,830	*50*	*20*
2799	*570*	7.0	75 8	9.5	9.68	409,714	*10*	*25*
2800	*503*	7.1	45 10	8.5	8.74	412,416	10	31
2801	12517	7.3	60 6	8	7.85	389,709	*32*	22
2802	12515	7.4	44 27	5.6	5.04	398,403,404	110	776
2803	*564*	7.7	60 16	8.5	8.45	389,709	10	11
2804	12520	8.0	25 11	7.1	7.50	467,777	00	05
2805	*565*	8.0	45 3	9.5	10.04	412,416	01	*85*
2806	12526	8.0	46 10	6.2	6.01	398,403,404	1*1*1	221
2807	12541	8.3	65 5	7.8	7.50	396,406	*22*	*30*
2808	12535	8.4	58 33	3.8	3.51	397,399,403,	*311*	523
						404,405,406	*111*	753
2809	*586*	8.5	25 13	9.5	9.95	467,777	*01*	*58*
2810	*609*	8.6	45 3	9	9.19	412,416	*11*	*22*
2811	*608*	8.7	40 7	8.8	8.84	388,721	10	*03*
2812	*621*	8.8	35 7	9.5	9.69	410,823	*22*	*22*
2813	*637*	8.8	55 12	9	9.01	418,705	*22*	00
2814	12557	9.0	61 54	4.3	4.20	397,399,405	01*2*	206
2815	*640*	9.1	45 13	9.5	9.84	412,416	10	*86*
2816	*644*	9.2	39 58	8.5	8.94	388,721	10	11
2817	*645*	9.2	40 9	9	9.14	388,721	01	*11*
2818	*686*	9.8	30 9	8.5	9.30	409,710	*11*	*53*
2819	*716*	10.1	44 59	9	9.64	412,416	*21*	*66*
2820	*726*	10.3	40 15	9	9.48	388,721	*11*	*50*
2821	*764*	10.3	60 16	9	9.75	389,709	*34*	*36*
2822	*738*	10.4	39 57	9	8.38	388,721	*11*	*24*
2823	12590	10.4	59 0	6.1	5.56	397,399,405	00*2*	653
2824	*781*	10.4	60 9	9	9.80	389,709	*44*	*33*

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
2825	12593	10.6	42 49	5.9	5.34	398,403,405	002	877
2826	*793*	10.6	60 15	9	9.15	389,709	*12*	*02*
2827	*790*	10.7	50 11	8.5	8.74	472,707	*12*	*22*
2828	12592	10.8	29 57	8	7.70	409,710	00	*52*
2829	12604	10.8	55 7	8.5	8.26	418,705	0*1*	22
2830	*800*	10.9	45 10	9	9.14	412,416	10	*33*
2831	*807*	11.0	45 9	9				
2832	*821*	11.0	55 10	9	F	418,829	FF	RR
2833	*826*	11.0	55 16	8.5	8.46	418,705	0*1*	33
2834	12613	11.3	55 9	6.0	5.19	397,399,405	00*1*	668
2835	12688	11.3	85 16	5.7	5.46	398,399,403,	0*21*	424
						404,405,406,	*103*	542
						467,472	21	34
2836	12618	11.6	45 8	6.8	6.49	412,416	*11*	p3
2837	12626	11.6	60 7	7.8	7.55	389,709	*12*	24
2838	12617	11.7	38 9	5.5	4.80	398,403,405	000	965
2839	*845*	11.7	35 2	9.5	8.69	410,823	*11*	31
2840	*858*	11.8	35 1	9				
2841	12620	11.8	37 0	5.1	4.70	398,403,405	10*1*	375
2842	12628	11.8	55 13	8.5	7.11	418,705	*11*	p4
2843	*907*	12.0	59 58	9	9.26	389,709	*23*	*11*
2844	12636	12.1	69 18	2.0	1.73	397,399,403,	411	81p
						404,405,406,	*114*	887
						826,829,830,	02*2*	335
						831	1	3
2845	*915*	12.2	55 8	9	9.46	418,707	*22*	00
2846	*999*	12.4	75 16	9.5	9.63	409,714	00	*11*
2847	*921*	12.6	35 9	9.1	9.69	410,823	*11*	*42*
2848	*928*	12.7	35 8	9.5	9.99	410,823	00	*55*
2849	12635	12.7	43 51	5.6	4.94	398,403,404	21*1*	8pp
2850	*976*	12.8	59 59	9.5	9.79	389,713	*22*	*11*
2851	*980*	13.0	55 8	8	8.28	418,707,825,	*321*	252
						829,830	*21*	*12*
2852	*961*	13.1	35 2	9	9.64	410,823	01	*14*
2853	12640	13.1	38 59	5.8	5.17	398,403,404	1*11*	746
2854	12644	13.3	24 56	8.8	9.75	467,777	0*1*	*88*
2855	*984*	13.4	25 0	9.5	10.45	467,777	*21*	*99*
2856	*1011*	13.4	55 13	8.5	8.46	418,707,825,	*243*	053
						829,830	*11*	03
2857	12652	13.4	57 7	4.8	4.16	397,399,404	*221*	p86
2858	*1027*	13.5	60 14	9.5	9.94	389,713	01	*44*
2859	12698	13.5	81 55	8.8	7.84	704,824,825	01*2*	774
2860	12653	13.7	35 16	8	7.89	410,823	*11*	31
2861	*1014*	13.7	40 4	9.5	9.24	388,721	10	00
2862	*1021*	13.8	34 56	8.5	8.39	410,823	00	41
2863	*1052*	14.1	45 4	9.2	9.39	412,416	00	*44*
2864	*1070*	14.1	60 11	9	9.84	389,713	01	*33*
2865	12685	14.2	75 10	8.8	7.88	409,714	*10*	13
2866	12663	14.3	45 12	9.2	7.25	412,416,829,	*231*	303
2867	12664	14.3	45 13	7.8				

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	'								m.	°	'					
							830,831	21	03	2913	1484	19.4	45	14	9	9.64	413,416	21	46
2868	12672	14.4	58	51	2.5	2.24	397,399,403,	022	862	2914	12800	19.7	34	49	6.7	6.59	410,823	00	90
							404,405,406	000	835	2915	1496	19.7	40	3	9	9.34	388,721	01	13
2869	1101	14.5	55	13	9.5	9.77	418,707	AF	30	2916	1531	19.7	60	2	9	9.36	711,713	21	44
2870	12676	14.7	50	38	5.8	5.34	398,399,404	110	435	2917	12805	19.8	50	8	9	9.04	472,710	12	00
2871	1113	14.9	45	7	9	9.29	412,416	00	13	2918	1527	19.8	55	13	9.5	9.46	418,707	00	00
2872	1123	15.0	45	2	9.5	9.74	412,416	12	22	2919	1522	19.9	39	57	9.5	9.74	388,721	10	22
2873	1144	15.2	50	10	9	9.20	472,710	00	22	2920	12806	20.0	24	59	8.5	9.15	467,777	01	47
2874	1155	15.3	54	59	9	9.36	418,707	11	44	2921	1516	20.0	29	59	9.5	9.55	409,711	10	46
2875	1283	15.3	80	15	10	9.54	704,824	FA	00	2922	1560	20.3	40	5	9	9.04	388,721	01	20
2876	1140	15.4	25	14	9	9.55	467,777	12	8n	2923	1570	20.3	45	2	9.5	9.64	413,416	21	46
2877	1153	15.6	25	9	8.8	9.55	467,777	01	6n	2924	1590	20.8	40	15	9	8.88	388,721	11	11
2878	1169	15.6	40	3	9	9.38	388,721	11	12	2925	12832	20.8	59	52	6.9	6.46	711,713	32	75
2879	1184	15.6	50	8	9	9.90	472,710	22	64	2926	1728	20.8	80	0	9	8.67	704,824	11	31
2880	12697	15.7	40	8	8.5	9.14	388,721	21	11	2927	1594	20.9	25	10	9.5	9.65	467,777	21	48
2881	1173	15.8	25	12	8.5	9.15	467,777	01	27	2928	12831	21.1	24	54	7	7.10	467,777	00	43
2882	12700	15.8	35	4	8	6.99	410,823	00	52	2929	1631	21.3	44	56	8	8.14	413,416	10	11
2883	12717	15.9	68	16	6.0	5.36	398,399,404	111	255	2930	1645	21.5	45	3	8.5	8.94	413,416	21	11
2884	12701	16.0	40	7	9.8	9.74	388,721	12	02	2931	12842	21.7	39	53	7.5	7.44	388,721,825,	131	464
2885	1207	16.0	45	15	9.5	9.69	412,416	11	22								829,830	15	84
2886	12724	16.3	65	0	8	7.64	396,406	32	14	2932	1739	21.7	75	16	9	9.03	409,714	00	00
2887	1237	16.4	40	9	9.2	9.28	388,721	00	21	2933	1687	22.0	45	9	9.5	9.64	413,416	12	66
2888	1231	16.4	40	15	9	9.44	388,721	01	12	2934	1698	22.2	39	58	9	9.24	388,721	01	33
2889	1261	16.5	50	7	9	9.10	472,710	11	11	2935	1702	22.2	49	57	9	9.50	472,710	11	55
2890	12729	17.0	34	56	7.8	7.49	410,823	00	03	2936	12865	22.6	40	4	6.8	6.30	388,721,825,	041	531
2891	1288	17.1	35	11	9.5	9.94	410,823	10	44								829,830	13	22
2892	12731	17.2	30	23	7.8	7.93	409,711,823	023	111	2937	1750	23.0	24	58	9	9.55	467,777	01	46
2893	12790	17.3	81	21	8.5	7.67	704,824,825	011	315	2938	12885	23.0	52	56	5.8	5.22	398,399,404	100	566
2894	1355	17.6	60	7	8.8	9.12	711,713	11	11	2939	1771	23.1	34	59	9.5	9.64	410,823	01	14
2895	12767	17.6	74	18	6.4	5.98	398,399,404	120	101	2940	12895	23.1	64	50	7.8	6.84	396,406	10	77
2896	12768	17.6	74	28	5.8	5.38	398,399,404	101	654	2941	1786	23.2	34	58	9.5	9.59	410,823	11	11
2897	1345	17.7	60	3	8.2	8.12	711,713	11	71	2942	12909	23.4	69	58	8.5	7.90	406,409	00	36
2898	1347	18.0	34	56	9.5	9.64	410,823	10	16	2943	1846	23.7	60	6	9	9.46	711,713	32	53
2899	1384	18.1	59	57	8.1	8.56	711,713	10	21	2944	1833	23.8	50	10	9.5	9.60	472,710	11	11
2900	1392	18.4	45	13	9.5	9.78	413,416	00	66	2945	12947	23.8	79	57	7.5	7.62	704,824	01	46
2901	12766	18.4	54	58	8.5	8.26	418,707	00	32	2946	1864	24.0	60	14	9.5	9.46	711,713	21	53
2902	12758	18.5	30	5	7.5	7.85	409,711	10	22	2947	12918	24.1	69	58	8.8	9.00	406,409	22	20
2903	12782	18.5	61	58	5.5	4.82	398,399,404	022	627	2948	12961	24.1	81	18	10	F	826,827	FF	RR
2904	12834	18.5	83	19	8.2	7.81	704,824,825,	2R2	774	2949	12907	24.2	24	59	7.5	7.20	467,777	22	30
							826,829,830,	102	777	2950	13004	24.2	84	12	7.8	7.85	704,825,826	012	200
							831	4	4	2951	1862	24.3	40	4	9.5	9.74	388,721	01	12
2905	12771	18.7	35	5	7.8	7.24	410,823	12	36	2952	1885	24.5	35	10	8.2	7.94	410,823	23	11
2906	1442	18.7	60	8	8.5	8.26	711,713	10	21	2953	1912	24.6	60	5	9	9.36	711,713,714,	531	444
2907	12785	18.8	55	5	6.4	5.70	418,707,829	111	935								829,830	23	44
2908	1456	18.9	60	11	9	9.26	711,713	10	13	2954	1890	24.7	25	12	8.5	9.05	467,777	21	22
2909	12789	18.9	60	24	7.8	7.36	711,713	10	44	2955	12922	24.8	45	3	6.9	6.94	413,416	01	33
2910	12778	19.0	30	3	9	8.60	409,711	11	12	2956	12926	24.9	45	3	8				
2911	12788	19.0	54	35	2.7	2.59	397,398,399,	200	632	2957	1931	25.0	40	15	8.5	8.38	388,721	11	41
							403,404,405	020	p14	2958	12930	25.1	35	30	5	4.40	398,403,404	101	093
2912	12787	19.1	49	48	8	7.90	472,710	11	11	2959	12934	25.3	25	5	7.5	7.50	467,777	00	33

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
2960	*1950*	25.3	25	9	9	9.65	467,777	10	*14*
2961	*1968*	25.3	45	2	8.8	8.98	413,416	00	20
2962	*1997*	25.4	60	9	9.3	9.42	711,713	*11*	11
2963	13035	25.5	84	14	8.2	8.29	704,825,826	0*3*2	722
2964	13012	25.7	81	18	9.8	F	826,827	FF	RR
2965	12993	25.8	75	20	8	8.03	409,714	*11*	20
2966	*2023*	26.0	50	0	9	9.44	472,710	01	*21*
2967	*2033*	26.1	50	13	9	9.20	472,710	*11*	*22*
2968	12965	26.2	25	10	8	7.90	467,777	*33*	*61*
2969	12971	26.2	50	9	7.8	7.34	472,710	10	57
2970	12994	26.2	71	10	6.0	5.44	398,399,404	20*1*	454
2971	*2036*	26.3	29	57	9	9.30	409,823	1*1*	*55*
2972	*2066*	26.3	60	1	8.3	8.52	711,713	*11*	0*3*
2973	13051	26.3	84	14	7.2	7.15	704,825,826	*222*	833
2974	*2073*	26.4	60	13	9.3	9.52	711,713	*11*	00
2975	12978	26.5	31	26	6.5	6.13	398,403,404	11*1*	*1*00
2976	12977	26.5	31	27	6.8				
2977	12991	26.7	51	4	5.9	5.61	398,403,404	100	033
2978	12989	26.8	40	1	3.7	3.53	397,399,403,	130	051
							404,405,406	*101*	553
2979	12995	26.8	45	7	7.2	6.74	413,416	*21*	58
2980	*2094*	26.8	50	13	9.5	9.70	472,710	00	*22*
2981	*2098*	26.9	40	0	8.7	8.94	388,721	*12*	*11*
2982	*2146*	27.2	60	10	9.5	9.86	711,713	0*1*	*44*
2983	13001	27.3	31	25	6.3	6.00	398,403,404	220	200
2984	13003	27.3	35	16	6.4	5.89	410,823,829	0*11*	*1*33
2985	*2137*	27.3	45	2	9	8.84	413,416	*21*	20
2986	13008	27.3	54	48	8	7.66	418,707	*11*	33
2987	*2157*	27.5	45	11	8.5	8.28	413,416	*11*	25
2988	*2165*	27.5	55	4	9	9.46	418,707	00	*55*
2989	13048	27.5	80	22	5.8	5.32	391,397,399,	*1*20	447
							404,405,406,	21*2*	845
							704,705	10	55*1*
2990	*2148*	27.7	25	9	9	9.85	467,777	*21*	*66*
2991	*2175*	27.7	45	3	9.2	9.38	413,416	*11*	*24*
2992	*2190*	27.8	55	12	8.5	8.72	418,707	10	*21*
2993	13063	28.0	80	41	8.2	8.66	824,826,827	0*2*0	*222*
2994	*2203*	28.1	55	8	8.2	8.32	418,707	01	25
2995	*2204*	28.2	45	0	9.5	9.78	413,416	00	*33*
2996	13030	28.2	56	36	3.2	2.98	397,399,403,	2*2*1	038
							404,405,406	00*2*	685
2997	*2227*	28.3	55	0	9.5	9.56	418,825	*22*	*11*
2998	*2236*	28.3	60	1	8.2	7.92	711,713	*11*	33
2999	13028	28.4	40	13	6	5.37	398,399,404	11*3*	466
3000	*2225*	28.5	40	8	9.5	9.58	388,721	*22*	*41*
3001	*2298*	29.2	60	11	9.5	9.64	713,714	*12*	*11*
3002	*2291*	29.4	35	15	9	9.44	410,823	01	*64*
3003	13053	29.4	45	5	8.5	8.38	413,416	1*1*	*21*
3004	13073	29.7	62	21	var.	var.	833,834,836,	*301*	7n7
							846	2	.

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3005	13070	29.8	60	5	7.5	7.32	711,713	00	27
3006	13077	30.2	48	34	5.6	5.31	398,399,405	010	624
3007	13085	30.2	65	3	8.8	8.44	396,406	10	*21*
3008	13088	30.4	64	56	8	7.90	396,406	1*1*	11
3009	13093	30.4	70	2	7.2	7.08	406,409,829	*4*30	*111*
3010	13081	30.5	40	2	7.8	7.84	388,721	*21*	*23*
3011	13090	30.7	50	49	5.4	5.18	398,399,405	11*2*	355
3012	*2415*	30.8	50	10	9	8.70	472,710	*11*	13
3013	*2433*	30.9	59	57	10	F	713,714,829,	NNF	NNR
							830	F	R
3014	13107	30.9	72	39	5.9	5.48	398,399,405	10*2*	433
3015	13092	31.0	35	23	6.8	6.59	410,823	00	*14*
3016	13094	31.0	60	11	7.5	7.06	711,713	*21*	17
3017	*2435*	31.2	49	58	8.5	8.90	472,710	00	*11*
3018	*2444*	31.3	50	7	8.5	8.44	472,710	10	14
3019	*2462*	31.5	50	9	9	9.14	472,710	*21*	11
3020	13112	31.5	58	47	4.9	4.18	398,399,405	*1*01	666
3021	13146	31.5	81	16	9.2	8.63	704,824,826	010	442
3022	*2536*	31.6	75	16	9	9.53	409,714	*11*	*53*
3023	*2498*	31.7	59	57	9.5	9.98	713,714	FA	*25*
3024	13151	31.8	81	24	8	8.17	704,824,826	1*2*0	623
3025	*2505*	32.3	30	3	9	9.55	409,823	*21*	*41*
3026	13122	32.5	24	51	6.4	5.78	467,704,777,	000	224
							829	*1*	2
3027	*2556*	32.8	40	5	9	9.34	388,721	01	*13*
3028	13132	32.9	31	44	6.2	5.57	398,403,405	10*2*	344
3029	13167	32.9	80	47	8	8.02	824,826,827	0*11*	552
3030	13145	33.3	48	55	4.9	4.41	398,399,405	010	468
3031	13144	33.4	30	14	7.5	7.95	409,823	0*1*	00
3032	13157	33.8	53	13	6.0	5.48	398,399,405	0*11*	744
3033	*2630*	33.9	40	4	8.5	8.84	388,721	*23*	22
3034	13156	34.0	34	59	8.5	8.39	410,823	00	*12*
3035	13159	34.1	42	45	6.0	5.41	398,403,405	11*1*	415
3036	13200	34.2	81	49	7.8	7.72	704,826,827	*1*02	331
3037	*2648*	34.3	39	57	9	8.94	388,721	*34*	11
3038	*2652*	34.3	45	2	9.5	9.74	413,416	10	*22*
3039	*2660*	34.4	45	8	8.8	9.18	413,416	*22*	*47*
3040	*2677*	34.7	55	3	9.5	9.71	418,825	01	*22*
3041	*2764*	34.9	75	14	8.2	8.14	409,714,831,	*4*21	111
							834,836	22	41
3042	*2695*	35.1	45	3	9	9.08	413,416	00	*33*
3043	*2715*	35.3	44	59	9	9.38	413,416	*11*	*42*
3044	13222	35.3	81	14	9	8.77	704,824,826,	*2*30	420
							827,829,830,	*2*10	200
							831	*1*	0
3045	*2723*	35.4	40	14	8.5	8.68	388,721	*22*	*12*
3046	*2743*	35.4	55	2	9.5	9.95	418,825,834,	*542*	*555*
							836,837	20	*85*
3047	*2804*	35.4	75	12	9.5	9.68	409,714	*10*	*25*
3048	13188	35.7	30	3	8.2	8.00	409,823	*11*	22

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot	Resid. Est.
		m.	° ′								m.	° ′					
3049	2769	35.8	55 2	9	9.01	418,825,834,	140	000							836,837	11	44
						836,837	02	00	3088	3314	43.5	54 58	9.2	9.33	714,825	01	33
3050	2779	36.1	45 13	9.5	9.54	413,416	10	30	3089	3317	43.6	50 4	9	9.28	472,824	10	11
3051	2803	36.5	30 7	9.5	9.50	409,823	11	03	3090	13368	44.0	25 5	8.8	8.90	467,777	11	44
3052	2827	36.6	60 5	9.2	9.59	713,714	33	14	3091	13369	44.0	45 5	8.8	8.88	413,416	22	11
3053	13217	36.6	60 53	5.1	4.56	398,399,405,	220	6p4	3092	13401	44.0	80 17	10	9.62	824,826,827	000	446
						833,834,836,	301	961	3093	13370	44.1	29 51	8	7.90	409,823	11	31
						837	1	4	3094	3343	44.2	45 5	10	F	413,416	FF	RR
3054	2821	36.7	45 7	9	9.44	413,416	01	24	3095	13389	44.6	64 37	3.5	2.99	397,398,399,	220	680
3055	13246	36.8	80 30	5.5	5.21	391,397,399,	113	558							404,405,406,	423	335
						404,405,406,	203	574							834	3	5
						704,705	22	66	3096	3379	44.7	45 6	9	9.38	413,416	11	41
3056	2847	36.9	55 16	8	8.06	418,825	21	11	3097	13387	45.0	29 58	9.2	9.20	409,823	11	24
3057	2840	37.0	35 2	8.5	8.59	410,823	11	11	3098	3409	45.1	40 11	9.5	9.44	388,721	23	22
3058	13226	37.5	29 51	7	6.85	409,823	10	73	3099	3415	45.1	44 58	8.8	9.28	413,416	11	33
3059	2883	37.5	55 9	9	9.37	418,825,834,	402	224	3100	3432	45.1	55 6	9	9.23	714,825	10	22
						836,837	00	22	3101	3441	45.1	60 7	9.5	9.51	714,827	11	30
3060	13234	37.7	57 32	6	5.38	398,399,405	000	556	3102	3411	45.2	30 16	9.5	9.20	409,823	00	04
3061	2910	38.1	40 10	9	9.14	388,721	01	31	3103	3419	45.3	30 16	9.5				
3062	13241	38.3	35 7	8	7.84	410,823	12	44	3104	13398	45.3	55 2	7.8	7.78	714,825	22	22
3063	13245	38.5	35 3	6.5	6.56	410,823,829	102	011	3105	3484	45.4	70 9	9	9.34	406,409	23	33
3064	2950	38.6	40 14	8.5	8.64	388,721	01	22	3106	3461	45.6	49 59	9.5	9.78	472,824	10	36
3065	2965	38.7	55 13	9	9.46	418,825	21	20	3107	3474	45.7	50 12	8.5	8.48	472,824	01	03
3066	2967	39.1	35 12	8	8.39	410,823	22	11	3108	13480	45.4	85 33	7.5	6.94	827,829,830	002	136
3067	13266	39.4	55 23	7.8	7.36	418,825	10	46	3109	13486	45.7	85 33	7.1				
3068	3033	40.0	45 16	9	9.24	413,416	21	22	3110	13417	46.1	45 16	5.6	5.30	397,403,405	102	236
3069	13282	40.3	53 26	5.8	5.68	398,399,404,	111	544	3111	3504	46.2	45 15	9				
						405	0	4							413,416,834	101	5p5
3070	3113	40.7	59 58	8.8	8.94	713,714	10	14	3112	13447	46.3	76 19	6.1	5.39	398,399,405	101	765
3071	13328	40.7	81 18	8.5	8.58	704,824,826,	510	411	3113	13426	46.4	50 9	8	7.88	472,824	10	33
						827,829,830,	020	111	3114	13434	46.6	49 58	7.5	7.58	472,824	10	66
						831	1	1	3115	13439	46.7	59 48	8	8.34	713,714	01	13
3072	3130	41.0	55 10	8.5	9.16	418,825	22	74	3116	13479	47.0	82 20	8	8.20	827,829,830	000	222
3073	3126	41.2	44 58	9	9.64	413,416	32	46	3117	3590	47.1	60 8	8.5	8.49	713,714	11	03
3074	3145	41.4	45 0	9	9.38	413,416	00	44	3118	3579	47.4	30 16	9	9.30	409,823	00	25
3075	3142	41.4	45 5	9.5	9.84	413,416	10	63	3119	13451	47.5	45 44	6.2	5.61	397,403,405	100	443
3076	3162	41.4	55 10	8.2	8.71	418,825	11	11	3120	13456	47.7	60 4	7.2	7.54	713,714	12	00
3077	3163	41.4	55 13	9	9.36	418,825	10	44	3121	13455	47.9	46 5	5	4.45	397,403,405	301	9p9
3078	3154	41.5	50 13	9.5	9.33	472,824	22	22	3122	3651	48.0	55 2	9.2	9.63	714,825	00	11
3079	13306	41.8	35 24	7.2	6.84	410,823	12	74	3123	13475	48.0	75 19	7	6.93	409,714	11	31
3080	13360	41.8	81 15	7	6.88	704,824,826	012	669	3124	13466	48.1	62 17	6.3	5.59	398,399,405	110	444
3081	3181	41.9	25 13	8.2	9.05	467,777	21	88	3125	13463	48.2	54 55	8	8.23	714,825	10	22
3082	13319	42.1	40 11	8	7.98	388,721	11	00	3126	13472	48.3	64 59	8.5	8.18	406,409	00	33
3083	13329	42.5	40 13	8	7.74	388,721	01	33	3127	3690	48.6	40 5	9.5	9.18	388,721	00	12
3084	13336	42.5	62 3	var.	var.	397,398,399,	102	111	3128	13476	48.7	60 7	8	7.69	713,714	00	33
						403,404,405,	011	131	3129	3723	48.9	59 58	8.5	8.54	713,714	12	00
						406,833	11	39	3130	3724	49.0	54 57	9.5	9.88	714,825	21	44
3085	13331	42.6	44 18	6	5.74	398,403,404	200	332	3131	13482	49.2	30 13	9	9.45	409,823	10	24
3086	13344	43.0	50 7	8	7.53	472,824	11	55	3132	13488	49.2	54 59	8	8.18	714,825	10	23
3087	3301	43.3	55 17	9.5	9.87	418,825,834,	312	444	3133	3737	49.3	40 1	10	F	388,721	FF	RR

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
3134	13489	49.5	25 0	8	8.60	467,777	11	41
3135	*3751*	49.5	25 6	9.5	10.05	467,777	21	58
3136	*3764*	49.6	45 15	9.5	9.84	413,416	01	33
3137	13499	49.6	54 54	6.8	6.73	714,825	11	33
3138	13537	49.8	80 36	8	8.19	824,826,827	201	220
3139	13512	50.2	50 40	6.2	6.01	398,399,405	210	100
3140	13518	50.4	44 49	6.2	5.81	397,403,405	100	541
3141	*3831*	50.6	45 16	8.5	8.58	413,416	11	11
3142	*3825*	50.6	35 9	8.8	8.39	410,823	00	24
3143	*3830*	50.7	35 9	8.3				
3144	*3846*	50.9	25 3	9.5	9.60	467,777	00	64
3145	*3861*	51.1	35 7	9.5	9.84	410,823	12	33
3146	13535	51.1	49 46	6.1	5.85	397,403,405	211	521
3147	13534	51.2	45 16	8	7.68	413,416	11	88
3148	13541	51.3	39 58	7.0	7.78	388,721	00	24
3149	13556	51.9	40 21	7.5	6.34	388,721	01	92
3150	*3936*	51.9	55 2	9	9.53	714,825	11	53
3151	*3949*	51.9	60 10	8	7.84	713,714	10	22
3152	*3987*	52.7	35 13	9	9.29	410,823	22	13
3153	*4014*	53.1	35 3	9	9.59	410,823	22	36
3154	*4039*	53.4	45 9	8.5	8.68	413,416	11	11
3155	13593	53.4	54 5	3.9	3.67	397,398,399,	111	075
						404,405,406	113	322
3156	*4038*	53.5	35 11	9	9.49	410,823	11	35
3157	*4091*	53.9	60 4	10	F	714,827	FF	RR
3158	*4099*	54.1	55 15	9	9.78	714,825	00	86
3159	13618	54.6	35 25	5.6	5.30	397,403,405	110	655
3160	*4137*	54.8	30 13	8.5	8.45	409,823	12	11
3161	13661	54.8	82 26	8	8.29	827,829,830	110	131
3162	*4161*	54.9	60 16	8	7.79	713,714	22	22
3163	*4170*	55.3	35 13	9.5	9.44	409,823	10	14
3164	13635	55.3	40 5	9.2	8.74	388,721	01	31
3165	13648	55.8	49 58	8.5	8.78	472,824	12	33
3166	13647	55.9	30 9	9.2	9.35	409,823	01	26
3167	*4244*	56.2	40 6	9	9.74	388,721,834,	143	222
						836,837	30	22
3168	*4278*	56.7	45 4	9.5	9.58	413,416	11	11
3169	13670	56.9	60 1	7.8	7.56	714,827	10	22
3170	*4300*	57.0	40 17	10	F	388,721	FF	RR
3171	*4312*	57.0	55 1	9	9.94	824,825	11	77
3172	13682	57.2	50 0	7.2	7.18	472,824	21	06
3173	*4367*	57.7	55 6	9	9.53	714,825	11	53
3174	*4363*	57.9	24 59	8.5	9.15	467,777	12	47
3175	13699	57.9	59 49	7.8	7.86	714,827	01	61
3176	13700	57.9	59 50	8	8.31	714,827	22	21
3177	*4398*	58.1	50 17	8.5	8.48	472,824	10	00
3178	*4413*	58.1	59 58	9	9.31	714,827	00	33
3179	*4406*	58.2	55 0	8.5	8.84	824,825	12	30
3180	13705	58.3	30 6	6.8	6.65	409,823	21	92
3181	*4430*	58.6	40 7	9.5	9.48	388,721	11	00

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
3182	*4438*	58.8	34 59	9.5	9.98	410,823	FA	25
3183	13720	58.8	59 56	6.4	6.28	714,827,834	012	553
3184	*4451*	58.9	45 11	9.2	9.88	413,416	00	47
3185	13717	59.1	24 50	6.8	7.10	467,777	00	74
3186	13723	59.3	24 59	8.5	9.25	467,777	10	22
3187	13736	59.3	70 15	7.8	7.24	406,409	01	66
3188	13761	59.4	81 6	9	8.66	826,827,830	101	111
3189	13764	59.4	81 21	8.2	8.38	830,831,832	124	111
3190	*4481*	59.5	44 57	8.5	8.78	413,416	11	33
3191	*4500*	59.5	55 14	8.8	9.74	824,825	11	57
3192	*4488*	59.6	45 9	9.5	9.84	413,416	01	33
3193	*4491*	59.6	45 12	8.5	8.28	413,416	11	22
3194	13740	59.6	65 26	7.8	7.36	406,409	32	14
3195	*4507*	59.8	45 16	9	9.38	413,416	00	44
3196	13739	59.9	47 40	9	8.87	844,845,846	022	111
3197	13748	0.2	55 14	9.5	8.74	824,825	01	11
3198	*4556*	0.4	30 4	9.3	9.35	409,823	12	24
3199	*4586*	0.4	65 12	8.5	8.68	406,409	11	21
3200	*4584*	0.8	25 12	8.8	9.25	467,777	10	77
3201	*4595*	1.0	30 5	9.2	9.55	409,823	01	14
3202	*7*	1.1	45 13	9	9.22	413,826,837	010	222
3203	13768	1.1	45 24	8	7.24	826,837	01	86
3204	13770	1.3	30 24	6.9	6.75	823,836	21	24
3205	*34*	1.5	45 10	9.5	9.48	826,837	11	00
3206	*38*	1.6	45 13	9.5	9.68	826,837	22	22
3207	*50*	1.6	55 12	9.5	9.98	824,825	10	58
3208	13778	1.6	55 17	8.5	8.54	824,825	23	00
3209	13797	2.2	46 53	5.7	5.20	397,460,516	000	34.
3210	*110*	2.8	35 15	9	9.48	827,838	22	55
3211	*121*	2.8	40 12	9	8.64	388,721	01	42
3212	13840	3.4	81 44	6.0	5.57	397,460,460,	021	440
						709	2	2
3213	*171*	3.5	40 7	9	9.38	388,721	11	24
3214	*167*	3.5	45 10	8.6	8.64	826,837	10	24
3215	*216*	3.5	70 6	9.2	9.38	826,829	12	22
3216	*177*	3.6	45 17	8.6	8.98	826,837	22	20
3217	*190*	3.9	30 13	9.2	9.45	823,836	12	22
3218	*197*	3.9	30 14	9.5	9.85	823,836	01	33
3219	*209*	4.1	25 8	9	10.00	467,777	22	8n
3220	*208*	4.1	25 11	9	9.75	467,777	01	68
3221	*240*	4.4	45 14	9.5	9.64	826,837	10	11
3222	*293*	4.5	70 15	9.5	9.68	826,829	01	25
3223	13838	5.1	7 55	6.2	6.20	855	A	4
3224	13850	5.1	51 19	5.3	5.16	460,516,517	011	236
3225	*310*	5.1	55 16	9	9.28	824,825	11	55
3226	*301*	5.2	35 10	9	9.28	827,838	00	53
3227	13847	5.2	35 22	6.5	6.48	827,838,846	022	333
3228	*308*	5.3	39 59	9	9.14	388,721	34	11
3229	13853	5.5	37 14	var.	var.	844,845,846,	113	n7n
						854	4	n

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3230	13857	5.7	30	24	8	7.85	823,836	*23*	02
3231	13874	5.9	65	1	7.2	7.44	829,836	01	11
3232	13875	5.9	65	19	5.7	5.36	460,516,517	*221*	044
3233	*361*	6.1	25	1	9.5	10.55	467,777	*01*	nn
3234	13873	6.1	45	17	7.2	7.93	846,850	*32*	*44*
3235	13899	6.1	81	4	7	6.56	826,827,830	010	446
3236	13907	6.2	82	1	7.5	7.31	830,831,832	111	295
3237	13885	6.4	44	49	8	7.24	826,837	10	36
3238	13888	6.5	55	16	8.8	9.28	824,825	*21*	*33*
3239	*465*	7.3	40	6	10	9.48	388,721	*11*	02
3240	13896	7.5	34	50	7.2	6.88	827,838	11	9p
3241	13900	7.6	49	59	8.2	7.84	472,832	01	22
3242	13901	7.7	40	22	8	7.00	388,831	*11*	05
3243	*526*	7.7	70	2	9	9.83	826,829	00	*66*
3244	*504*	7.8	40	6	9	8.84	388,831	01	20
3245	13910	7.9	45	9	8.8	8.64	826,837	01	*41*
3246	*513*	8.1	25	16	10	10.40	467,777	*11*	*89*
3247	*553*	8.3	60	15	9.5	9.48	822,834	11	*03*
3248	*558*	8.5	45	13	9	9.34	826,837	10	*53*
3249	*565*	8.7	40	8	9	8.64	388,831	01	44
3250	14032	8.7	86	25	8	7.26	831,832,833	*212*	777
3251	*603*	9.1	55	17	9	9.18	824,825	*10*	*22*
3252	*602*	9.2	50	15	9	9.39	472,832	00	*42*
3253	*618*	9.4	50	7	8	7.99	472,832	11	05
3254	13941	9.5	39	51	6.4	5.96	388,831,846	*223*	p22
3255	13942	9.6	50	44	5.8	5.56	460,516,517	*101*	622
3256	13943	9.7	39	48	6.8	6.24	388,831	01	p3
3257	*633*	9.7	49	58	8	8.04	472,832	01	52
3258	13945	9.7	51	15	6.2	5.99	460,516,517	111	200
3259	*684*	10.0	60	15	10	9.84	822,834	01	*33*
3260	13964	10.1	61	9	6.9	6.68	841,844,845,	001	*255*
							854	*1*	*5*
3261	*678*	10.3	25	3	8.8	9.05	467,777	10	*58*
3262	14023	10.3	83	35	8.5	7.31	831,832,833,	*323*	555
3263	14028	10.4	83	35	8		834,836,837,	102	577
							838	1	7
3264	13962	10.4	24	51	8	8.60	467,777	00	*44*
3265	13968	10.6	41	37	4	3.96	398,460,516,	*100*	565
							517,841,844	*101*	450
3266	13983	10.7	65	52	5.7	5.39	460,516,517	*101*	445
3267	13982	10.9	54	47	8	7.98	824,825	*22*	00
3268	*745*	10.9	65	12	9	7.94	829,836	10	66
3269	13988	11.0	60	11	9.2	9.98	822,834	*21*	*55*
3270	13985	11.2	34	59	8.5	8.08	827,838	00	11
3271	13991	11.3	42	36	6.2	5.68	460,516,517	*303*	*153*
3272	*779*	11.3	64	58	8.5	8.34	829,836	10	25
3273	13998	11.4	55	3	7.1	6.74	824,825	01	8p
3274	14008	11.4	69	32	3.6	3.61	397,398,460,	*113*	*231*
							516,522,841	*101*	*116*

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3275	14000	11.5	55	9	7.5	7.34	824,825	11	p9
3276	*790*	11.5	60	14	9.5	9.44	822,834	00	*22*
3277	14002	11.6	54	28	6.9	6.50	460,516,517	022	*311*
3278	14004	11.6	55	11	7.8	8.08	824,825	*11*	44
3279	*791*	11.7	50	1	9	9.19	472,832	11	*02*
3280	*896*	11.8	80	9	9	8.91	830,831	10	11
3281	14021	12.1	55	9	8.2	8.88	824,825	*11*	11
3282	*839*	12.1	60	14	9	8.94	822,834	*11*	11
3283	14029	12.2	55	1	7.2	7.04	824,825	00	05
3284	*840*	12.4	40	8	9.5	8.94	388,831	*12*	31
3285	*882*	12.4	60	12	9.5	9.54	822,834	*32*	*03*
3286	14037	12.6	55	5	9	9.14	824,825	*11*	*13*
3287	*881*	12.8	50	0	9.5	9.99	472,832	*22*	*55*
3288	14044	13.2	55	11	9.2	9.18	824,825	00	*42*
3289	*902*	13.3	24	59	9	9.55	467,777	*12*	*87*
3290	*915*	13.4	50	1	9.5	9.94	472,832	10	*44*
3291	*924*	13.5	50	5	9	9.44	472,832	01	*42*
3292	*940*	13.5	65	2	9	8.98	829,836	*11*	00
3293	14054	13.7	60	50	3.3	3.42	398,460,516,	202	541
							522,841,844	111	*442*
3294	*957*	14.0	45	4	9	9.00	826,837,846,	241	*222*
							850,854	20	*02*
3295	*949*	14.1	25	14	9	9.80	467,777	11	*88*
3296	*953*	14.1	39	59	8.5	8.24	388,831	*12*	30
3297	14056	14.2	35	16	8	7.68	827,838	*11*	35
3298	*978*	14.4	25	5	9	9.55	467,777	01	*66*
3299	*990*	14.6	25	11	9.5	10.10	467,777	11	*69*
3300	*1002*	14.6	45	8	9	9.44	826,837	10	*44*
3301	14073	14.6	64	56	7.5	6.84	829,836	10	pp
3302	*1028*	14.6	70	0	8.5	8.38	826,829	01	*24*
3303	*1017*	14.9	50	11	9	9.44	472,832	*21*	*44*
3304	14084	15.1	50	13	7.2	7.24	472,832	*23*	83
3305	14119	15.2	81	26	11	F	830,831,832	FFF	RRR
3306	14086	15.3	45	9	8.8	7.78	826,837	*22*	04
3307	14125	15.4	81	19	11	F	830,831,832	FFF	RRR
3308	14105	15.8	54	32	5.4	4.47	460,516,517	021	8pp
3309	*1086*	15.9	30	0	8	8.65	823,836	*12*	*44*
3310	*1090*	15.9	45	14	9	8.98	826,837	00	*22*
3311	*1099*	15.9	60	3	9.5	9.94	822,834	*12*	*47*
3312	14114	16.2	47	12	6.3	5.62	460,516,517	000	334
3313	*1169*	16.5	70	17	9.5	9.53	826,829	00	*55*
3314	14121	16.7	24	53	7	6.90	467,777	11	*14*
3315	*1153*	17.0	25	0	9	9.55	467,777	*12*	*66*
3316	*1188*	17.2	30	16	9	9.60	823,836	*11*	*68*
3317	14145	17.2	55	33	5	4.44	460,516,517	001	p88
3318	*1184*	17.3	25	6	9.5	10.10	467,777	11	*99*
3319	*1194*	17.4	30	11	8.5	9.10	823,836	00	*36*
3320	*1216*	17.5	55	11	9.5	9.38	824,825	*22*	*24*
3321	*1242*	17.9	30	9	9.5	8.20	823,836	00	*42*
3322	14155	18.0	30	10	8				

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
3323	14156	18.1	41	9	5.3	4.88	517,841,844	*211*	131
3324	*1314*	18.2	75	6	9.5	9.44	777,838	*21*	*22*
3325	*1281*	18.6	25	11	9	9.38	467,777,846,	*431*	*464*
							850,854	*12*	*44*
3326	*1292*	18.6	44	58	9	9.28	826,837	*11*	*33*
3327	14180	18.6	65	9	10	9.88	829,836	*11*	*34*
3328	14179	18.8	40	11	9.5	9.99	388,831	FA	*25*
3329	*1311*	18.8	45	13	9.5	9.68	826,837	*11*	*57*
3330	14444	18.9	89	1	8.2	7.53	514,832,833,	*210*	057
							834	0	5
3331	14186	19.0	30	26	7.5	7.80	823,836	*11*	*30*
3332	14185	19.0	40	12	7.8	7.34	388,831	*21*	77
3333	14191	19.1	37	31	5.7	5.51	517,841,844	*111*	233
3334	14193	19.1	50	2	7.2	7.19	472,832	*11*	86
3335	*1345*	19.1	65	4	9.5	9.54	829,836,850,	*261*	000
							854,855	*32*	*30*
3336	14197	19.2	65	12	8	8.08	829,836	*11*	47
3337	14198	19.2	65	12	10				
3338	*1367*	19.4	55	18	9.2	9.38	824,825	00	*44*
3339	14203	19.5	60	10	9.8	8.60	782,834	*11*	*11*
3340	14202	19.8	25	4	7.8	7.00	467,777	*22*	5p
3341	*1375*	19.8	30	6	9.5	9.85	823,836	*12*	*33*
3342	*1376*	19.8	35	9	8.5	8.48	827,838	*11*	*55*
3343	*1388*	19.9	45	1	8.5	9.04	826,837	10	*20*
3344	14216	20.0	66	24	5.4	5.38	516,517,522	*112*	141
3345	*1403*	20.2	35	7	9.2	9.48	827,838	00	*37*
3346	14249	20.4	82	25	7	6.64	832,833,834	221	424
3347	*1445*	20.6	50	1	9.5	9.64	472,832	10	*11*
3348	*1485*	20.6	75	17	9.5	9.24	777,838	*21*	*02*
3349	*1465*	21.0	30	10	9.5	9.55	823,836	*21*	*44*
3350	*1503*	21.1	70	14	8	8.38	826,829	*10*	*24*
3351	14267	21.3	81	9	8	7.30	830,831,832	1*11*	527
3352	*1490*	21.4	30	11	9.5	N	823,836	NN	NN
3353	14242	21.5	25	12	8.5	8.82	467,777,846,	453	2*30*
							850,854	*10*	*33*
3354	*1511*	21.7	30	8	9	8.80	823,836	*11*	00
3355	*1573*	21.7	80	14	9	9.06	830,831	*11*	*11*
3356	14252	21.9	45	2	7.8	7.68	826,837	*11*	15
3357	*1524*	21.9	45	3	9.5	F	826,837	FF	RR
3358	14254	21.9	45	4	7.5	7.44	826,837	10	14
3359	14276	22.4	73	32	4.4	4.02	516,517,522	010	45*5*
3360	14266	22.5	30	34	4.4	4.23	398,517,831,	03*1*	45*2*
							841,844	00	36
3361	*1565*	22.6	54	58	9	9.04	824,825	*12*	*22*
3362	*1566*	22.6	54	58	9.5	8.64	824,825	00	22
3363	*1564*	22.6	55	15	9.2	9.28	824,825	*01*	*33*
3364	*1593*	22.9	60	17	9	9.28	822,834	*12*	*13*
3365	*1592*	23.0	45	13	10	9.74	826,837	*21*	*25*
3366	14277	23.0	54	22	6.2	5.51	516,517,522	000	555
3367	*1630*	23.4	60	10	9.5	9.98	822,834	*01*	*58*

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
3368	14294	23.5	65	16	8.5	8.98	829,836	00	*20*
3369	14295	23.7	57	8	5.4	4.91	516,517,522	000	886
3370	*1665*	23.9	60	12	9.5	9.58	822,834	00	*14*
3371	*1678*	24.0	65	12	9.5	F	829,836	FF	RR
3372	*1666*	24.1	45	0	9	9.68	826,837	*11*	*55*
3373	*1681*	24.1	60	2	9.2	9.24	822,834	00	*22*
3374	14304	24.2	58	14	4.6	4.05	516,517,522	0*12*	842
3375	*1670*	24.3	25	4	9	9.55	467,777	*12*	*68*
3376	14310	24.3	65	12	6.6	6.12	829,836,846	1*2*2	911
3377	14312	24.7	30	2	9.2	8.60	823,836	*11*	22
3378	*1746*	24.7	70	13	9	8.83	826,829	*22*	*30*
3379	14318	24.9	30	6	9.5	5.82	517,831,841	1*10*	*201*
3380	14319	24.9	30	6	6				
							844	1	2
3381	*1773*	25.2	65	11	9	8.98	829,836	00	20
3382	*1751*	25.3	30	0	8.8	9.65	823,836	01	*66*
3383	*1766*	25.3	50	4	9	9.49	472,832	00	*53*
3384	14328	25.3	60	23	7.5	7.78	822,834	*01*	*30*
3385	14337	25.5	63	40	6.1	5.23	516,517,522	010	58p
3386	*1803*	25.6	60	6	9.5	9.28	822,834	*11*	*31*
3387	*1812*	25.6	70	13	9.5	9.53	826,829	*11*	*35*
3388	*1880*	26.8	60	14	9	9.78	822,834	*01*	*66*
3389	*1870*	26.9	40	10	9.5	9.74	388,832	*32*	*25*
3390	*1883*	27.0	50	18	9	9.64	472,832	01	*64*
3391	*1893*	27.1	55	12	9.5	9.08	824,825	*11*	*31*
3392	*1899*	27.4	30	1	9.5	9.85	823,836	10	*63*
3393	*1907*	27.5	30	5	9.5	9.80	823,836	*22*	*66*
3394	14369	27.5	53	13	5.8	5.07	516,517,522	2*13*	664
3395	14375	27.5	70	23	7.8	7.08	826,829	*01*	44
3396	*1920*	27.7	30	5	9.2	10.00	823,836	*11*	*55*
3397	14373	27.7	44	33	6.2	5.82	517,522,525	0*12*	*800*
3398	14372	27.7	44	34	6.8				
3399	14383	27.8	71	29	5.0	4.91	516,517,522	*101*	313
3400	*1948*	27.9	40	16	9	8.84	388,832,850,	*523*	002
							854,855	03	02
3401	*1959*	28.1	40	8	9.5	9.34	388,832	10	*21*
3402	*1978*	28.3	50	8	9	9.29	472,832	00	*33*
3403	*1976*	28.4	25	5	9	9.70	467,777	*22*	*99*
3404	*1981*	28.4	45	2	9.5	9.38	826,837	*11*	*24*
3405	14385	28.5	24	59	9	9.70	467,777	*11*	*99*
3406	14392	28.5	61	11	3.6	3.62	460,516,517,	012	*181*
							522,841,844,	*112*	*114*
							845	2	4
3407	*2000*	28.6	34	59	9.5	10.08	831,838	*33*	*66*
3408	14405	28.7	72	43	5.6	4.82	516,517,522	*102*	p69
3409	14397	28.8	46	30	5.8	5.09	517,522,525	*220*	544
3410	14421	28.8	80	33	7.8	7.53	830,831,832	*311*	035
3411	*2017*	28.9	25	5	9	10.00	467,777	00	nn
3412	*2028*	28.9	55	14	9.5	9.64	824,825	00	*44*
3413	14481	29.1	86	3	8.5	7.75	832,833,834	0*32*	333

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
3414	14410	29.4	54 52	7.5	6.54	824,825	01	03
3415	14408	29.4	54 53	7				
3416	*2062*	29.4	55 7	9	9.04	824,825	*12*	0*2*
3417	*2070*	29.6	40 10	9.5	9.59	388,832	*11*	*18*
3418	14457	29.6	83 50	8.5	8.56	831,832,333	00*2*	*112*
3419	*2080*	29.7	55 13	9	9.24	824,825	00	0*2*
3420	*2078*	29.7	55 15	9.5	9.48	824,825	*11*	*33*
3421	*2090*	29.8	60 4	9.5	10.24	822,834	*21*	*77*
3422	14434	30.1	64 51	8	8.08	831,836	*10*	*11*
3423	14440	30.8	39 3	5.9	5.41	517,525,841	20*1*	546
3424	14442	30.8	45 23	7.8	7.68	826,837	1*1*	*25*
3425	*2168*	31.1	35 3	9	9.18	831,838	*22*	*22*
3426	14452	31.2	54 54	7.5	7.28	824,825	0*1*	25
3427	14507	31.2	83 38	8.5	8.56	831,832,833	0*11*	*111*
3428	14478	31.8	57 3	5.3	4.55	516,517,522	*110*	9p6
3429	14489	32.0	57 43	7.5	R	516,517,522	RRR	RRR
3430	*2251*	32.2	25 9	9	10.00	467,777	1*1*	nn
3431	14523	32.4	81 25	7.2	7.02	822,830,831,	100	*8*25
						832	0	0
3432	14504	32.6	59 3	5.5	5.28	460,516,517,	010	245
						522	*1*	2
3433	14529	32.8	81 6	8	7.50	830,831,832	*1*01	035
3434	14531	32.9	80 39	8.8	7.93	830,831,832	101	113
3435	14516	33.1	35 12	7	7.14	831,838	10	11
3436	14517	33.2	47 43	4.1	3.99	517,525,841,	00*3*	652
						844,845,846	022	550
3437	*2365*	33.5	70 13	8.5	8.73	826,829	00	1*2*
3438	14547	33.6	80 0	8.2	7.02	824,830	10	pp
3439	*2375*	33.7	70 4	9	9.18	826,829	0*1*	*24*
3440	*2366*	33.8	50 10	9	9.39	472,832	1*1*	*44*
3441	14570	33.8	83 42	8.5	8.89	831,832,833	00*1*	*141*
3442	*2372*	33.9	55 7	9.5	9.34	824,825	*21*	*12*
3443	*2378*	33.9	60 17	9	9.44	822,834	00	*44*
3444	14546	33.9	75 17	7.8	7.44	777,838	*12*	68
3445	*2376*	34.0	55 0	9.5	9.36	824,825,833	R0*1*	R11
3446	14557	34.3	78 6	4.4	4.09	516,525,526	1*1*0	*144*
3447	14538	34.3	40 9	7.5	7.79	388,832	*11*	22
3448	14537	34.4	25 20	7.8	7.45	467,777	10	*24*
3449	14548	34.4	60 2	8.5	8.54	822,834	10	03
3450	*2441*	34.6	54 58	9	8.76	824,825,833	R*22*	R*42*
3451	*2459*	34.8	55 8	9	9.16	825,833	*21*	00
3452	14558	34.9	58 40	5.5	4.74	460,516,517,	*112*	8p7
						522	2	8
3453	*2463*	35.1	25 9	9	10.10	467,777	*22*	n6
3454	14569	35.3	55 5	5	4.40	514,517,525	000	668
3455	14573	35.4	55 5	7.5	6.62	825,833	*22*	pp
3456	*2514*	35.7	40 13	8.5	8.54	388,832	*12*	05
3457	*2527*	35.9	40 10	9	9.59	388,832	*11*	*14*
3458	14591	36.3	35 13	6.5	6.45	831,838,846	*114*	*212*
3459	*2593*	36.7	40 13	9	8.84	388,832	*12*	22

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
3460	14597	36.8	30 1	9.2	8.50	823,836	*11*	00
3461	14604	36.9	35 13	6.9	6.94	831,838	10	*11*
3462	*2614*	37.1	30 14	8.3	8.05	823,836	10	22
3463	*2633*	37.4	40 3	9.5	9.84	388,832	*23*	*33*
3464	14616	37.4	45 15	8	7.48	832,837	00	55
3465	14626	37.4	59 9	7.2	6.48	850,854,857	0*1*0	335
3466	14622	37.5	40 10	7.5	7.64	388,832	*32*	44
3467	*2680*	37.8	50 14	9	9.04	472,832	10	00
3468	*2684*	37.8	58 15	9	9.02	850,854,857	000	*2*00
3469	14635	38.1	32 12	5.9	5.92	517,525,841	21*2*	00*1*
3470	*2706*	38.3	24 59	9	10.00	467,777	*22*	nn
3471	*2720*	38.4	50 13	9	9.14	472,832	01	*11*
3472	14653	38.7	63 57	5.7	5.18	514,516,517	1*11*	762
3473	*2751*	38.8	50 10	9	9.49	472,832	*11*	*35*
3474	14656	38.9	58 42	6.5	5.51	460,516,517,	001	475
						522,841,844,	0*11*	77p
						845	*1*	1
3475	14663	39.2	60 28	7.5	7.58	822,834	*21*	*11*
3476	14667	39.4	63 52	2.9	3.01	460,516,517,	211	*55*0
						522,841,844,	0*22*	058
						845	0	5
3477	14673	39.7	60 3	5.2	4.44	514,516,517	3*10*	ppp
3478	14685	40.1	55 16	8.5	7.46	825,833	1*1*	75
3479	14684	40.1	59 36	6.9	6.68	850,854,857	0*10*	333
3480	*2858*	40.2	55 2	8.5	8.42	825,833	*21*	14
3481	14709	40.3	74 57	7	6.89	777,838	*11*	*1*p
3482	14702	40.5	63 26	5.6	5.12	460,514,516	*211*	767
3483	14706	40.7	55 12	8.2	8.96	825,833	0*1*	50
3484	*2914*	41.2	25 16	9.5	10.15	467,777	*10*	n*7*
3485	14720	41.2	59 10	var.	var.	460,514,525,	*102*	22*1*
						841,844,845,	101	555
						846	2	5
3486	14721	41.3	40 27	7	6.84	388,832	01	74
3487	*2938*	41.4	45 14	9.2	9.08	832,837	00	*11*
3488	14731	41.4	70 20	6.9	6.26	460,514,516,	*112*	7*41*
						826,829	0*2*	59
3489	14727	41.4	55 16	8	7.10	825,837	*11*	44
3490	*2958*	41.5	55 16	10				
3491	14735	41.6	70 20	6.9	6.64	460,514,516	210	67*4*
						826,829	*10*	26
3492	*2972*	41.8	45 16	9	9.73	832,837	*21*	*55*
3493	14738	42.0	25 1	7.8	7.50	777,850	*11*	00
3494	14777	42.4	81 31	8.8	8.27	830,832,833	*213*	*212*
3495	14751	42.5	48 54	2.9	2.81	460,517,525	*131*	*8*22
						841,844,845,	*111*	772
						846	3	p
3496	14754	42.5	60 5	7	6.38	822,834	00	64
3497	*3036*	42.8	30 7	9	9.30	823,836	*22*	*33*
3498	14769	42.8	63 44	6.2	5.45	460,516,517	100	535
3499	14767	42.9	56 14	5.8	5.47	460,517,525	*1*00	134

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900. °	S. Dec. 1900. ′	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3500	*3056*	43.0	35	16	9.2	9.28	831,838	00	33
3501	*3080*	43.1	70	2	9.5	9.65	826,837	21	11
3502	14775	43.2	63	52	5.8	5.05	460,516,517	010	977
3503	*3082*	43.3	60	3	8.5	8.48	822,834	10	55
3504	*3086*	43.4	55	16	9.5	9.55	825,837	22	64
3505	14778	43.6	31	10	6.2	6.03	841,844,845	100	224
3506	*3105*	43.7	60	15	9	9.48	822,834	11	33
3507	*3113*	43.8	60	5	8	8.24	822,834	00	33
3508	*3138*	44.4	30	13	8	7.25	823,836	12	88
3509	*3160*	44.4	60	7	9	9.54	822,834	11	35
3510	14817	44.4	79	57	6.2	5.48	516,526,822,	003	237
							824,830,832	200	355
3511	*3156*	44.5	30	5	9.5	9.70	823,836,854	532	522
							855,857	11	22
3512	*3153*	44.5	30	7	8.2	8.20	823,836	11	33
3513	*3236*	44.6	80	4	8.8	8.94	822,824	11	13
3514	*3169*	44.7	30	1	8.3	8.30	823,836	11	21
3515	*3206*	44.7	70	0	9	9.60	826,837	11	44
3516	*3210*	44.9	60	4	9	9.38	822,834	01	42
3517	14829	44.9	80	1	4.9	4.62	516,526,822,	110	614
							824,830,832	501	998
3518	*3214*	45.0	55	1	9.5	9.65	825,837	00	11
3519	*3245*	45.2	70	9	9.5	9.50	826,837	11	33
3520	14820	45.3	33	32	5.8	5.83	841,844,845	111	022
3521	14821	45.3	35	17	8	7.18	831,838	11	68
3522	*3232*	45.3	45	13	9.5	9.93	832,837	01	74
3523	*3239*	45.3	60	11	9.5	9.28	822,834	10	51
3524	*3251*	45.5	45	5	8.8	8.63	832,837	10	61
3525	*3249*	45.6	30	1	9	9.25	823,836	12	22
3526	*3260*	45.8	45	14	9.5	9.83	832,837	21	33
3527	*3281*	45.8	70	5	9	9.10	826,837	20	11
3528	*3313*	45.8	80	8	8.5	8.71	822,824,830,	331	212
							832,833	02	12
3529	14832	45.9	25	0	8.8	8.90	777,850	00	41
3530	14883	45.9	86	22	8.5	7.62	832,833,834	111	666
3531	*3302*	46.0	75	15	9	9.24	777,838	01	22
3532	*3284*	46.1	60	14	9	9.44	822,834	21	42
3533	*3285*	46.3	35	15	8	8.18	831,838	00	26
3534	*3289*	46.3	50	5	9	8.58	472,832,854,	512	224
							855,857	20	22
3535	*3304*	46.4	60	7	9	8.78	822,834	01	02
3536	*3303*	46.5	49	59	9	9.04	472,832	12	00
3537	*3317*	46.5	60	16	9	9.44	822,834	00	21
3538	*3315*	46.6	45	9	9.2	9.13	832,837	10	31
3539	*3330*	46.9	35	13	9.5	9.68	831,838	00	55
3540	*3346*	46.9	60	16	9	9.38	822,834	01	44
3541	*3374*	47.4	45	9	9.5	9.63	832,837	10	11
3542	*3386*	47.5	60	17	9	9.44	822,834	00	21
3543	*3406*	47.7	54	59	9.8	9.25	825,837	20	22
3544	*3402*	47.7	60	16	9.5	9.88	822,834	12	74

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900. °	S. Dec. 1900. ′	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3545	*3435*	48.3	50	16	9	9.54	472,832	01	53
3546	14876	48.4	34	58	6.7	6.88	831,838	11	33
3547	14886	48.4	56	43	6 0	5.67	514,517,525	223	11.
3548	14885	48.5	39	53	7.0	7.94	388,832	12	44
3549	*3463*	48.5	65	2	9.5	9.68	831,836	11	22
3550	*3482*	49.0	50	4	8.5	8.19	472,832	22	63
3551	14905	49.0	75	21	6.9	6.74	777,838	01	53
3552	14920	49.0	80	24	8.5	8.31	822,824,830	101	122
3553	*3487*	49.1	50	6	8.5	8.94	472,832	01	11
3554	*3490*	49.3	30	6	9	9.65	823,836	01	66
3555	14903	49.3	60	17	7.8	7.44	822,834	01	86
3556	14910	49.4	58	19	4.1	3.85	460,517,525,	031	p56
							841,844,845,	010	722
							846	1	2
3557	*3546*	49.9	25	9	9	9.75	777,850	12	8n
3558	14928	50.0	60	9	8.8	8.94	822,834	11	11
3559	14930	50.1	59	49	8	8.04	822,834	22	00
3560	14936	50.4	55	5	7.5	6.65	825,837	00	99
3561	*3593*	50.4	60	14	8.5	8.54	822,834	11	03
3562	14943	50.4	70	11	6.5	6.06	826,837,846	021	471
3563	*3590*	50.5	50	4	9	9.34	472,832	01	33
3564	14939	50.5	60	3	9	8.94	822,834	10	11
3565	*3591*	50.6	30	5	8.8	9.10	823,836	11	33
3566	*3599*	50.6	50	6	9	9.94	472,832	01	44
3567	14940	50.7	34	58	8.2	8.04	831,838	01	52
3568	14941	50.7	34	58	10				
3569	*3646*	51.1	70	13	9.2	9.20	826,837	11	40
3570	14955	51.3	59	59	var.	var.	822,834,854,	010	505
							855	0	5
3571	14954	51.4	25	3	9	8.65	777,850	21	11
3572	*3655*	51.4	55	7	9	9.30	825,837	11	13
3573	*3682*	51.8	55	2	8	8.25	825,837	00	33
3574	14963	52.1	36	36	5.1	4.61	525,841,844	111	424
3575	14968	52.1	40	2	8	8.49	388,832	00	00
3576	14971	52.2	59	55	7.8	7.64	822,834	22	69
3577	14972	52.3	50	4	7.4	7.44	472,832	10	06
3578	*3726*	52.3	59	59	9.2	9.58	822,834	22	14
3579	*3719*	52.4	35	14	9.5	9.94	831,838	23	44
3580	*3731*	52.6	30	2	9.5	9.45	823,836	12	44
3581	14978	52.6	59	59	9	9.04	822,834	00	20
3582	14982	52.8	50	14	6.4	6.22	472,829,832,	321	402
							846,854	11	00
3583	*3784*	53.0	55	12	9	9.05	825,837	00	00
3584	14990	53.1	45	20	7.2	6.83	832,837	10	23
3585	14988	53.2	35	6	8.5	8.64	831,838	10	14
3586	*3795*	53.2	60	11	9	9.48	822,834	11	33
3587	*3797*	53.5	35	2	8.5	8.54	831,838	01	30
3588	*3804*	53.6	35	8	8	7.84	831,838	21	44
3589	*3812*	53.6	49	59	9.5	9.72	829,832	10	22
3590	15007	53.8	55	15	7.2	6.85	825,837	20	7p

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3591	*3842*	54.0	44	59	9	9.08	832,837	00	11
3592	*3862*	54.0	70	14	9	9.06	826,837	12	11
3593	15020	54.5	33	12	6.0	5.83	525,841,844	111	222
3594	*3883*	54.6	54	59	9.5	9.15	825,837	02	22
3595	*3908*	55.1	25	0	9	9.50	777,850	11	55
3596	*3916*	55.2	25	12	9	9.65	777,850	21	66
3597	*3954*	55.2	75	4	9	9.09	777,838	11	13
3598	15043	55.4	43	16	6.2	6.12	514,517,525	100	101
3599	*3982*	55.4	80	1	9	8.75	822,824	21	03
3600	15044	55.5	39	53	7.2	8.59	388,832	22	11
3601	15048	55.5	41	41	4.5	4.58	514,517,525	021	210
3602	*3970*	55.8	55	5	10	F	825,837	FF	RR
3603	15057	55.9	25	11	8	8.05	777,850	21	02
3604	*3974*	55.9	55	8	9	8.85	825,837	22	20
3605	15061	56.0	31	18	6.3	6.19	525,841,844	111	034
3606	*3984*	56.2	35	1	8.5	8.44	831,838	01	11
3607	15064	56.3	39	58	6.9	6.64	388,832	12	44
3608	*4007*	56.3	45	17	8.8	8.78	832,837	11	33
3609	*4040*	56.7	65	13	8.5	8.58	831,836	21	21
3610	15095	56.9	80	18	8.5	8.41	822,824,830	102	141
3611	*4096*	57.2	80	15	9	8.88	822,824	12	11
3612	*4069*	57.5	40	5	10	9.69	388,832	11	15
3613	15122	57.6	82	3	8	7.53	822,824,833	022	535
3614	15102	57.8	25	21	8	8.25	777,850	21	23
3615	*4127*	58.1	65	2	9	9.33	831,836	11	11
3616	15128	58.1	81	1	7.0	6.64	822,824,830	110	229
3617	15111	58.2	25	2	6.7	6.95	777,850	10	55
3618	15116	58.2	59	58	9.2	8.98	822,834	21	02
3619	15118	58.3	59	59	9				
3620	*4139*	58.3	65	0	9	9.43	831,836	00	22
3621	*4152*	58.4	60	17	9.5	10.08	822,834	11	66
3622	*4145*	58.5	35	17	9	9.24	831,838	10	42
3623	*4159*	58.6	55	18	9.5	9.35	825,837	00	24
3624	*4188*	58.6	75	8	8	7.29	777,838	22	27
3625	15131	58.6	75	8	7.8				
3626	*4163*	58.7	25	18	9.5	9.70	777,850	11	55
3627	15125	58.8	25	7	8.5	8.65	777,850	21	41
3628	15126	58.8	50	27	8	7.82	829,832	21	74
3629	15133	58.9	60	17	8.5	7.64	822,834	21	44
3630	15135	59.0	60	22	7.2	6.68	822,834	10	p5
3631	*4194*	59.1	25	15	9.5	9.90	777,850	00	94
3632	15138	59.1	60	8	9	8.58	822,834	22	24
3633	*4244*	59.6	45	12	8.8	8.58	832,837	00	11
3634	*4251*	59.6	60	2	8.5	8.84	822,834	00	00
3635	*4259*	59.8	55	14	9.5	9.45	825,837	20	24
3636	15160	59.8	75	3	8.5	8.34	777,838	10	11
3637	*4268*	0.0	35	16	9.5	10.14	831,838	10	69
3638	15153	0.0	47	8	6.0	5.92	514,517,525	111	201
3639	15189	0.0	84	3	6.3	6.22	460,526,777,	11R	200
							822,823,824,	144	200

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							844,845,857	011	320
3640	15155	0.2	35	16	5.8	5.71	514,517,525	021	012
3641	*4293*	0.3	35	4	9	9.38	831,838	11	22
3642	15162	0.4	29	54	7.3	7.35	823,836	01	11
3643	*4309*	0.5	30	0	9.2	9.50	823,836	11	73
3644	*4333*	0.6	60	7	9	9.04	822,834	00	02
3645	*4334*	0.6	60	0	9	8.68	822,834	12	13
3646	*4336*	0.7	60	0	9				
3647	15177	0.8	65	1	8.2	7.98	831,836	22	08
3648	15179	1.0	34	56	8	8.08	831,838	11	41
3649	*8*	1.1	50	1	8.5	8.47	829,832	11	35
3650	*15*	1.1	70	15	8.5	8.91	826,838,846,	436	114
							855,857	51	11
3651	*6*	1.2	35	1	8.7	8.78	829,838	00	00
3652	*12*	1.2	60	17	9.5	9.78	827,834	01	36
3653	15217	1.6	81	5	8.8	8.21	822,824,830	100	033
3654	*46*	1.7	55	13	9.5	9.36	825,838	01	44
3655	15200	1.8	49	54	7.5	6.92	829,832	01	11
3656	15206	2.0	50	25	6.8	6.22	829,832	21	66
3657	*73*	2.0	60	6	9	9.38	827,834	10	24
3658	15205	2.1	30	1	6.9	6.60	823,836	00	44
3659	15215	2.3	58	7	6.9	6.04	460,841,844	001	522
3660	15220	2.3	64	58	8.2	7.75	831,836,846,	611	272
							850,854,855	012	244
3661	*78*	2.4	34	58	9	9.58	829,838	11	44
3662	15222	2.4	61	53	5.3	4.80	502,514,526	211	447
3663	15224	2.7	42	6	5.8	5.35	502,514,525	120	141
3664	*135*	2.9	60	8	9	8.93	827,834	11	11
3665	*150*	3.0	60	0	9	9.28	827,834	10	11
3666	15238	3.2	60	14	9.2	9.68	827,834	21	22
3667	15242	3.2	70	17	7.5	7.16	826,838	12	66
3668	15243	3.2	70	20	6.1	5.86	502,514,516	212	102
3669	*171*	3.4	50	0	8.2	8.57	829,832	22	16
3670	*179*	3.4	60	4	9.5	9.83	827,834	22	66
3671	*187*	3.4	60	7	9	9.53	827,834	11	33
3672	*183*	3.5	55	16	9.5	9.70	825,838	10	22
3673	*196*	3.7	60	5	9.5	9.78	827,834	10	63
3674	*201*	3.9	30	14	9	9.05	823,836	12	22
3675	15258	3.9	60	17	8	7.43	827,834	11	64
3676	*215*	4.1	35	16	9.5	10.08	829,838	00	96
3677	*234*	4.2	65	13	9.5	9.18	831,836	21	02
3678	15266	4.4	58	26	4.6	4.03	460,502,525	010	0p5
3679	15269	4.4	61	24	6.0	5.47	460,502,525	102	025
3680	15271	4.4	64	53	7.5	7.03	831,836	01	55
3681	*264*	4.5	60	16	9	9.68	827,834	01	22
3682	15273	4.6	60	13	8	8.53	827,834	00	53
3683	*288*	4.9	60	17	9	9.18	827,834	01	22
3684	*287*	5.0	40	3	9.5	9.88	830,854	11	77
3685	*290*	5.0	44	59	9.5	9.88	826,837	00	47
3686	15279	5.1	31	49	5.9	5.84	460,502,525,	031	112

11h

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						823,841	21	22
3687	15286	5.2	25 4	7.8	7.35	830,850	10	84
3688	15297	5.6	25 27	8	7.45	830,850	01	64
3689	*324*	5.6	44 59	8.5	8.48	826,837	22	00
3690	*338*	5.7	60 14	9.5	F	827,834	FF	RR
3691	15311	5.7	81 15	8.8	9.32	824,830,841	111	133
3692	15305	5.8	60 26	8	8.06	827,834,850,	100	111
						854,857	31	44
3693	*352*	5.9	60 13	9				
3694	*359*	5.9	60 14	9.5	8.68	827,834	10	11
3695	*360*	5.9	60 14	9				
3696	*350*	6.0	25 14	8.5	8.85	830,850	10	03
3697	*362*	6.0	45 18	9	9.04	826,837	01	00
3698	15309	6.2	45 2	7	7.08	826,837	11	49
3699	15313	6.5	59 50	7.8	7.18	827,834	10	86
3700	*393*	6.5	60 12	9	8.79	827,834,855	321	000
3701	*411*	6.7	60 12	9				
						857,858	30	00
3702	*391*	6.6	40 0	9	9.33	830,854	21	11
3703	*431*	7.0	60 7	9	9.73	827,834	11	55
3704	*444*	7.2	60 8	9	9.18	827,834	10	02
3705	15336	7.4	59 53	8	7.68	827,834	10	21
3706	15333	7.4	59 54	8				
3707	15337	7.5	60 10	9.5	F	827,834	FF	RR
3708	*466*	7.6	60 4	9	9.53	827,834	11	03
3709	15341	7.6	60 9	8	8.03	827,834	11	58
3710	15363	7.6	83 54	8	7.89	822,841,844	213	113
3711	15370	7.6	85 12	8.2	7.15	838,841,844	020	633
3712	*475*	7.7	54 58	9.5	9.26	825,838	10	11
3713	*481*	7.9	25 15	9	9.25	830,850	10	40
3714	15347	8.0	48 33	5.8	5.68	460,502,525	121	102
3715	15352	8.1	59 50	8	8.58	827,834	32	41
3716	15356	8.3	59 46	5.2	4.73	460,502,525	100	8p7
3717	*530*	8.6	60 11	8.8	8.98	827,834	10	20
3718	15365	8.6	63 37	5.7	5.53	460,502,514	132	023
3719	*584*	9.3	54 58	8.5	8.06	825,838	12	74
3720	15385	9.4	60 12	8.2	8.23	827,834	11	26
3721	*604*	9.6	30 3	9	9.20	823,836	11	42
3722	*632*	9.7	70 5	8	8.06	826,838	10	11
3723	*634*	10.0	25 1	9.5	9.90	830,850	00	74
3724	*642*	10.1	55 11	8.5	8.26	825,838	11	25
3725	*665*	10.3	50 16	9	9.42	829,832	10	44
3726	*673*	10.4	60 7	9.5	9.59	827,834,855,	403	141
						857,858	02	11
3727	*675*	10.5	40 11	9.5	9.63	830,854	21	14
3728	*677*	10.5	55 15	9.5	10.00	825,838	22	5n
3729	15410	10.5	75 15	7.8	7.38	831,837	11	68
3730	15440	10.5	85 41	7.5	6.65	838,841,844	001	p44
3731	*691*	10.7	55 13	9	9.36	825,838	22	22
3732	*688*	10.7	55 16	9.5	9.96	825,838	01	55
3733	*695*	10.8	25 16	8.5	9.45	830,850	10	44
3734	*699*	10.8	60 8	9.2	9.48	827,834	21	33
3735	*714*	10.9	55 15	9	9.36	825,838	00	22
3736	*713*	11.0	30 18	9	8.40	823,836	11	44
3737	15421	11.0	69 49	7.9	7.76	826,838	10	44
3738	*738*	11.3	30 15	9.5	9.90	823,836	00	47
3739	*761*	11.6	40 17	8.5	9.13	830,854	10	36
3740	*788*	11.8	65 17	9	8.98	831,836	00	22
3741	15437	11.9	45 20	6.7	6.44	826,837	01	46
3742	15443	12.1	55 0	8	7.77	825,838,855,	621	202
						857,858	21	22
3743	15444	12.1	60 1	8.5	8.98	827,834	01	52
3744	15445	12.2	50 23	8	7.92	829,832	01	13
3745	*808*	12.3	50 12	9.5	9.52	829,832	10	35
3746	*813*	12.4	60 17	9.5	9.73	827,834	11	75
3747	*823*	12.6	40 6	9.2	9.43	830,854	10	21
3748	*827*	12.6	55 4	8	7.56	825,838	00	42
3749	*872*	13.1	45 1	8.5	8.74	826,837	01	51
3750	15466	13.2	40 1	8.5	8.68	830,854	22	12
3751	15468	13.2	44 57	7.8	7.18	826,837	11	86
3752	*891*	13.3	55 9	9.5	9.60	825,838	21	14
3753	*896*	13.4	50 5	9	9.47	829,832	22	53
3754	*899*	13.5	50 10	9.5	9.97	829,832	11	55
3755	*914*	13.6	75 6	9.5	9.54	831,837	10	30
3756	*922*	14.0	60 3	9.5	9.48	827,834	10	55
3757	*934*	14.2	60 16	9.5	9.58	827,834	10	66
3758	*944*	14.2	65 0	9.5	9.48	831,836	11	33
3759	15490	14.4	39 57	7.3	7.28	830,854	00	57
3760	*960*	14.5	55 6	8	7.66	825,838	11	83
3761	15502	15.0	29 54	8	8.10	823,836	11	11
3762	*992*	15.1	60 2	9	9.33	827,834	00	33
3763	*1011*	15.3	50 16	8.8	9.17	829,832	11	22
3764	15520	15.6	75 16	7.2	7.08	831,837	00	99
3765	15525	15.6	79 7	6.6	6.30	841,844,845	011	212
3766	15517	15.8	45 11	7.5	6.94	826,837	10	11
3767	*1042*	15.9	35 6	9	9.34	829,854	01	33
3768	15519	15.9	35 10	7.8	7.64	829,854	12	24
3769	*1058*	15.9	70 4	8	8.11	826,838	00	11
3770	*1060*	16.2	60 2	9	8.83	827,834	22	00
3771	15531	16.3	34 58	8.2	7.48	829,854	22	53
3772	*1075*	16.3	59 58	9	9.58	827,834	21	66
3773	15535	16.4	45 20	8	7.44	826,837	12	68
3774	15539	16.4	53 56	4.3	4.38	460,502,514	111	146
3775	*1106*	16.8	60 0	9	9.38	827,834	01	24
3776	15550	17.2	60 26	8	7.98	827,834	43	22
3777	15552	17.3	70 15	8.5	7.91	826,838	00	33
3778	*1173*	17.8	60 11	8.8	8.98	827,834	01	22
3779	*1171*	17.8	60 14	9.5	9.58	827,834	10	46
3780	*1172*	17.8	60 14	9.5				
3781	*1183*	18.0	25 15	9	9.70	830,850	11	52

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3782	*1196*	18.2	25	0	10	F	830,850	FF	RR
3783	15570	18.3	25	1	8.5	9.00	830,850	00	55
3784	15568	18.3	50	14	7.2	6.74	472,832	12	p8
3785	15571	18.4	35	37	5.8	5.00	460,502,514	111	577
3786	*1223*	18.6	55	10	9.5	9.56	825,838	22	44
3787	*1247*	18.9	60	1	9.5	9.88	827,834	10	74
3788	15588	19.1	64	24	6	5.43	460,502,514	033	343
3789	15594	19.4	65	17	8.5	8.18	831,836	21	32
3790	*1318*	19.9	60	0	8.8	9.13	827,834	00	13
3791	15608	20.1	55	20	8	8.60	825,838	00	14
3792	15612	20.2	71	42	6.1	5.64	460,502,514,	1R1	344
							844,845,846,	011	244
							854	0	0
3793	*1344*	20.3	60	11	9.5	9.88	827,834	10	97
3794	15619	20.6	35	31	5.7	5.44	460,502,514	042	434
3795	*1361*	20.6	40	10	9.5	9.78	830,854	11	36
3796	*1366*	20.6	60	11	8.8	9.13	827,834	00	11
3797	15629	21.0	45	20	7	6.94	826,837	01	33
3798	15636	21.4	25	12	8.2	8.70	830,850	11	25
3799	15640	21.4	63	25	5.7	5.34	460,502,525	021	247
3800	*1430*	21.5	55	4	9.5	9.70	825,838	32	22
3801	*1468*	22.1	54	58	9.5	9.20	825,838	22	33
3802	15652	22.1	60	34	6.2	5.57	460,502,525	210	033
3803	*1461*	22.1	50	9	8.5	8.39	472,832	00	11
3804	*1466*	22.2	50	10	8.5				
3805	*1478*	22.2	70	11	9.5	9.81	826,838	00	33
3806	*1490*	22.3	75	10	9	9.34	831,837	10	33
3807	15660	22.6	25	18	6.9	6.80	830,850	00	00
3808	*1497*	22.6	60	4	9	9.08	827,834	10	33
3809	*1501*	22.7	45	13	9.5	9.24	826,837	32	22
3810	*1503*	22.7	45	14	9				
3811	*1505*	22.8	40	18	9.5	10.13	830,854	21	66
3812	*1518*	22.8	70	3	9	9.56	826,838	12	11
3813	*1520*	22.9	59	59	9	9.23	827,834	11	22
3814	15667	23.0	35	0	8.2	7.74	829,854	12	51
3815	*1545*	23.2	55	15	9.5	9.76	825,838	01	36
3816	15672	23.2	59	56	7.8	6.83	827,834	00	7p
3817	*1541*	23.3	25	12	9	9.43	829,830,850	111	994
3818	*1543*	23.3	30	12	9	N	823,836	NN	NN
3819	*1550*	23.4	50	18	8.2	8.34	472,832	10	22
3820	15679	23.7	45	13	8	8.08	826,837	22	17
3821	*1573*	23.8	25	18	9	9.40	830,850	22	24
3822	15684	23.8	42	7	5.5	5.38	460,502,525	011	252
3823	15688	23.9	60	3	9.2	9.13	827,834	11	31
3824	15711	23.9	84	24	7.8	7.77	822,841,844	111	033
3825	15761	23.9	88	41	7.8	7.64	832,833,834	001	.44
3826	15692	24.1	35	7	9.5	9.18	829,854	00	22
3827	*1612*	24.3	60	7	9	9.18	827,834	10	20
3828	*1641*	24.7	50	14	9.5	9.64	472,832	01	11
3829	*1661*	25.0	25	0	9.5	9.70	830,850	00	95

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3830	15720	25.3	25	15	6.9	6.70	830,850	00	33
3831	*1701*	25.4	60	3	9	9.83	827,834	22	33
3832	*1699*	25.5	55	0	9	9.06	825,838	10	11
3833	*1711*	25.7	25	10	9.2	9.25	830,850	21	00
3834	*1712*	25.7	59	58	8.8	8.78	827,834	01	30
3835	*1745*	26.3	35	6	8.5	8.34	829,854	01	22
3836	*1758*	26.6	30	0	8.8	9.25	823,836	01	24
3837	*1786*	26.7	65	11	9	8.73	831,836	10	11
3838	*1781*	26.8	50	18	9.2	9.54	472,832	21	33
3839	15753	26.9	60	6	8.5	8.73	827,834	11	21
3840	15755	27.1	58	53	5.2	4.93	502,514,525	221	565
3841	15756	27.1	58	58	5.5	5.30	502,514,525	220	243
3842	*1804*	27.2	55	11	9.5	9.60	825,838	22	14
3843	*1810*	27.2	59	58	9.5	9.63	827,834	00	11
3844	15757	27.2	60	3	7.8	7.48	827,834	21	35
3845	15758	27.2	60	8	8	8.13	827,834	11	44
3846	15772	27.6	60	18	8.2	7.93	827,834	00	36
3847	15792	27.8	83	32	8	8.25	822,841,844	121	200
3848	15777	27.9	30	32	5.8	4.94	502,514,822,	001	156
							841	1	3
3849	15776	27.9	39	53	6.2	5.67	502,514,525	110	312
3850	*1871*	27.9	60	11	9	8.83	827,834	00	00
3851	*1860*	28.0	49	58	8.5	8.40	472,832,855	452	142
							857,858	02	22
3852	*1870*	28.0	50	3	8.5	9.19	472,832	22	42
3853	15786	28.1	31	18	3.7	3.65	460,502,514,	141	81n
							822,841,841,	142	622
							844,845	02	42
3854	*1885*	28.2	60	2	9	9.53	827,834	00	33
3855	*1894*	28.3	50	11	9	9.39	472,832	22	12
3856	*1897*	28.3	65	4	9	9.13	831,836	10	11
3857	*1899*	28.4	30	7	9.5	9.85	823,836	21	88
3858	*1902*	28.4	55	5	9	9.06	825,838	10	11
3859	*1911*	28.5	25	15	9.5	9.85	830,850	10	83
3860	15795	28.7	40	2	5.7	5.61	502,514,525	311	232
3861	15796	28.8	30	6	8.2	8.30	823,836	11	31
3862	*1933*	28.8	50	17	9	9.74	472,832	10	52
3863	*1934*	28.8	60	13	9	8.88	827,834	10	11
3864	*1961*	29.2	25	6	9.5	N	830,850	NN	NN
3865	*1969*	29.2	70	2	9	9.31	826,838	11	51
3866	*1972*	29.4	30	3	9.7	9.85	823,836	01	36
3867	*1998*	29.5	74	59	9.5	9.78	831,837	11	33
3868	15815	29.6	32	18	6.2	6.17	502,514,525	220	322
3869	15818	29.7	64	51	7.5	7.13	831,836	10	44
3870	15822	30.0	25	1	10	10.00	830,850	22	55
3871	15825	30.0	53	42	5.2	4.79	502,514,841	102	5p2
3872	15826	30.1	30	10	7.5	7.30	823,836	11	23
3873	15827	30.2	48	35	6.0	5.55	502,514,841	221	430
3874	15828	30.2	60	14	7.2	7.44	829,846	10	66
3875	15829	30.3	35	3	7.0	6.93	823,854	12	p1

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3876	15832	30.4	46	49	6.0	5.71	502,514,841	011	121
3877	*2044*	30.5	50	16	9	9.54	472,832	10	33
3878	15837	30.7	60	20	7	6.74	829,846	10	83
3879	15840	30.8	50	10	8.2	8.14	472,832	23	11
3880	*2055*	30.8	55	6	9.5	9.79	825,838,855,	421	363
							857,858	12	63
3881	*2071*	30.8	60	11	8.5	8.54	829,846	01	03
3882	15841	31.1	47	5	5.5	5.45	502,514,841	320	221
3883	15848	31.1	62	28	3.4	3.31	460,502,514,	111	075
							841,844,845	211	227
3884	*2090*	31.2	25	12	9	9.15	830,850	01	24
3885	*2091*	31.2	44	59	8.5	8.78	826,837	11	30
3886	15846	31.2	50	11	7.8	7.79	472,832	22	72
3887	*2099*	31.4	55	17	9.5	9.50	825,838	11	03
3888	15854	31.6	33	1	6.2	5.85	460,525,841	110	011
3889	*2117*	31.7	55	11	8.5	8.30	825,838	12	22
3890	15867	31.9	60	20	8	7.70	829,846	11	35
3891	*2153*	32.1	35	2	8.5	8.63	823,854	01	12
3892	*2187*	32.4	55	2	9.5	9.06	825,838	11	13
3893	15877	32.4	60	44	5.9	5.21	460,841,844	112	356
3894	15883	32.7	47	11	5.9	5.41	460,502,841	231	242
3895	15882	32.7	60	10	8	8.04	829,846	12	22
3896	15888	32.9	59	48	7.8	7.30	829,846	00	72
3897	15890	32.9	60	21	7.3	6.70	829,846	00	p3
3898	*2238*	33.0	45	10	9.5	10.14	826,837	21	96
3899	15891	33.0	60	25	7.8	7.44	829,846	12	64
3900	15898	33.1	75	20	6.2	5.66	460,841,844	021	035
3901	*2251*	33.2	25	2	9	9.05	830,850	21	50
3902	*2252*	33.3	25	4	9.2	9.80	830,850	00	66
3903	15896	33.3	45	11	7.5	7.28	826,832,837	110	327
3904	15902	33.4	65	6	8	7.23	831,836	01	86
3905	15901	33.5	61	16	6.0	5.38	460,841,844	111	454
3906	*2286*	33.7	40	18	9	9.18	831,854	11	42
3907	*2288*	33.7	60	3	9.2	9.06	829,850	01	11
3908	*2289*	33.7	60	4	9.5	9.40	829,850	00	21
3909	15906	33.7	60	6	8	7.76	829,850	01	24
3910	*2362*	34.8	55	3	9	8.80	825,838	00	30
3911	15937	34.8	64	50	5.8	5.08	460,841,844	100	177
3912	15935	34.9	45	25	8	7.83	832,837	21	27
3913	15940	35.0	45	15	7.8	7.48	832,837	11	57
3914	15944	35.0	49	56	6.8	6.79	472,832	11	72
3915	*2378*	35.0	55	10	9.5	9.36	825,838	00	22
3916	*2384*	35.1	55	0	9.5	9.86	825,838	12	47
3917	*2380*	35.1	55	8	9.5	9.66	825,838	12	25
3918	15950	35.2	34	11	4.9	4.98	460,525,844	211	50n
3919	15949	35.2	45	1	9.8	F	832,837	FF	RR
3920	15959	35.2	84	56	7.5	7.47	822,841,844	001	500
3921	*2399*	35.4	35	17	9	9.38	823,854	00	26
3922	*2418*	35.8	60	7	9	8.96	829,850	12	00
3923	15970	36.1	40	19	7.6	8.08	831,854	11	36

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
3924	15969	36.1	60	25	7.8	7.20	829,846	11	68
3925	*2456*	36.2	40	16	9.5	9.54	831,854	01	30
3926	15973	36.2	55	1	7	7.00	825,838	01	28
3927	15975	36.2	61	32	5.7	4.85	460,841,844	100	889
3928	15976	36.3	60	3	8.5	8.50	829,850	00	35
3929	15979	36.3	60	22	7.8	7.40	829,846	22	66
3930	15982	36.4	35	3	7.2	7.08	823,854	11	16
3931	15984	36.4	40	27	7.2	6.88	831,854	00	31
3932	15983	36.4	42	32	6.1	5.59	502,514,844	100	322
3933	15986	36.7	31	56	5.8	4.98	150,514,525,	132	686
							844	2	8
3934	*2491*	36.9	40	1	9	9.44	831,854	21	21
3935	15990	36.9	50	4	7.2	7.44	472,832	23	41
3936	*2502*	37.0	45	5	8.5	8.03	832,837	21	00
3937	16006	37.6	60	24	7.5	7.34	829,846	12	9p
3938	16016	37.6	82	32	6.7	6.19	841,844,845	001	630
3939	*2544*	37.7	60	7	9	9.06	829,850	23	31
3940	*2549*	37.8	35	15	9	9.11	823,825,854	113	331
3941	*2558*	37.9	39	58	10	9.74	831,854	10	22
3942	16013	37.9	59	52	7.5	7.62	829,846,855,	352	441
							857,858	41	12
3943	*2571*	38.0	60	7	9.5	9.10	829,850	11	41
3944	*2579*	38.2	60	6	9	9.16	829,850	01	00
3945	*2582*	38.3	35	11	9	9.13	823,854	01	31
3946	*2594*	38.4	55	1	9	8.86	825,838	11	17
3947	*2598*	38.4	70	6	9	9.76	826,838	12	86
3948	*2606*	38.7	25	6	9.1	9.15	830,850	12	22
3949	16039	38.8	61	56	5.8	5.17	502,514,525	032	847
3950	16047	39.2	45	1	8.5	8.38	832,837	11	14
3951	*2663*	39.3	60	5	9	8.96	829,850	12	00
3952	16055	39.6	79	55	6.8	6.60	841,844	11	21
3953	*2674*	39.7	45	5	9.5	9.68	832,837	00	51
3954	16056	39.8	60	17	8.2	7.86	829,850,855,	322	163
							857,858	03	11
3955	16057	39.9	55	16	8	7.80	825,838	01	22
3956	16058	39.9	59	50	8	7.54	829,846	01	00
3957	16059	40.0	54	54	8	7.50	825,838	10	33
3958	16069	40.4	39	57	7	7.14	831,854	01	97
3959	16073	40.6	35	3	8.2	7.53	823,854	12	50
3960	16079	40.7	45	13	10	F	832,837	FF	RR
3961	*2750*	40.7	59	58	9	8.90	829,850	11	11
3962	16080	40.8	45	8	5.9	5.42	502,514,844	100	424
3963	16085	40.9	66	10	3.8	3.77	459,460,514,	011	333
							844,845,846	021	273
3964	*2774*	41.1	59	58	9.5	9.50	829,850	11	00
3965	16096	41.6	30	22	8	8.20	823,836	11	20
3966	16100	41.7	60	37	4.7	4.28	459,460,525	101	252
3967	*2814*	41.7	65	2	9	9.03	831,836	00	00
3968	16105	41.7	70	21	8	8.36	826,838	01	41
3969	16103	41.8	39	57	5.4	5.11	459,460,525,	111	144

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
						831,854,855	001	797	4016	3393	50.5	45 0	9	9.28	832,837	00	53
3970	16110	42.0	35 21	6.6	6.13	823,854	12	74	4017	3401	50.6	60 2	9.5	9.88	827,834	01	47
3971	16112	42.1	34 50	8	7.53	823,854	01	35	4018	3400	50.6	60 16	9.5	9.68	827,834	10	57
3972	2835	42.2	25 6	9.5	N	830,850	NN	NN	4019	3406	50.7	60 4	9.5	9.83	827,834	00	36
3973	2840	42.2	60 0	9.5	9.86	829,850	01	44	4020	16297	51.6	44 59	8.5	8.78	832,837	00	33
3974	16115	42.3	25 24	7.8	7.55	830,850	10	11	4021	3463	51.7	45 8	9	9.08	832,837	11	31
3975	2853	42.3	60 3	9.5	9.90	829,850	33	44	4022	16324	52.5	79 56	8	7.50	841,844	11	50
3976	16122	42.7	60 4	8.5	8.04	829,834	01	22	4023	16331	52.7	59 53	7.3	6.87	526,827	21	66
3977	2910	43.1	60 0	9	8.80	829,834	00	30	4024	3533	52.8	30 6	9.5	10.10	823,836	00*	96
3978	16133	43.4	66 15	5.3	4.69	459,460,514	102	55p	4025	3549	53.0	54 58	8.5	8.90	825,838	11	11
3979	16138	43.6	35 26	7.2	6.63	823,854	12	29	4026	16341	53.2	55 45	6.1	5.58	459,516,525	212	044
3980	2937	43.6	45 2	8.5	8.58	832,837	11	11	4027	16345	53.3	40 23	7	6.88	831,854	11	11
3981	2964	44.2	30 6	8.5	8.70	823,836	00	22	4028	3585	53.5	60 6	9.5	9.32	526,827	00	23
3982	16147	44.5	59 52	7.8	7.30	829,834	00	22	4029	16351	53.5	70 11	7.0	6.96	826,838	01	52
3983	2984	44.5	60 4	9.5	9.64	829,834	12	61	4030	16360	53.8	25 21	6.7	6.53	147,830,850	331	5p5
3984	16148	44.6	50 12	8.5	8.24	472,832	23	33	4031	3611	54.0	25 12	9	9.60	830,850	22	66
3985	16152	44.6	83 39	9.5	F	854,855,857	FFF	RRR	4032	16365	54.1	45 16	6.8	6.63	832,837	21	12
3986	16150	44.7	50 10	7	7.09	472,832	11	77	4033	3631	54.2	60 15	9.5	9.87	526,827,834,	433	447
3987	16151	44.8	63 14	4.9	4.62	459,460,525	202	944							855,857	40	44
3988	3022	45.1	29 58	9	9.85	823,836	01	66	4034	16370	54.3	39 59	8.2	8.68	831,854	00	11
3989	16166	45.1	83 37	10	N	854,855,857	NNN	NNN	4035	3650	54.7	30 2	9	9.29	158,823	22	33
3990	16162	45.2	69 40	5.6	4.92	459,460,525	111	957	4036	3652	54.7	35 1	9	9.58	823,854	00	46
3991	3035	45.3	29 59	9	9.15	823,836	21	22	4037	3658	54.7	59 59	9.5	9.72	526,827	11	22
3992	3056	45.5	75 5	9	9.34	831,837	21	13	4038	16380	54.7	60 14	8	8.07	526,827	21	41
3993	3060	45.6	60 14	8.3	8.40	829,834	22	22	4039	16382	54.7	77 40	5.0	5.06	459,525,844,	302	411
3994	3091	46.1	40 12	9	9.34	831,854	01	31							845,846,850,	111	511
3995	16179	46.1	44 37	5.0	4.59	459,460,844	201	464							854	2	1
3996	3101	46.3	70 15	9	9.51	826,838	11	55	4040	3667	54.9	55 1	9	9.00	825,838	00	22
3997	3116	46.5	40 8	8	7.84	831,854	10	27	4041	16395	55.3	30 2	8.5	8.14	158,823,836,	500	111
3998	3118	46.5	65 14	9.5	9.48	831,836	32	00							855,857	R3	36
3999	3126	46.6	35 17	9	9.53	823,854	01	33	4042	16399	55.4	60 8	10	F	526,827	FF	RR
4000	16192	46.7	30 16	6.2	5.94	459,460,844,	120	311	4043	3727	55.8	55 6	9	8.86	825,838	11	11
						845	1	3	4044	3745	56.1	39 59	10	9.64	831,854	21	14
4001	16200	47.0	64 39	5.5	5.11	459,516,525	001	144	4045	3752	56.3	60 15	9.5	F	526,827	FF	RR
4002	16206	47.2	56 26	6.1	5.65	459,516,525	111	242	4046	3769	56.5	35 18	9.5	10.03	823,854	10	58
4003	3167	47.2	59 58	9.5	9.60	829,834	11	11	4047	3772	56.6	35 1	9	9.23	823,854	12	22
4004	3199	47.7	59 59	9	9.04	829,834	21	20	4048	3790	56.8	60 17	9.5	9.77	526,827	21	33
4005	16217	47.9	33 21	4.5	4.47	459,776,844,	111	155	4049	3795	56.8	60 13	8.7	8.82	526,827	00	03
						845	0	5	4050	3798	56.9	60 13	10				
4006	16226	48.4	64 51	7.3	7.43	831,836	00	11	4051	3799	56.9	60 16	9.5	9.62	526,827	00	11
4007	3239	48.4	70 16	9	9.31	826,838	00	31	4052	16428	57.1	30 3	9	8.24	158,823	10	10
4008	16236	48.8	25 16	8.8	8.80	830,850	11	03	4053	3826	57.3	55 0	9	9.46	825,838	11	33
4009	16243	49.2	30 21	7.5	7.40	823,836	11	47	4054	16438	57.3	85 4	6.6	5.86	514,776,822,	110	6.7
4010	16252	49.7	25 9	5.8	5.60	148,830,850,	112	622							857,858	11	41
						855	2	8	4055	3848	57.4	70 18	8	8.11	826,838	11	44
4011	3334	49.7	60 7	8.5	8.68	827,834	01	25	4056	16439	57.5	54 58	8.8	7.90	825,838	11	14
4012	3341	49.9	59 59	9.5	9.73	827,834	22	25	4057	16441	57.6	68 38	6.5	6.10	459,841,844	112	141
4013	3344	49.9	60 16	9.5	10.18	827,834	12	7n	4058	3863	57.9	39 59	9.5	9.58	831,854	11	16
4014	16265	49.9	82 43	8.8	8.45	841,844,845	100	414	4059	16451	58.0	62 45	4.7	4.47	459,516,525	101	50p
4015	3363	50.3	35 6	8.8	9.13	823,854	10	13	4060	3886	58.1	55 9	9	9.86	825,838	10	44

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4061	*3887*	58.1	65	16	8	8.08	831,836	11	44
4062	*3899*	58.2	55	14	9	8.86	825,838	12	11
4063	16458	58.5	41	52	5.7	5.36	459,525,844	221	344
4064	*3937*	58.8	50	15	8.5	8.14	472,832	23	44
4065	*3938*	58.9	30	4	9	9.49	158,823	11	35
4066	16479	59.2	62	36	5.3	4.94	459,516,525	100	163
4067	16481	59.5	67	46	6.0	5.43	459,522,525	010	265
4068	*3976*	59.6	50	0	8.5	8.66	472,832,855,	r14	112
							857,858	30	12
4069	16484	59.6	75	57	5.6	4.93	459,522,525	010	488
4070	16488	59.8	60	24	6.6	5.92	526,827	00	9p
4071	16492	59.8	75	7	7.8	7.92	831,837,855,	24R	411
							857,858	12	41
4072	*4000*	59.9	35	5	8.5	8.93	823,854	10	14
4073	*4013*	0.1	25	15	9	9.50	162,830	11	.5
4074	*4029*	0.3	40	18	9	9.58	831,854	00	66
4075	*4043*	0.6	40	15	8.5	8.94	831,854	10	11
4076	16508	0.7	64	59	6.9	6.38	831,836	00	p8
4077	16512	0.8	35	8	6.2	6.45	459,522,525	110	4.4
4078	*4061*	0.9	25	14	8.8	9.10	162,830	00	.3
4079	16534	1.2	65	9	7	5.88	831,836	11	p6
4080	16535	1.2	65	9	8.5				
4081	16529	1.2	85	13	8.8	8.18	514,822,841	011	603
4082	*20*	1.6	45	0	9	9.54	829,837	12	35
4083	16541	1.7	64	3	4.7	4.31	459,522,525	110	333
4084	*40*	1.9	40	16	9.5	9.68	826,837	22	25
4085	*58*	2.1	30	9	8	8.62	158,836,855,	602	446
							857,858	12	64
4086	16555	2.4	45	1	7.2	7.24	829,837	12	66
4087	*81*	2.6	60	10	9	9.03	502,526,830,	330	000
							855,857	21	00
4088	16560	2.6	74	48	5.8	5.11	459,522,525	122	677
4089	16566	2.9	50	6	5.8	4.79	459,460,514	113	999
4090	16565	2.9	50	12	8.5	6.37	829,832	22	4p
4091	16567	3.0	60	13	7.5	7.62	502,526	22	69
4092	16570	3.1	48	8	6.1	5.65	459,460,522	201	424
4093	16572	3.2	50	10	2.8	2.81	459,460,514,	211	733
							522,844,845	201	238
4094	16574	3.2	60	17	6.8	6.22	502,526	11	pp
4095	*135*	3.5	40	13	9	9.04	826,837	10	02
4096	16588	3.7	43	46	6.1	6.03	460,522,844	020	010
4097	*156*	3.7	55	4	9	9.21	776,825	00	22
4098	*153*	3.7	55	10	9	9.51	776,825	11	55
4099	16589	3.8	40	40	5.9	5.74	460,844,845	110	211
4100	*185*	4.2	70	17	9	8.92	823,832	32	11
4101	*189*	4.3	54	58	9	9.56	776,825	22	44
4102	16619	5.3	83	13	8	7.42	157,514,844	101	.86
4103	*262*	5.6	60	17	9.5	9.91	526,830	00	44
4104	16630	5.8	40	23	8	7.44	826,837	12	64
4105	16632	5.9	44	52	7.0	6.38	829,837	00	46

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4106	*288*	6.0	75	2	9.5	9.62	830,831	11	11
4107	16652	6.4	51	48	4.5	4.15	460,522,844	021	603
4108	16654	6.5	30	2	8.5	7.89	158,836	00	11
4109	16656	6.6	50	24	8	7.67	829,832	11	53
4110	*349*	6.7	50	12	8.5	8.57	829,832	22	21
4111	*344*	6.7	55	11	9.5	10.16	776,825	00	p7
4112	16661	6.8	25	23	8	7.30	162,826	00	.1
4113	*373*	7.1	55	2	8.5	8.86	776,825	11	44
4114	*377*	7.2	55	12	9	9.71	776,825	01	52
4115	*394*	7.5	25	16	8.6	8.95	162,826	01	25
4116	*403*	7.7	50	6	8.5	8.97	829,832	11	20
4117	*402*	7.7	60	6	9.2	9.66	526,830	21	55
4118	*401*	7.7	70	13	8.8	8.32	823,832	12	52
4119	*415*	7.9	70	14	9				
4120	*420*	7.9	50	12	8.5	9.37	829,832	11	42
4121	*435*	8.1	60	7	9	9.06	526,830	10	11
4122	16688	8.2	38	22	6.1	6.04	460,844,845	211	123
4123	*441*	8.2	45	4	9	9.04	829,837	12	02
4124	*450*	8.3	60	2	9.5	9.46	526,830	10	20
4125	*475*	8.7	40	1	9.5	9.48	826,837	11	33
4126	16698	8.7	54	55	7.5	7.26	776,825	01	22
4127	16700	8.8	45	10	6.5	5.36	460,522,844	001	233
4128	*488*	8.9	34	59	9.5	9.98	823,838	11	55
4129	*518*	9.3	50	13	9	9.27	829,832	11	51
4130	*523*	9.4	25	18	9	9.65	826,836	10	66
4131	*533*	9.5	55	14	8.5	8.41	776,825	00	44
4132	*536*	9.6	55	14	9				
4133	16709	9.6	87	51	6.7	6.68	514,841,844,	020	881
							845,846,850,	031	221
							854	1	1
4134	16726	9.8	58	11	3.4	3.08	459,460,514,	043	154
							517,844,845,	003	231
							846	0	4
4135	*549*	9.9	80	13	8.5	8.02	514,841	01	55
4136	*569*	10.1	25	17	8.8	9.20	826,836	11	22
4137	16742	10.6	55	9	9	8.26	776,825	21	55
4138	*604*	10.7	65	6	8	8.34	782,831	01	31
4139	16743	10.7	70	16	8.5	8.42	823,832	01	11
4140	*613*	10.8	59	58	9.2	9.31	526,830	11	35
4141	*621*	10.9	55	6	9.5	10.16	776,825	32	77
4142	*625*	10.9	70	14	9	9.67	823,832	00	52
4143	*649*	11.5	80	1	9	8.72	514,841	12	31
4144	16756	11.7	65	8	6.7	6.23	782,831,844,	203	424
							845,846	01	33
4145	*683*	11.9	25	10	9	9.50	826,836	11	75
4146	*682*	11.9	65	10	8.8	9.24	782,831	12	23
4147	16761	12.1	67	24	4.7	4.15	460,517,522,	114	2p8
							844,845,846,	012	320
							850	2	2
4148	16766	12.5	78	45	4.6	4.34	514,522,841,	111	525

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.
		m.	° ′					
						844	0	5
4149	728	12.7	35 16	8.5	8.63	823,838	10	11
4150	724	12.7	60 7	9	9.11	526,830	00	11
4151	726	12.7	65 6	8.5	8.60	782,831	00	61
4152	737	12.8	55 16	9	9.96	776,825	22	88
4153	16778	13.0	63 26	4.6	4.25	460,517,522	122	2p0
4154	748	13.1	29 58	9	10.09	158,834	00	6n
4155	767	13.4	55 13	8.5	9.16	776,825	10	44
4156	769	13.5	65 13	9.5	9.54	782,831	01	00
4157	16793	13.6	54 35	5.8	4.97	460,517,522	100	577
4158	792	13.8	65 16	9.5	9.40	782,831	00	11
4159	799	13.9	25 7	9.5	9.75	826,836	10	66
4160	814	14.3	35 9	8.5	8.58	823,838	00	11
4161	834	14.7	25 16	9	10.00	826,836	11	58
4162	16816	14.9	25 0	8.5	9.10	826,836	11	33
4163	846	14.9	60 16	9.5	9.81	526,830	22	33
4164	856	15.0	35 7	9	9.73	823,838	01	22
4165	16817	15.0	65 17	6.8	6.40	782,831	12	6p
4166	861	15.1	50 13	9	9.27	829,832	11	33
4167	860	15.1	55 11	9.5	10.01	776,825	00	55
4168	16818	15.1	65 15	8.2	8.34	782,831	21	55
4169	875	15.4	35 15	9	9.33	823,838	12	11
4170	881	15.5	60 0	9.5	9.66	526,830	32	25
4171	885	15.6	30 1	8	8.54	158,834	01	55
4172	16827	15.7	65 16	8.8	8.64	782,831	22	12
4173	16835	15.9	59 51	4.0	3.53	459,460,514,	110	053
						522,844,845	101	555
4174	918	16.0	30 0	8.8	9.54	158,834	01	27
4175	953	16.6	35 4	9	9.48	823,838	00	55
4176	16845	16.6	66 58	5.8	5.30	460,517,522	220	555
4177	962	16.8	65 3	8	7.94	782,831	11	13
4178	964	16.8	65 8	9	8.74	782,831	11	12
4179	16853	16.9	34 57	7.3	6.76	823,838,855,	121	224
						857,858	14	04
4180	1014	17.5	45 6	8	7.54	829,837	01	55
4181	1020	17.6	25 8	8.8	8.90	826,836	11	71
4182	16859	17.6	85 35	6.9	6.32	514,841,844	110	p95
4183	1022	17.7	45 9	9.5	9.88	829,837	11	49
4184	1031	17.9	35 16	9	9.53	823,838	12	55
4185	1044	18.1	50 4	8.5	8.72	829,832	01	12
4186	16885	18.2	65 9	8	8.90	782,831	23	11
4187	16894	18.3	34 51	5.5	5.44	460,517,522	211	431
4188	1070	18.5	30 8	9.5	9.44	158,834	12	44
4189	1068	18.5	30 13	9	9.59	158,834	11	66
4190	16896	18.5	38 21	6.1	6.14	460,522,844	200	121
4191	1103	19.1	25 0	8	8.30	826,836	11	32
4192	1101	19.1	60 15	9.5	9.81	526,830	00	33
4193	1112	19.2	25 1	9.8	10.05	826,836	01	58
4194	16905	19.3	60 21	7.8	7.11	526,830	00	77
4195	1113	19.3	65 18	9	9.24	782,831	22	22

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.
		m.	° ′					
4196	1111	19.3	70 10	8.5	8.17	823,832	11	00
4197	1143	19.6	40 7	8.5	8.48	826,837	22	00
4198	16918	19.7	65 12	6.9	6.40	782,831	12	46
4199	16923	19.8	41 57	6.6	6.18	460,517,522	021	202
4200	16925	20.0	25 26	7.0	7.05	157,826	10	20
4201	1167	20.0	45 4	9	8.78	829,837	00	10
4202	16929	20.1	34 38	5.8	5.84	460,517,522	002	100
4203	1183	20.3	25 9	8.9	9.05	157,826	10	05
4204	1184	20.3	40 18	10	9.98	826,837	11	55
4205	1196	20.5	25 1	9.0	9.20	157,826	22	42
4206	1197	20.5	25 13	10	10.05	157,826	01	08
4207	16946	21.1	50 53	5.7	5.07	460,517,844	010	741
4208	16942	21.1	62 32	1.5	1.02	459,460,514,	013	005
4209	16943	21.1	62 32	1.8		517,522,844,	232	025
						845,846,850,	204	055
						854	1	p
4210	1212	21.1	75 12	9	9.52	830,831	00	55
4211	1238	21.4	60 12	9.5	9.51	526,830	11	00
4212	16957	21.6	32 16	5.6	5.64	460,517	200	121
4213	16952	21.7	83 15	7.0	6.65	167,514,844	122	.64
4214	1264	21.8	60 13	8.5	8.16	526,830	12	66
4215	1263	21.8	60 17	9	9.21	526,830	00	13
4216	1276	21.9	30 6	9	9.64	158,834	12	16
4217	16960	21.9	55 11	7.2	7.21	776,825	00	62
4218	16967	22.1	55 14	9.8	10.31	776,825	01	88
4219	16966	22.1	55 16	8.8	8.96	776,825	10	22
4220	16973	22.3	25 13	10	F	157,826,836	FFF	RRR
4221	16972	22.4	69 59	8	7.67	823,832	11	35
4222	16976	22.6	49 40	4.3	4.14	460,517,844	221	917
4223	1324	22.7	25 6	8.7	9.30	157,826	11	83
4224	16991	23.0	38 29	5.9	5.71	460,517,844	221	111
4225	16990	23.1	75 4	8.2	8.32	830,831	00	11
4226	1354	23.2	55 0	9	9.46	776,825	11	53
4227	16992	23.2	55 50	6.2	6.17	460,517,522	221	000
4228	1357	23.3	69 58	9.2	9.92	823,832	21	44
4229	16996	23.5	50 5	7.5	7.82	829,832	12	33
4230	16995	23.6	60 15	8.2	7.86	526,830	10	63
4231	1402	24.0	30 16	9	9.49	158,834	11	n7
4232	17014	24.4	55 58	5.9	5.67	460,517,522	012	333
4233	17018	24.6	35 16	9	8.43	823,838	01	11
4234	17026	24.7	60 26	7	6.86	526,830	01	33
4235	17034	24.8	29 59	9	9.54	158,834	23	27
4236	17021	24.8	74 51	7.2	7.47	830,831	01	30
4237	17037	24.9	30 0	8.2	8.46	158,834,836,	502	003
						855,857	32	53
4238	1455	24.9	30 6	9	9.49	158,834	00	75
4239	1474	25.4	65 6	9.5	9.70	782,831	11	55
4240	1482	25.5	30 2	9	9.86	158,834,836	111	474
4241	17050	25.6	30 7	8.5	7.70	834,836	11	15

12h

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4242	17048	25.6	56	33	2.0	1.55	162,459,460,	R11	244
							514,517,844,	110	444
							845,846,850,	014	444
							854	2	9
4243	17051	25.7	60	7	10	9.76	526,830	10	13
4244	*1499*	25.9	70	5	9.5	9.47	823,832	11	53
4245	17061	26.1	72	27	6.2	5.96	162,459,844	001	112
4246	17071	26.3	30	25	7.0	6.95	834,836	10	00
4247	17072	26.5	71	35	4.0	4.01	162,459,460,	202	280
							514,844,845,	211	0p8
							846	1	2
4248	*1554*	26.6	35	0	9.5	9.83	823,838	10	33
4249	*1550*	26.6	35	6	9.5	9.28	823,838	00	03
4250	17075	26.7	74	53	7.4	7.87	830,831	12	41
4251	*1582*	27.1	25	5	8.7	8.88	826,836,855,	135	111
							857,858	11	11
4252	*1584*	27.2	65	9	9.5	10.04	782,831	10	85
4253	17093	27.3	44	54	7.2	7.34	829,837	01	12
4254	17099	27.5	60	23	8	8.16	526,830	32	02
4255	*1606*	27.6	55	1	9	9.71	776,825	23	77
4256	17105	27.8	50	6	7.2	7.42	829,832	12	14
4257	*1682*	28.8	30	12	9	9.55	834,836	01	66
4258	*1680*	28.8	40	16	8.5	7.98	837,855,857,	240	200
							858	2	5
4259	*1699*	29.1	45	12	9.2	9.44	829,837	01	44
4260	*1711*	29.3	25	8	9	10.05	826,836	01	85
4261	17130	29.3	44	7	6.2	5.83	162,459,844	001	334
4262	*1762*	30.3	35	16	9	8.98	823,838	11	22
4263	17141	30.3	40	28	5.7	5.48	162,459,501,	312	213
							522	2	3
4264	17149	30.6	39	19	6.4	5.95	162,459,844	111	010
4265	*1773*	30.6	50	6	9	8.42	829,832	10	21
4266	*1789*	30.7	35	16	8.8	8.93	823,838	10	11
4267	*1781*	30.8	45	8	8.8	8.88	829,837	00	11
4268	*1801*	31.0	60	10	9.5	9.56	526,830	32	11
4269	*1808*	31.2	45	10	8.8	9.08	829,837	11	33
4270	17156	31.3	68	35	2.9	2.91	162,459,460,	101	376
							514,517,844,	212	41p
							845	2	6
4271	*1846*	31.9	40	15	8	8.18	501,837	00	00
4272	*1840*	31.9	50	17	9.5	9.52	829,832	10	03
4273	*1836*	31.9	70	6	8.5	8.57	823,832	00	21
4274	17183	32.2	30	1	9.2	9.35	834,836	10	64
4275	17184	32.3	25	4	9.2	9.80	826,836	11	86
4276	17180	32.3	47	59	4.4	3.99	162,459,522	220	705
4277	17187	32.4	24	58	8.8	9.20	826,836	11	44
4278	*1868*	32.4	65	17	9	8.50	782,831	11	13
4279	17188	32.5	55	23	7.3	6.96	776,825,825	122	528
4280	17197	32.9	30	12	8.8	9.10	834,836	00	36
4281	*1898*	32.9	35	13	9.2	9.48	823,838	22	03
4282	*1894*	32.9	49	58	8.5	9.12	829,832	10	63
4283	17191	32.9	74	49	6.7	6.67	830,831	01	22
4284	*1924*	33.5	65	9	9	8.84	782,831	22	30
4285	*1935*	33.6	60	0	9.5	9.51	526,830	00	00
4286	17216	33.7	29	52	6.4	5.95	536,834,836,	R10	022
							844,845	12	02
4287	*1943*	33.7	55	6	8.2	8.61	776,825	12	61
4288	*1953*	33.9	45	16	9.5	9.64	829,837	10	86
4289	17234	34.4	39	26	5.2	4.71	162,459,844	212	p35
4290	17229	34.4	70	0	8	7.52	823,832	10	35
4291	17237	34.5	40	12	9	9.12	501,837	10	63
4292	*2017*	34.9	40	5	8.5	8.88	501,837	11	74
4293	*2030*	35.2	45	14	9	9.38	829,837	11	64
4294	17269	36.0	48	24	2.4	2.36	162,459,460,	020	471
							514,517,844	202	926
4295	17263	36.0	68	51	var.	var.	844,845,846,	213	212
							850	0	2
4296	*2079*	36.1	34	58	10	9.83	823,838	10	33
4297	17270	36.2	59	8	6.0	5.04	167,459,522	111	5p8
4298	*2084*	36.4	60	6	9.5	9.41	526,830	11	12
4299	17287	36.6	60	28	7.2	7.26	526,830	01	27
4300	17296	36.9	62	30	6.1	5.98	162,459,522	201	422
4301	17300	37.1	48	16	5.4	4.63	162,459,522	102	pp9
4302	17301	37.1	55	24	6.5	6.16	776,825,844	220	424
4303	*2131*	37.2	65	7	8.8	9.00	782,831	12	22
4304	*2140*	37.3	50	16	8.5	8.82	829,832	01	33
4305	*2154*	37.5	25	7	9	9.65	826,836	12	66
4306	*2153*	37.6	60	10	9.5	9.16	526,830	10	34
4307	17315	37.8	45	3	8.2	8.34	829,837	10	21
4308	17325	38.2	34	52	8	7.88	823,838	11	17
4309	17347	38.8	59	55	8	8.06	526,830	10	11
4310	17366	39.7	60	26	5.7	4.71	167,459,522	101	p99
4311	*2302*	40.0	60	0	9.5	9.16	526,830	32	24
4312	17374	40.1	67	33	3.4	3.26	167,459,460,	110	p10
							514,844,845	110	722
4313	17381	40.3	45	18	7.8	7.64	829,837	12	42
4314	*2338*	40.4	30	16	9	9.19	536,834	33	22
4315	17384	40.4	45	9	9	9.28	829,837	00	33
4316	*2333*	40.4	60	17	9	8.46	526,830	21	53
4317	17390	40.6	55	56	5.4	4.93	167,459,522	201	p93
4318	*2344*	40.6	59	59	9.5	9.16	526,830	32	10
4319	17241	40.9	89	15	7.5	6.56	151,841,844	221	.9p
4320	*2379*	41.3	65	5	9.5	9.84	782,831	10	33
4321	*2393*	41.5	55	1	9.5	10.11	776,825	22	66
4322	*2401*	41.6	50	9	9	9.77	829,832	00	86
4323	*2403*	41.7	65	5	9.5	9.54	782,831	01	00
4324	17411	41.8	59	8	1.7	1.49	167,459,460,	T31	703
							514,517,522,	021	255
							844,845,846,	502	550
							850	1	5

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S. M. P.	Design.	R. A. 1900.	S. Dec 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4325	17401	41.8	80	9	7.0	7.24	147,155,525	024	n.2
4326	*2447*	42.1	30	10	9	9.42	536,834,836,	542	444
							854,855	32	46
4327	17429	42.7	35	9	8.5	8.33	823,838	01	11
4328	17432	43.0	65	3	7.8	7.60	782,831	00	14
4329	17437	43.2	45	1	8.8	9.04	829,837	10	52
4330	*2505*	43.4	60	7	8.5	8.11	526,830	22	47
4331	*2516*	43.6	60	9	10	9.11	526,830	22	54
4332	*2539*	43.8	30	13	9	9.39	536,834	22	44
4333	*2534*	43.8	40	5	9.5	9.78	501,837	11	88
4334	17444	43.9	40	14	7.4	6.98	501,837	00	04
4335	17446	44.0	45	17	8	8.64	829,837	12	44
4336	*2569*	44.1	30	16	8.5	8.74	536,834	23	22
4337	*2575*	44.2	30	6	8.5	9.82	172,536,834,	0R4	8n6
							836,854	12	66
4338	*2564*	44.2	54	59	9.5	10.01	776,825	00	88
4339	17453	44.3	59	51	7.5	5.96	502,526	23	p0
4340	17450	44.3	62	6	7.2	6.51	167,517,522	110	353
4341	17440	44.4	84	35	6.0	5.37	167,501,514,	141	656
							825,826,827,	113	.45
							857	0	6
4342	17456	44.6	60	7	10	9.20	502,526	NA	N4
4343	17465	44.8	25	18	8.5	8.45	157,826	10	34
4344	17468	45.0	30	2	7.2	7.82	172,536,834,	1R2	833
							836,846	02	33
4345	17466	45.1	60	4	9.5	9.52	502,526	11	00
4346	17471	45.2	52	14	6.2	5.88	167,517,522	101	103
4347	17473	45.3	33	27	5.3	5.12	167,517,844	210	827
4348	*2642*	45.6	65	18	9	9.14	782,831	21	31
4349	*2684*	46.3	25	17	9	9.46	157,826,836,	423	675
							854,855	03	35
4350	*2720*	46.7	30	6	8.2	8.57	172,536,834,	1R0	133
							836,846	11	11
4351	17501	47.3	60	11	9.8	F	502,526	FF	.R
4352	17504	47.4	59	47	6.3	5.78	167,517,522,	420	344
							844,845,846,	201	404
							850	0	4
4353	*2746*	47.5	35	12	8.3	8.28	823,838	22	31
4354	17506	47.5	48	24	5.0	4.36	167,517,522	001	p64
4355	*2744*	47.5	50	3	9.5	9.72	829,832	01	22
4356	*2750*	47.6	50	0	9	9.32	829,832	01	33
4357	17510	47.7	59	48	7.2	R			
4358	17517	47.8	59	47	8.2	R			
4359	*2771*	47.8	50	14	9.5	9.77	829,832	22	66
4360	17515	47.8	60	11	8.5	9.42	502,526	11	44
4361	17521	47.9	39	38	4.4	4.31	167,517,844	111	925
4362	17518	47.9	59	50	6.7	6.11	167,502,517,	230	0p4
							522,526	10	57
4363	*2804*	48.6	65	17	9	9.04	782,831	00	00
4364	*2814*	48.6	25	12	8.6	8.70	157,826,836,	111	552

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							854,855	12	25
4365	17540	48.7	58	36	5.6	4.84	167,517,522	120	p79
4366	17542	48.8	56	37	5.5	5.42	167,517,522	231	064
4367	17541	48.8	56	38	4.4	4.29	167,517,522	110	952
4368	*2855*	49.4	25	17	9.5	9.65	157,826	12	96
4369	17561	49.5	60	6	9.2	9.02	502,526	00	22
4370	*2858*	49.6	50	4	8.5	8.77	829,832	11	33
4371	17568	49.8	42	22	6.1	5.40	517,844,845	110	464
4372	*2877*	49.9	65	16	9	9.64	782,831	10	44
4373	17572	50.1	56	17	6.0	5.62	167,517,522	021	433
4374	*2888*	50.1	65	8	9.5	9.10	782,831	11	61
4375	*2879*	50.2	75	6	9	9.22	830,831	11	24
4376	17580	50.4	55	1	7	6.76	776,825	10	72
4377	*2913*	50.5	40	12	9	9.02	501,837	10	22
4378	*2909*	50.5	55	8	8.5	8.91	776,825	11	41
4379	*2903*	50.5	60	7	9	8.66	502,526	01	35
4380	*2908*	50.5	60	8	9.5	9.16	502,526	01	33
4381	17585	50.9	55	14	8.5	8.26	776,825	11	32
4382	17589	51.0	55	6	8.5	9.11	776,825	01	66
4383	17598	51.1	35	5	8.5	8.73	823,838	01	22
4384	17608	51.3	50	39	5.8	5.21	147,844,845	221	243
4385	17599	51.3	65	6	7	6.94	782,831	01	11
4386	*2965*	51.5	70	0	9.5	9.42	823,832	10	14
4387	*2988*	51.8	60	16	10	9.43	502,526,854,	R40	111
							855,857	41	11
4388	17627	52.3	40	6	9	9.72	501,837	01	77
4389	*3033*	52.6	45	15	9	9.14	829,837	10	63
4390	17638	52.8	70	5	10	8.02	823,832	23	02
4391	17639	52.8	70	6	8.5				
4392	17641	52.9	70	17	9	8.87	823,832	00	11
4393	*3059*	53.1	70	9	9	9.47	823,832	11	23
4394	*3061*	53.1	55	7	9.2	10.01	776,825	12	88
4395	17656	53.4	45	25	7.6	8.04	829,837	10	55
4396	*3094*	53.8	55	2	8.2	8.86	776,825	11	44
4397	17668	54.0	60	3	8.5	8.33	502,526,854,	R22	225
							855,857	21	15
4398	*3120*	54.1	35	6	8.2	8.38	823,838	00	22
4399	17674	54.4	59	50	7.2	7.13	502,526,854,	R01	961
							855,857	31	14
4400	*3142*	54.5	35	5	9.2	9.78	823,838	00	68
4401	17685	54.8	30	4	9	9.20	172,536,834,	0R3	242
							836,846	14	42
4402	17693	55.4	71	0	3.7	3.60	147,167,459,	112	n43
							460,844,845,	421	814
							846	0	4
4403	17702	55.5	60	8	7	7.32	502,526	22	72
4404	17694	55.8	80	37	7.2	7.20	148,150,525	101	..3
4405	17715	56.1	55	2	8.8	8.81	776,825	22	63
4406	17725	56.4	30	18	7.5	7.59	155,158,172,	323	.14
							174,536	2R	11

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.		S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.						Cat.	S. M. P.		Phot.	Est.
		m.	°	'								m.	°	'					
4407	17728	56.6	60	12	7.8	7.72	502,526	11	53	4448	212	5.2	35	6	8	8.34	171,173	01	33
4408	17714	56.8	82	25	7.8	7.65	514,525,844	020	222	4449	206	5.2	54	59	8.2	8.71	776,854	21	22
4409	3302	57.2	30	6	9	9.52	155,158,174,	322	.25	4450	17925	5.4	41	42	6.1	5.78	147,162,844	101	120
							536	R	5	4451	237	5.5	30	1	9	9.38	158,174	22	44
4410	17696	57.5	87	1	7.2	7.10	514,525,841,	302	444	4452	17929	5.6	42	50	5.7	5.08	147,162,844	211	474
							844,845,846,	011	441	4453	17936	6.0	59	23	5.4	4.74	147,162,517,	311	197
							850	1	1								522,844,845,	112	758
4411	3323	57.6	50	9	8.2	8.62	829,832	10	44								846	1	5
4412	17747	57.7	48	59	5.8	5.00	147,167,522	022	1p8	4454	262	6.1	65	7	8.5	8.71	536,540	10	11
4413	3352	58.2	35	15	9.5	9.83	823,838	10	38	4455	276	6.2	35	5	9	8.34	171,173	01	32
4414	17755	58.2	40	19	7.3	7.12	501,837	10	11	4456	17942	6.2	60	2	8	8.26	502,537	12	13
4415	3356	58.3	30	3	9	8.97	155,158,174,	620	.32	4457	284	6.3	35	6	9.5	9.34	171,173	10	21
							536,834	R3	22	4458	271	6.3	65	6	9	9.01	536,540	00	00
4416	17764	58.4	25	16	7.2	8.10	157,826	00	33	4459	294	6.5	30	12	9	9.94	158,174	21	69
4417	17753	58.9	82	11	8	8.32	514,525,844,	221	232	4460	293	6.5	35	7	9.5	9.18	171,173	11	30
							845,846,850,	000	222	4461	17949	6.5	37	16	5.2	4.82	147,162,844	001	3p7
							854	1	2	4462	308	6.8	50	17	9.5	10.14	179,543	10	66
4418	17774	59.0	59	54	8	8.32	502,526	11	11	4463	17966	7.4	30	11	8.8	8.24	158,174	10	31
4419	17782	59.1	40	9	7	7.92	501,837	21	77	4464	17963	7.5	50	10	6.4	5.99	179,543,854	231	052
4420	3467	0.2	30	14	9.5	9.89	155,158,174	110	.59	4465	17970	7.6	34	48	8	8.08	171,173	33	13
4421	17803	0.3	55	4	6.9	6.81	776,825	00	72	4466	368	7.6	45	12	8.5	8.47	178,540	11	50
4422	17811	0.4	47	56	5.3	4.94	147,167,522	121	896	4467	17977	8.0	58	34	5.9	4.99	147,148,517,	402	8.7
4423	3474	0.4	60	15	9	10.31	502,537	22	n8								522,844,845,	002	687
4424	3485	0.5	30	14	9	9.26	155,158,174	531	.13								846	0	2
4425	17826	1.0	49	22	4.8	4.36	147,162,522	000	866	4468	395	8.1	25	13	9.8	9.88	157,542,854,	151	144
4426	17825	1.1	60	10	9.2	9.81	502,537	11	65								855,857	31	44
4427	17824	1.1	60	18	9.2	9.66	502,537	10	74	4469	17980	8.3	69	57	7.8	7.52	501,776	11	23
4428	17835	1.4	35	19	6.0	5.58	147,162,171,	003	24.	4470	17989	8.5	67	22	5.3	4.91	147,148,517	111	039
							173	3	2	4471	455	9.3	65	15	9.5	9.41	536,540	22	12
4429	10	1.6	45	2	9.5	9.47	178,540	11	32	4472	454	9.3	70	6	9	9.41	501,501,776	000	426
4430	12	1.6	45	12	8.5	8.57	178,540	11	21	4473	18017	9.5	39	52	8	7.82	501,782	01	22
4431	17844	1.7	52	55	6.1	5.89	147,162,522	211	311	4474	477	9.6	60	18	9	9.61	502,537	11	66
4432	17840	1.7	64	46	6	5.64	147,162,522,	113	244	4475	18030	9.9	30	2	9.2	9.38	158,174	00	44
							846,857	22	22	4476	507	9.9	30	12	9	9.78	158,174	00	08
4433	15	1.8	54	59	8.5	9.16	776,854	10	42	4477	530	10.1	25	17	9.2	9.15	157,542	01	50
4434	7	1.8	65	0	8.8	8.71	536,540	11	11	4478	523	10.1	50	17	8.2	8.80	179,543	22	03
4435	17855	2.2	29	54	7.2	7.84	158,174	10	32	4479	539	10.4	65	5	9.5	8.91	536,540	11	31
4436	17858	2.5	59	48	8	8.46	502,537	01	50	4480	18039	10.5	66	15	5.5	4.82	147,148,517	122	869
4437	17862	2.6	34	58	8	8.04	171,173	10	.0	4481	18060	11.3	30	59	5.7	5.16	147,151,522,	111	636
4438	126	3.7	45	15	9	8.92	178,540	01	91								776,832,836	122	434
4439	17894	3.9	30	4	8.5	9.48	158,174	00	n7	4482	18063	11.4	30	4	7.4	7.72	158,536,834,	2R0	325
4440	17887	3.9	70	16	8.5	9.62	501,776	22	66								854,855	43	77
4441	146	4.0	45	11	9	9.67	178,540	00	77	4483	18064	11.4	43	27	6.1	5.90	148,151,522	023	111
4442	147	4.1	35	13	9	9.08	171,173	11	61	4484	—	11.5	57	36	—	9.08	846,855,857	111	111
4443	143	4.1	60	15	8.5	9.51	502,537	22	7n	4485	629	11.7	40	1	9.5	9.57	501,782	11	66
4444	158	4.4	50	6	9.5	9.74	179,543	12	75	4486	634	11.8	40	8	8.8	9.17	501,782	11	47
4445	17875	4.5	83	56	8.5	9.04	514,525,553	043	235	4487	18067	11.8	59	52	8	7.66	502,537	12	32
4446	17911	4.8	25	0	8.5	7.55	157,542	12	56	4488	661	12.2	24	58	9.5	9.50	157,542	11	p3
4447	204	5.1	30	8	9	10.02	158,174,536,	44R	5n7	4489	667	12.5	65	14	9.5	9.36	536,540	01	12
							834,854	21	n8	4490	18098	12.6	30	12	8.8	8.79	158,536,543,	0R1	533

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						834,854	12	33
4491	18096	12.6	45 14	7.0	6.94	178,540,854	121	994
						855,857	41	11
4492	*689*	12.7	50 16	9	9.34	179,543	11	35
4493	18103	12.9	25 0	8.2	8.40	157,542	22	21
4494	18092	12.9	70 20	7.5	7.56	501,501,776,	226	221
						823,854,855	202	111
4495	18107	13.2	55 10	8	7.78	182,185	12	22
4496	18108	13.3	60 7	7.8	7.11	502,537	11	74
4497	18097	13.5	80 47	7.8	8.30	514,525,553	132	538
4498	18122	13.6	25 4	8.5	8.25	157,542	12	23
4499	*743*	13.7	60 0	9	9.51	502,537	11	33
4500	18127	14.0	55 14	9	8.68	182,185	12	32
4501	*782*	14.2	25 8	8	8.34	157,542,854,	522	043
						855,857	41	31
4502	*780*	14.4	60 5	8.5	9.41	502,537	11	44
4503	18139	14.5	52 13	6.1	5.72	148,151,517,	200	333
						522,545,844,	111	3.0
						845	1	3
4504	18140	14.6	55 17	6.7	6.18	182,185	23	38
4505	*799*	14.7	50 2	9	9.64	179,543	00	66
4506	18141	14.9	70 1	7.8	7.42	501,776	22	46
4507	18149	15.0	36 11	3.0	2.98	148,151,167,	211	82n
						517,522,844,	012	n25
						845	1	5
4508	*823*	15.0	40 16	9	9.52	501,782	01	55
4509	*822*	15.1	50 11	8.5	9.04	179,543	21	02
4510	18148	15.1	60 17	8.5	8.81	502,537	11	03
4511	18161	15.6	54 54	7.5	8.03	182,185	11	00
4512	18175	16.0	25 1	8.5	10.05	157,542	21	57
4513	*880*	16.1	55 1	8.5	8.62	182,185,857,	042	111
						858	2	1
4514	18172	16.1	60 27	6.5	6.60	502,537,545	211	p41
4515	18174	16.2	60 28	5.2	4.56	148,151,167,	203	p2p
						502	2	p
4516	*915*	16.6	35 10	9	8.34	171,173	01	53
4517	*934*	16.9	25 15	9.5	10.05	157,542	21	54
4518	*933*	16.9	30 17	8.5	8.88	536,543	22	42
4519	*910*	16.9	70 16	8.8	8.57	501,776	01	11
4520	18201	17.0	25 19	7.1	7.15	157,542	10	26
4521	18202	17.2	64 1	5.3	4.43	148,151,167	022	.pp
4522	18192	17.2	74 22	5.6	4.90	148,151,167	122	p8p
4523	*957*	17.4	30 2	9	9.38	536,543	22	44
4524	18203	17.5	69 54	7.7	7.22	501,776	11	68
4525	18209	17.6	54 52	8	8.73	182,185	00	22
4526	18211	17.7	45 0	7.8	8.40	178,540,854,	340	412
						855,857	31	42
4527	*988*	17.8	25 14	9.5	9.65	157,542	21	01
4528	*975*	17.8	45 18	9	9.24	178,540,854,	301	232
						855,857	32	24
4529	18216	17.9	44 57	7.6	7.77	178,540	11	02
4530	*965*	17.9	69 58	9.5	10.02	501,776	00	55
4531	18220	18.0	45 4	9	9.82	178,540	10	33
4532	*991*	18.0	45 13	9.5	9.62	178,540	10	11
4533	*1026*	18.4	35 2	9	8.94	171,173	12	24
4534	18236	18.6	50 3	8	8.54	179,543	10	00
4535	18227	18.6	70 6	6.1	5.88	148,151,167	000	322
4536	*1074*	19.2	35 16	8.5	8.78	171,173	11	22
4537	*1050*	19.2	70 1	9	9.02	501,776	00	50
4538	*1084*	19.7	65 7	9	8.96	536,540	01	00
4539	18212	19.7	85 19	7.0	7.20	514,553,844,	124	p20
						845,846,850	230	002
4540	*1119*	20.2	65 13	9	9.26	536,540	11	31
4541	18268	20.3	39 14	5.9	5.12	148,162,167	100	814
4542	18278	20.8	46 57	4	R	148,162,167,	RRR	RRR
						517	R	R
4543	18290	21.1	40 59	6.2	5.72	148,162,167	311	333
4544	18240	21.4	86 13	8	7.98	514,525,553	010	552
4545	*1226*	21.8	30 13	.9	9.68	536,543	22	75
4546	18308	22.0	24 58	8.5	8.60	157,542	11	21
4547	18307	22.1	55 16	7.8	7.30	182,185,855,	012	332
						857,858	51	35
4548	18315	22.2	30 16	8.5	8.23	536,543	12	33
4549	18318	22.2	35 9	7.2	8.44	171,173	01	14
4550	*1255*	22.4	44 59	8.5	8.67	178,540	11	22
4551	*1273*	22.6	30 12	9	9.88	536,543	00	44
4552	*1260*	22.6	60 12	9	9.34	526,537	01	33
4553	*1284*	22.8	35 12	9	8.94	171,173	23	21
4554	*1279*	23.0	64 59	8.5	7.61	536,540	01	91
4555	*1303*	23.2	40 13	9.5	9.62	501,782	10	46
4556	18335	23.3	45 1	6.8	6.83	178,540,545	200	p73
4557	18332	23.3	50 39	5.8	5.34	148,162,517	331	665
4558	18342	23.4	35 16	8	7.98	171,173	00	00
4559	18338	23.4	52 15	7.2	6.86	151	A	9
4560	*1335*	23.7	25 13	9	9.65	157,542	01	11
4561	18348	23.7	35 3	7.8	7.28	171,173	11	22
4562	*1323*	23.7	44 58	8.5	8.87	178,540	00	11
4563	18363	24.6	60 13	8	7.94	526,537	01	11
4564	*1394*	24.7	55 8	8.5	8.76	182,185,855,	010	323
						857,858	31	00
4565	18321	24.7	85 17	5.7	5.68	148,162,167,	432	331
						459,514,525,	001	41p
						823,858	10	11
4566	18366	25.1	64 49	7.0	6.71	536,540	10	53
4567	18376	25.2	38 54	4.5	3.95	148,150,517	111	545
4568	18390	25.6	25 9	7.8	7.40	157,542	00	14
4569	*1469*	25.9	40 10	9	9.62	501,782	01	46
4570	*1473*	26.0	40 13	9	9.07	501,782	11	13
4571	18369	26.0	80 14	9.5	9.25	514,525,553	130	312
4572	*1472*	26.5	75 2	10	9.80	776,782,830,	431	366

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
							831,855	32	33
4573	18407	26.6	65	7	6.7	6.41	536,540	00	86
4574	18374	26.8	83	24	7.8	7.39	272,525,553,	010	.44
							844	1	4
4575	18373	26.9	83	57	10	F	514,525,553	NFF	NRR
4576	18421	27.1	45	1	8.5	9.02	178,540	10	02
4577	1546	27.4	55	10	9	9.50	182,185,855,	120	235
							857,858	40	50
4578	1568	27.6	25	2	8.8	8.95	157,542	32	52
4579	1567	27.8	55	13	9.5	9.86	182,185,855,	010	444
							857,858	22	44
4580	1599	28.0	30	7	8.5	9.14	174,536	01	63
4581	1588	28.5	75	2	9	9.82	776,782	22	36
4582	18462	28.6	50	17	7.5	7.44	179,543	01	46
4583	1649	28.8	25	10	9	9.75	542,855	21	68
4584	1639	28.8	50	10	9	9.74	179,543	10	77
4585	1651	28.9	45	5	9.5	9.64	178,540,854,	210	414
							855,857	31	44
4586	18465	28.9	55	11	9	10.06	182,185,855,	120	686
							857,858	51	66
4587	1674	29.4	45	13	9	8.97	178,540	11	00
4588	1687	29.5	35	8	9	8.38	171,173	11	14
4589	1688	29.5	35	8	9.5				
4590	1685	29.5	45	4	9	9.20	178,540,854,	210	222
							855,857	22	24
4591	1713	30.1	65	16	9.5	9.36	536,540	01	11
4592	18485	30.7	75	11	6.3	6.55	545,552,553	002	111
4593	1765	30.9	50	10	9	9.44	179,543	01	44
4594	18498	31.2	69	56	6.7	5.87	501,776	01	9p
4595	18514	31.5	40	23	8	7.57	501,782	11	46
4596	1809	31.6	50	13	9.5	9.90	179,543	11	44
4597	1814	31.6	35	12	9.5	9.04	171,173	10	.5
4598	1818	31.7	35	12	9.5				
4599	18518	31.7	50	6	7.5	7.20	179,543	00	86
4600	1819	31.8	50	6	10				
4601	18525	31.9	49	51	6.9	6.60	179,543	22	46
4602	1822	32.0	60	13	9	10.00	526,537	11	55
4603	1839	32.2	60	18	9.5	9.14	526,537	01	12
4604	18526	32.3	70	17	7.1	6.50	501,776,854,	330	555
							855,857	34	35
4605	1883	32.7	35	0	8.5	8.98	173,542	22	55
4606	1878	32.9	60	16	9.5	9.54	526,537	01	03
4607	1924	33.4	30	15	9	9.25	174,543,854,	232	724
							855,857	44	44
4608	1918	33.5	60	2	8.8	8.50	526,537	22	35
4609	1912	33.5	60	3	8				
4610	18559	33.6	52	58	2.6	2.58	148,150,167,	024	844
							517,522,545,	123	p19
							552,553	12	11
4611	1938	33.7	45	3	9.5	9.42	178,540	12	44

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
4612	18568	34.0	39	33	6.2	5.75	148,150,167	212	422
4613	18570	34.0	50	2	7.5	7.50	179,543	10	57
4614	1972	34.2	45	12	8.5	8.22	178,540	10	03
4615	1971	34.2	45	13	9				
4616	1968	34.2	50	11	8.5	8.98	179,543,854,	222	502
							855	2	2
4617	1995	34.7	45	5	9.5	9.77	178,540	22	68
4618	18500	35.0	87	7	9	8.66	514,525,553	100	311
4619	18583	35.1	45	5	8	8.67	178,540	11	13
4620	1992	35.1	70	14	9.5	9.12	537,776	00	41
4621	18586	35.3	58	17	6.1	5.53	148,150,162,	212	145
							167	1	5
4622	18587	35.4	54	3	6.2	5.49	148,150,167	210	310
4623	18594	35.5	45	0	7.2	6.92	178,540	01	9p
4624	2049	35.6	30	3	9	9.54	174,543	01	55
4625	2061	35.8	40	2	9	9.77	501,782	11	68
4626	2065	35.8	40	7	9	9.42	501,782	01	44
4627	2075	35.9	30	5	9	9.78	174,543	00	88
4628	2099	36.3	45	6	9	9.42	178,540	10	14
4629	2105	36.4	35	4	9.5	9.58	173,542	00	36
4630	18614	36.6	50	17	7.0	6.24	179,543	22	pp
4631	2131	36.7	30	10	9	9.33	174,543,854,	422	353
							855,857	31	33
4632	2142	37.0	50	13	9	9.50	179,543	10	55
4633	2171	37.5	30	5	9.5	9.95	174,543,854,	312	855
							855,857	31	55
4634	2166	37.5	45	5	9	9.57	178,540	22	11
4635	2153	37.5	65	15	9	9.51	536,540	11	55
4636	2241	38.6	35	14	9.5	10.04	173,542	10	57
4637	2259	38.9	35	7	9.2	9.28	173,542	11	13
4638	18675	39.2	25	0	6.5	6.03	157,542,545	102	563
4639	18690	39.6	35	26	7	7.28	542,855	11	35
4640	2296	39.6	50	4	8.5	9.04	179,543	21	20
4641	18696	40.0	32	33	4.5	4.25	147,148,162	130	3p2
4642	2313	40.0	60	4	9	9.20	526,537	00	20
4643	2346	40.1	25	11	9.2	9.65	157,542	12	14
4644	2319	40.2	60	11	9	9.54	526,537	01	35
4645	2328	40.3	60	12	8.5	8.60	526,537	11	21
4646	18700	40.4	50	56	5.2	4.61	147,150,162,	320	8p3
							516,517,545,	101	44p
							553	0	8
4647	2372	40.5	45	15	9.5	9.47	178,540	00	55
4648	2382	40.6	25	2	9	9.55	157,542	21	24
4649	18708	40.6	29	59	8.8	8.08	172,543	00	.4
4650	2320	40.6	75	6	9.5	9.92	776,782	22	44
4651	18718	41.1	35	45	5.8	5.18	147,150,162	000	978
4652	2390	41.3	70	13	9	9.07	537,776	10	13
4653	18720	41.4	49	50	6.0	5.56	147,150,162,	124	432
							179,516,517	221	p43
4654	2410	41.7	70	8	9	9.22	537,776	00	24

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
4655	2425	41.9	70 1	9.5	9.92	537,776	22	47
4656	18731	42.0	55 7	8.2	8.38	182,185	12	46
4657	2443	42.1	60 18	8.5	9.00	526,537	00	25
4658	2424	42.1	75 5	9	9.56	776,782	10	41
4659	2467	42.4	50 14	8.5	9.54	179,543	11	p7
4660	2462	42.4	59 59	9	9.24	526,537	12	22
4661	18738	42.4	60 16	7.5	7.64	526,537	12	12
4662	18756	42.7	30 15	8.5	8.53	158,172	32	75
4663	2499	42.7	35 13	9.5	10.08	173,542,855,	132	369
						857,858	00	66
4664	2491	42.8	50 12	8.5	9.24	179,543	00	74
4665	18722	42.9	82 11	6.6	5.79	160,525,553,	101	.p7
						844,858	00	47
4666	2519	43.1	25 3	8.5	9.60	174,542	00	n6
4667	18760	43.1	35 12	10	6.44	173,542	23	p2
4668	18761	43.1	35 12	6.8				
4669	18768	43.3	30 13	8	7.68	158,172	33	00
4670	18765	43.3	40 2	7.1	7.37	501,782	11	66
4671	18769	43.4	40 2	7.1	7.18	501,782,854	0R0	8.8
4672	18772	43.5	41 12	3.7	3.54	147,150,151,	333	2p0
						162,516,517,	023	555
						553	2	p
4673	2544	43.5	55 4	9	9.73	182,185	11	n7
4674	2527	43.5	60 1	9.5	9.74	526,537,854,	144	222
						855,857	21	22
4675	18779	43.6	33 58	4.6	4.28	147,150,151,	442	73p
						516,517,545,	011	p32
						553	0	2
4676	18773	43.6	41 59	3.4	3.33	147,150,151,	213	631
						516,517,522	120	552
4677	2517	43.6	70 16	10	10.27	537,776	01	88
4678	2574	43.7	35 10	8.8	8.84	173,542	10	34
4679	2550	43.9	70 16	9	9.22	537,776	11	22
4680	2587	44.1	50 17	8.5	8.94	179,543	11	46
4681	18782	44.2	65 17	8.5	8.11	536,540	11	14
4682	2603	44.3	60 8	8.5	8.34	526,537	01	23
4683	2622	44.4	35 0	9.5	9.62	173,542,855,	431	864
						857,858	02	44
4684	18815	45.4	30 5	8.5	8.48	158,172	00	63
4685	18819	45.6	46 25	6.2	5.85	147,150,151,	423	223
						516,517,522,	143	224
						552	2	7
4686	18817	45.6	52 19	5.9	5.40	147,150,151	021	406
4687	2684	45.7	60 9	9	9.84	526,537	10	33
4688	2715	45.8	25 1	9.2	9.75	174,542	12	68
4689	2716	45.9	40 12	9	9.12	501,782,854	0R1	613
4690	18833	46.0	32 30	5	4.35	147,150,151	113	8pp
4691	18837	46.4	50 26	8	7.54	179,543	10	55
4692	18843	46.6	30 18	8	7.88	158,172	11	24
4693	2750	46.7	65 2	9.5	9.56	536,540	22	64

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot	Resid. Est.
		m.	° ′					
4694	2789	46.9	29 58	8.5	8.83	158,172	10	52
4695	2782	47.1	65 10	8.8	8.71	536,540	12	11
4696	18800	47.1	83 39	9	9.42	525,553,844,	NNN	NNN
						854,855,857	010	222
4697	18849	47.2	52 53	6.5	6.05	147,150,151,	043	004
						196,516,517,	310	.21
						522	0	2
4698	2793	47.2	55 3	8	9.03	182,185	11	55
4699	18850	47.3	45 9	8.8	9.42	178,540	01	14
4700	2786	47.3	65 4	9.5	9.71	536,540	10	22
4701	18855	47.4	31 27	5.5	4.88	147,150,162	000	488
4702	18802	47.4	84 19	9	9.02	525,553,844	220	002
4703	2838	47.7	35 9	8.5	8.82	173,542,855,	241	703
						857,858	03	03
4704	18863	47.7	35 11	6.0	5.72	147,150,162,	041	453
						173,516	01	p3
4705	2851	47.9	30 6	8.5	9.39	158,172,543,	130	846
						854,857	11	66
4706	18864	48.0	55 15	7.8	7.42	182,185,854,	232	611
						857,858	31	11
4707	2800	48.0	75 0	9.5	9.72	776,782	00	55
4708	18871	48.1	34 50	6.7	6.34	173,542	10	29
4709	2865	48.2	45 13	10	9.92	178,540	23	47
4710	18873	48.3	50 12	8.2	7.80	179,543	00	22
4711	18874	48.3	50 12	8.8				
4712	18885	48.6	34 58	9	8.68	173,542	00	21
4713	2895	48.6	45 16	9	9.42	178,540	12	12
4714	18887	48.8	51 41	6.1	5.83	147,150,162	120	243
4715	18897	49.3	46 47	2.7	2.81	147,148,162,	531	n1n
						196,516,517,	212	p32
						553	0	3
4716	18901	49.5	50 10	7.5	7.04	179,543	21	80
4717	18868	49.6	82 27	7.8	7.10	175,525,553	022	.9p
4718	2976	50.0	60 13	8.5	8.84	526,537	21	33
4719	18921	50.1	30 5	7.1	7.13	158,172	21	71
4720	3001	50.2	25 8	8.2	8.70	174,542	11	75
4721	2998	50.2	30 13	9	9.63	158,172	10	66
4722	3012	50.4	25 2	8.3	8.95	174,542	12	55
4723	3013	50.4	25 2	9.2				
4724	18920	50.4	63 11	5.7	4.76	147,148,162	111	7pp
4725	3014	50.5	35 3	9.5	9.30	173,542,855,	520	832
						857,858	13	33
4726	3019	50.9	65 9	9	8.21	536,540	22	33
4727	18931	51.0	65 18	6.8	6.21	536,540	01	44
4728	3064	51.3	29 59	9	9.88	158,543	11	77
4729	18948	51.8	65 17	9	9.21	536,540	23	23
4730	3096	52.1	60 2	9	9.54	526,537	10	55
4731	18960	52.2	41 36	4.1	4.04	147,148,162,	210	8pp
						516,517,522,	131	040
						545	0	4

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
4732	18968	52.5	44 19	4.2	4.05	147,148,162,	200	62p
						196,516,517,	521	530
						545	1	5
4733	*3120*	52.5	60 4	8	8.30	526,537	22	33
4734	18959	52.5	65 3	7.2	7.66	536,540	11	11
4735	18978	52.9	44 58	7	7.57	178,540	11	06
4736	18973	52.9	49 53	6.6	6.14	179,543	11	15
4737	*3149*	53.0	55 15	9	9.23	182,185	22	74
4738	*3173*	53.2	40 14	9.5	9.58	501,854	11	66
4739	*3146*	53.4	75 12	9.5	9.66	776,782	10	52
4740	*3198*	53.5	25 3	9	9.20	174,542	00	44
4741	18996	54.1	35 7	8.8	9.14	173,542	01	13
4742	*3252*	54.4	25 3	9.3	9.40	174,542	00	14
4743	*3230*	54.5	65 8	9	9.41	536,540	01	42
4744	19009	54.6	35 18	8	8.48	173,542	11	55
4745	*3281*	54.8	25 4	9.3	9.52	174,542,854,	403	200
						855,857	42	03
4746	*3300*	55.1	24 58	9.5	10.05	174,542	21	45
4747	*3285*	55.2	65 14	9.5	9.81	536,540	23	33
4748	19027	55.4	45 7	5.0	4.50	148,150,162	210	28p
4749	19014	55.6	76 19	var.	5.68	148,150,162,	542	323
						196,516,517,	712	311
						522,545,552,	113	376
						553	1	6
4750	19035	56.0	60 1	8.5	7.94	526,537	21	66
4751	19017	56.2	80 17	8.5	7.78	525,553,844,	321	472
						845,846,854,	121	424
						855	0	4
4752	*3350*	56.3	65 16	8.8	9.01	536,540	00	02
4753	19043	56.7	59 53	1.2	0.83	148,150,155,	222	522
						516,517,522,	234	422
						545,552,553,	110	272
						844	2	7
4754	19041	56.8	64 56	8	8.06	536,540	10	31
4755	*3401*	56.9	25 12	9.5	9.80	174,542	00	56
4756	*3351*	56.9	75 15	9.2	9.52	776,782	11	55
4757	19007	56.9	84 4	7.2	6.92	514,525,553,	410	161
						844,845,846,	212	131
						854	1	1
4758	*3395*	57.1	60 13	9	9.43	526,537,537	111	664
4759	19064	57.7	30 7	8.5	8.83	158,543	01	83
4760	*3416*	57.7	65 6	9.2	9.36	536,540	01	22
4761	*3475*	58.3	50 2	9.5	10.10	179,543	10	66
4762	*3456*	58.3	64 59	10	9.76	536,540	00	33
4763	19058	58.3	75 18	8	8.26	776,782	12	32
4764	*3492*	58.5	25 2	9.5	9.95	174,542	12	n7
4765	19081	58.7	35 10	7.2	7.28	173,542	00	52
4766	*3495*	58.7	50 1	9.5	9.64	179,543	22	11
4767	*3484*	58.7	60 10	9	9.35	526,537,854,	232	449
						857,858	32	66

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
4768	*3500*	59.1	65 1	9	9.41	536,540	22	11
4769	*3556*	59.6	50 14	9	9.44	179,543	01	44
4770	*3570*	59.8	45 9	9.5	9.47	175,178	22	55
4771	*3592*	59.9	30 7	8.5	9.08	158,543	11	93
4772	19107	59.9	40 42	4.8	4.59	148,150,155	112	8p.
4773	*3564*	0.1	69 57	9.5	9.32	537,776	11	13
4774	19115	0.3	59 59	8.5	8.20	526,537	22	26
4775	19129	0.8	35 52	2.2	2.19	148,150,155,	224	10p
						516,517,522,	111	323
						545,552,553,	010	222
						556,844	T1	p2
4776	19123	0.9	60 18	8	8.02	526,537,854,	230	202
						857,858	22	02
4777	*3627*	1.0	70 0	9.5	9.62	537,776	11	14
4778	19142	1.2	35 1	7.2	7.38	171,542	00	41
4779	*3678*	1.2	50 4	9.5	9.74	179,543,854,	311	552
						857,858	11	52
4780	*3660*	1.2	60 3	8.5	9.04	526,537	12	02
4781	*3692*	1.3	35 17	9	9.18	171,542	00	72
4782	19139	1.3	45 7	9	9.27	175,178	11	33
4783	*3681*	1.3	50 17	9.5	9.64	179,543	00	44
4784	*3673*	1.3	55 9	9	9.56	182,183,185	011	868
4785	19148	1.4	40 10	8	8.30	501,854,857,	414	333
						858	2	3
4786	*2*	1.5	35 8	8.5	8.88	171,542	11	41
4787	*3687*	1.6	65 9	9	8.74	536,540,854,	330	121
						857,858	03	11
4788	*7*	1.7	44 58	8.3	9.07	175,178	11	61
4789	*15*	1.8	45 16	9.5	9.97	175,178	11	55
4790	*8*	1.9	60 4	8.8	9.14	526,537	01	11
4791	19154	2.1	69 50	6.7	6.08	531,542	10	54
4792	*62*	2.3	30 4	9.5	9.91	158,174,855,	321	447
						857,858	01	49
4793	19165	2.6	60 6	8.2	8.20	526,537	11	03
4794	19172	2.8	45 6	9	8.92	175,178	01	11
4795	*68*	2.8	60 14	9	9.20	526,537	11	22
4796	*95*	3.0	45 5	9.2	9.47	175,178	11	50
4797	*118*	3.2	30 6	9	9.45	158,174,855,	421	064
						857,858	22	46
4798	19179	3.3	52 57	5.4	4.83	148,150,155	222	221
4799	*49*	3.7	80 6	9	9.98	563,564	01	35
4800	19190	3.9	45 26	8	7.62	175,178	32	44
4801	*173*	4.1	29 58	8.5	8.68	158,174	00	13
4802	19193	4.2	54 58	8	8.08	182,183,185,	1R2	113
						556,855	10	11
4803	19200	4.4	30 9	6.8	6.74	158,174	10	88
4804	19204	4.5	24 55	8	7.55	160,174	21	.2
4805	*206*	4.5	30 6	9	9.68	158,174	00	47
4806	19197	5.7	80 32	5.3	5.04	148,150,155,	410	355
						502,516,857,	113	772

S.M.P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							858	1	0
4807	280	5.8	35	16	9	9.53	171,542	10	55
4808	19224	5.8	55	0	8	8.34	182,183,185,	101	133
							556	1	2
4809	302	6.0	25	16	8.5	9.55	160,174	21	.9
4810	305	6.3	45	16	10	10.12	175,178	21	13
4811	306	6.4	55	1	9.5	10.10	182,183,185,	122	866
							556,855	40	6n
4812	332	6.5	35	8	8.5	8.68	171,542	33	11
4813	19242	6.6	53	12	6.1	5.47	148,150,155	213	564
4814	19248	6.8	40	22	7.0	6.88	501,540	22	11
4815	19243	6.9	65	14	6.8	6.88	531,536	11	11
4816	19257	7.2	25	2	7.5	7.24	157,172,855,	406	703
							857,858	44	23
4817	368	7.2	45	9	10	9.92	175,178	32	21
4818	383	7.3	25	7	9	9.25	157,172	01	24
4819	406	7.7	25	1	9.2	10.10	157,172	11	6n
4820	19273	8.0	56	37	5.6	5.22	148,150,155	201	466
4821	19281	8.4	45	11	8.5	8.87	175,178	22	14
4822	19280	8.7	66	7	6.2	5.89	148,150,155	202	210
4823	19288	8.8	40	26	7.5	6.92	501,540	21	93
4824	467	9.2	65	12	9.5	9.62	531,536	00	11
4825	508	9.3	30	7	9	9.34	158,174	21	23
4826	19295	9.4	59	27	var.	var.	192,196,197,	122	.77
							516,517,522,	NRR	NRR
							545,552,553	RRR	RRR
4827	530	9.6	35	7	9.5	10.03	171,542	01	n5
4828	19271	9.6	82	23	6.8	R	R	R	R
4829	544	9.9	30	5	9	9.74	158,174	10	07
4830	534	10.1	65	8	9.5	9.71	531,536,854,	631	572
							855,857	01	22
4831	550	10.2	55	3	8.5	8.88	182,183,185,	033	194
							556,855	20	44
4832	19289	10.3	79	39	5.5	5.29	148,150,155	001	863
4833	589	10.5	25	8	9.2	9.35	157,172	01	42
4834	19314	10.5	55	18	7.1	6.94	182,183,185,	551	696
							556,855	00	17
4835	562	10.6	65	10	9	9.38	531,536	12	24
4836	579	10.8	65	11	10	F	531,536	FF	RR
4837	19284	10.9	83	13	4.7	4.10	148,150,152,	144	p9.
							155,186,193,	020	1..
							514,516,857,	111	437
							858	0	p
4838	19327	11.4	40	24	8	7.88	501,540	00	16
4839	657	11.8	45	14	9.3	9.67	175,178	11	77
4840	652	12.0	65	3	9	8.98	531,536	22	02
4841	677	12.2	50	6	9	9.20	179,542	22	22
4842	19342	12.2	55	25	8	7.26	182,183,185	350	779
4843	19344	12.5	60	48	5.9	5.25	148,150,155	111	334
4844	700	12.6	45	15	9.5	10.27	175,178	00	88

S.M.P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4845	19354	13.0	45	36	3.8	3.91	148,150,155,	433	131
							196,197,516,	412	692
							517	1	4
4846	19366	13.3	25	22	6.3	6.07	157,172,553	201	p11
4847	19357	13.3	55	20	7.8	7.23	182,183,185	231	688
4848	19358	13.3	55	56	5.0	4.36	148,150,155,	001	8pp
							517	0	6
4849	721	13.4	70	7	9	8.64	531,542	11	42
4850	19098	13.8	88	55	8.5	8.11	525,553,844	210	474
4851	773	14.0	65	17	9.5	9.88	531,536	01	44
4852	793	14.1	55	4	8	8.44	182,183,185,	022	441
							556,855	10	22
4853	19379	14.3	44	43	5.7	4.81	148,155,175	111	03p
4854	19387	14.5	37	26	4.4	4.19	148,155,197	011	7np
4855	19396	14.7	35	11	8	8.33	171,542	10	23
4856	854	14.8	25	16	9.5	9.55	157,172	01	16
4857	19402	15.0	35	7	9	9.13	171,542	10	31
4858	19406	15.5	58	0	6	4.95	150,155,196,	610	290
							197,517,553,	210	576
							844	1	6
4859	895	15.6	44	58	9.5	9.67	175,178	00	52
4860	19414	15.8	54	58	7	7.54	182,183,185,	111	502
							556,855	13	57
4861	889	15.8	59	58	9.5	9.66	526,537,854,	411	572
							855,857	42	25
4862	19430	16.0	25	12	10.2	10.05	157,172	12	4n
4863	909	16.1	55	9	9	9.59	182,183,185	001	646
4864	19435	16.3	34	20	6.0	5.86	155,196,197	311	410
4865	19437	16.7	50	19	6.7	6.04	179,542	21	58
4866	19445	16.8	39	3	4.9	4.61	147,155,196,	322	330
							517,522,553,	311	910
							844	0	6
4867	19432	16.8	67	44	6.0	5.86	147,155,196,	512	111
							197	3	0
4868	19450	17.1	35	14	8.5	8.43	171,542	01	11
4869	993	17.2	50	3	9	9.40	179,542	22	44
4870	19453	17.4	45	13	8.5	8.22	175,178	10	31
4871	1054	17.9	35	2	9.5	9.63	171,542	12	44
4872	1046	18.2	65	9	8.5	8.52	531,536	21	00
4873	1062	18.4	60	3	8.5	8.74	526,537	10	22
4874	19424	18.4	83	42	7.5	7.12	514,525,544	313	944
4875	19488	18.5	40	18	7.0	7.12	501,540	21	11
4876	1086	18.7	60	16	9.5	9.34	526,537	23	20
4877	19493	19.2	65	22	6.6	5.72	531,536	11	p4
4878	19504	19.4	60	18	7.8	7.84	526,537	10	20
4879	19514	19.7	44	46	5.3	4.58	147,155,175	213	222
4880	19515	19.8	44	56	4.9	4.35	147,155,175	212	136
4881	1175	20.1	50	13	9	9.24	179,542	00	22
4882	19538	20.6	39	59	8.5	8.18	501,540	22	33
4883	1200	20.7	65	0	9	9.22	531,536	00	04

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S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4884	1229	21.1	60	7	9.5	9.60	526,537	11	11
4885	1261	21.3	45	5	9.5	9.46	175,535	22	50
4886	1253	21.3	60	6	8	8.60	526,537	00	12
4887	1233	21.4	65	6	8.5	8.58	531,536	12	21
4888	19561	21.5	35	0	7.2	6.74	171,173	12	82
4889	1247	21.5	65	2	9	9.43	531,535	10	22
4890	1295	21.8	30	8	9	10.04	158,174	21	5n
4891	1338	22.5	30	3	8.2	8.88	158,174	00	69
4892	1334	22.7	59	58	8.8	8.74	526,537	01	11
4893	1359	23.0	50	16	9	9.44	179,542	00	42
4894	1361	23.1	60	5	9	9.24	526,537	10	24
4895	1376	23.2	25	15	8.5	9.08	157,172,543,	220	1n3
							855,857	23	6n
4896	19598	23.7	44	53	6.2	5.61	147,155,175	102	321
4897	19597	23.7	49	4	5.9	5.54	147,155,196	222	334
4898	1380	23.8	64	58	9	9.22	531,536	10	22
4899	1384	23.9	64	57	9.5				
4900	19612	24.0	25	10	9	9.88	157,172,543,	432	494
							855,857	13	99
4901	19614	24.0	25	6	7.5	7.76	157,172,855,	402	322
4902	19616	24.1	25	6	10				
							855,857	62	20
4903	19611	24.1	50	2	8.2	8.94	179,542	11	41
4904	1443	24.2	35	5	9	9.08	171,173	11	11
4905	19613	24.2	40	2	7.2	7.22	501,540	01	68
4906	1393	24.2	70	11	9	9.08	531,542	23	11
4907	1448	24.3	45	11	9.5	9.76	175,535	11	53
4908	1385	24.4	75	11	9	9.71	531,542	32	55
4909	1391	24.4	75	14	9	9.31	531,542	11	33
4910	1431	24.5	64	57	9	9.12	531,536	01	11
4911	19624	24.7	40	24	7.0	6.32	501,540	21	55
4912	19532	24.7	85	58	8.2	7.87	514,525,544,	235	131
							553,561,563,	321	613
							564	3	3
4913	19633	25.0	39	57	7.1	6.68	501,540	11	83
4914	19635	25.0	40	13	7.5	7.58	501,540	00	24
4915	1480	25.0	45	16	9.2	9.21	175,535	10	23
4916	19653	25.2	24	52	8	7.93	157,172,186	111	219
4917	1504	25.2	40	9	9.5	9.52	501,540	10	03
4918	1474	25.3	64	58	9.5	9.28	531,536	11	11
4919	19646	25.4	55	1	8	7.69	182,185,556,	230	415
							854,855	25	32
4920	19657	25.6	45	0	8.8	8.61	175,535	21	12
4921	19661	25.9	50	1	5.2	4.61	147,155,179,	214	4p1
							196,197	20	p9
4922	1529	26.3	70	13	9	9.58	531,542	23	44
4923	1587	26.4	30	1	9.5	9.92	158,174,855,	T11	477
							857,858	12	47
4924	19668	26.4	60	22	8	7.80	526,537	11	22
4925	1616	26.8	35	5	9	8.94	171,173	10	11

S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
4926	1589	26.8	59	58	8.8	8.89	526,537,543,	501	141
							855,857	13	41
4927	19697	27.3	30	17	6.4	6.02	158,174,552,	012	582
4928	1570	27.3	75	7	8.5	8.66	531,542	12	22
4929	1633	27.5	60	0	9	9.44	526,537	12	12
4930	1667	27.6	45	6	9.5	9.61	175,535	21	66
4931	1643	27.6	59	57	8.5	8.94	526,537	10	11
4932	1682	27.8	44	58	9.5	9.81	175,535	01	33
4933	19706	28.0	60	12	8.2	7.54	526,537	12	55
4934	1700	28.1	30	11	8.5	9.48	158,174	11	nn
4935	1707	28.1	30	11	9				
4936	1726	28.4	30	2	9	9.54	158,174	10	35
4937	1732	28.5	30	15	9.2	9.78	158,174	00	66
4938	19725	28.6	35	2	7.8	7.18	171,173	11	88
4939	1765	28.9	24	59	9.5	9.90	157,160	00	6.
4940	1727	29.1	69	59	9.5	9.94	531,542	11	44
4941	19737	29.2	41	43	2.5	2.54	147,155,193,	312	373
							196,197,517,	101	535
							522	2	0
4942	19739	29.2	45	11	8	8.06	175,535	11	44
4943	19746	29.7	45	49	6.2	5.34	147,155,193,	212	679
							196,197	11	67
4944	1746	29.7	75	3	9	9.61	531,542	22	44
4945	1801	29.9	54	59	9.2	9.25	182,185,556,	512	222
							854,855	03	20
4946	1813	30.1	55	10	9	9.28	182,185,556	R23	541
							854,855	11	35
4947	1847	30.4	30	5	9	9.04	158,174	10	00
4948	19768	30.5	39	47	6.2	6.06	147,155,193	131	12.
4949	19773	30.8	45	42	6.2	5.44	147,155,193,	214	446
							196,197,517,	111	765
							553	0	6
4950	19785	31.2	49	0	4.5	4.04	147,155,193	002	p98
4951	19805	31.6	35	5	7.8	7.68	171,173	22	33
4952	19802	31.6	45	27	7	6.82	178,535	21	22
4953	19742	32.2	84	8	8.5	8.56	514,525,544	011	211
4954	19818	32.3	34	51	7.0	6.74	171,173	10	23
4955	19793	32.3	75	24	8	7.41	531,542	22	64
4956	1966	32.5	65	0	8	7.89	208,536	23	11
4957	1954	32.5	69	57	9	9.68	531,542	01	57
4958	1975	32.7	65	2	9.5	9.69	208,536	01	22
4959	19829	32.8	35	10	8.2	7.08	171,173	22	79
4960	19825	32.8	60	25	1	0.20	147,152,192,	112	p57
4961	19826	32.8	60	25	3.5				
							517,522,552,	310	333
							553,844	23	33
4962	2018	33.0	40	4	9	9.04	158,501,540	121	n00
4963	19841	33.6	45	7	8	7.92	178,535	10	16
4964	2047	33.6	45	12	9	9.93	175,535,543,	430	794
							855,857	42	49

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
4965	19842	33.7	45 22	6.9	6.67	178,535	*22*	14							858	0	0
4966	19846	34.0	40 25	6.9	6.88	501,540	*22*	31	4996	*2405*	39.5	50 1	8.5	8.41	179,542,543,	*414*	414
4967	19854	34.2	40 11	8	7.52	501,540	*21*	55							854,855	10	*21*
4968	*2063*	34.3	65 16	9.5	9.52	208,536,543,	*331*	020	4997	19953	39.5	70 10	8.2	7.48	531,542	01	50
						855,857	*32*	*33*	4998	19914	39.9	84 2	10.5	F	525,553,561	NNF	NNR
4969	19849	34.4	64 33	3.5	3.37	147,152,193,	*210*	*241*	4999	19985	40.0	51 57	5.8	5.12	148,151,193	001	998
						517,522,552,	120	666	5000	19997	40.2	25 1	5.2	5.15	157,160,162,	*111*	6p.
						553	0	*4*	5001	19998	40.2	25 1	7				
4970	19861	34.5	30 7	8	8.02	158,174,855	*113*	002							552	*1*	2
4971	*2114*	34.7	45 17	9.5	9.82	178,535	01	*33*	5002	*2440*	40.2	60 0	9	9.06	192,526	*21*	*11*
4972	19867	34.9	35 43	6.2	5.82	147,152,193	*212*	422	5003	19980	40.3	66 10	6.1	6.00	148,151,193	*211*	312
4973	*2116*	35.0	60 17	9.5	9.37	192,526,537,	*222*	*112*	5004	19971	40.4	75 6	8.5	8.82	531,542,854,	*230*	*333*
						543,855	*11*	*22*							855,857	11	*33*
4974	*2159*	35.2	24 59	9.5	9.45	157,160	*23*	1.	5005	*2475*	41.0	65 15	8	7.04	208,536	00	88
4975	19873	35.2	46 57	2.6	2.46	148,151,193,	*221*	*337*	5006	20021	41.1	25 2	9	8.90	157,160	*11*	*41*
						517,552,553,	310	30p	5007	*2527*	41.3	30 0	9	9.84	158,174	*23*	*88*
						565	*3*	5	5008	20005	41.3	70 7	8.5	8.38	531,542	*01*	11
4976	19851	35.4	78 38	4.0	3.80	147,152,193,	*211*	pp8	5009	20007	41.4	70 7	9.5				
						553,565,844	*102*	*347*	5010	20035	41.5	25 12	6.1	5.68	157,160,162,	*311*	5p*1*
4977	19884	35.6	40 10	10	10.02	501,540	10	*57*							552	2	2
4978	19890	35.7	37 21	4.2	4.17	148,151,193,	*412*	p*25*	5011	20040	41.7	30 0	9	9.58	158,174	*22*	*64*
						517,522,552,	110	*262*	5012	20046	42.1	45 11	9	9.87	178,535	*11*	*97*
						553	0	*2*	5013	*2593*	42.2	29 59	8.5	8.58	158,174	*11*	*61*
4979	19900	36.2	45 10	8.5	8.47	178,535	00	03	5014	20051	42.3	35 25	7.2	6.78	171,173	*23*	p7
4980	19809	36.6	86 4	7.2	7.78	180,514,525,	*213*	.*33*	5015	20063	42.6	25 4	R	6.85	157,160	10	7p
						544,553,561,	221	274	5016	20057	42.6	30 1	8.8	8.48	158,174	*11*	*33*
						563,564	00	44	5017	*2612*	42.6	30 8	9.5	10.34	158,174	10	n*8*
4981	*2222*	36.7	50 10	9	9.24	179,542	*21*	*24*	5018	20055	42.6	40 0	7.5	7.58	180,501	*11*	02
4982	*2229*	36.8	50 4	9.5	9.71	179,542,543,	*314*	*242*	5019	20065	42.8	35 8	8.2	7.68	171,173,543	*3*T1	*238*
						854,855	*06*	*25*							854,855	11	53
4983	*2244*	37.1	50 15	8.5	8.84	179,542	01	*23*	5020	*2623*	42.8	35 13	9.5	9.48	171,173	*11*	00
4984	*2265*	37.2	25 5	9	8.95	157,160	*10*	20	5021	*2624*	42.9	40 2	8.2	8.12	180,501	*21*	*11*
4985	19916	37.3	62 26	6.0	5.15	148,151,193	*132*	887	5022	*2646*	43.1	24 58	9	9.65	157,160	10	*8*n
4986	19932	37.5	29 46	7.2	7.94	158,174	01	*91*	5023	20049	43.2	72 46	6.1	5.62	148,152,193	02*1*	14.
4987	19931	37.5	34 44	4.3	3.76	148,151,171,	*112*	3pp	5024	*2640*	43.4	55 0	8.5	8.95	182,185,556,	*310*	*555*
						173	1	7							854,855	*23*	*55*
4988	19934	38.0	55 10	6.5	6.24	148,151,182,	*213*	002	5025	*2673*	43.6	29 59	9	9.34	158,174	10	*33*
						185	0	8	5026	*2698*	43.8	25 7	9.2	9.65	157,160	10	*64*
4989	19940	38.1	50 6	8.2	7.99	179,542,543,	*442*	030	5027	20061	43.8	75 11	8	7.36	531,542	*01*	63
						854,855	*53*	00	5028	*2674*	43.9	55 1	9.5	9.78	182,185	*23*	*35*
4990	19937	38.1	55 10	7.5	7.68	556,854	*01*	*22*	5029	*2654*	43.9	65 13	9.5	9.59	208,536	*12*	*11*
4991	*2330*	38.3	45 3	9.5	10.13	178,535,543,	*420*	*886*	5030	*2677*	44.0	60 5	9	8.86	192,526	*21*	31
						855,857	10	*66*	5031	20092	44.2	39 58	8.2	8.58	180,501	*22*	*63*
4992	*2357*	38.6	45 0	8.8	9.57	178,535,543,	*341*	*686*	5032	20034	44.2	82 49	6.0	5.60	148,152,193,	*351*	634
						855,857	*33*	*66*							196,197,201,	*120*	35.
4993	19958	38.8	34 46	5.4	4.96	148,151,171,	*221*	*552*							517,522,565	0*10*	544
						173	2	4	5033	*2749*	45.0	45 2	9	9.77	178,535	*11*	*88*
4994	19954	38.8	45 14	8.8	9.47	178,535	*11*	*27*	5034	20109	45.1	43 9	5.0	4.43	148,167,196,	*2*T2	p8p
4995	19776	39.1	87 45	6.8	6.54	147,155,193,	030	*323*							517	1	6
						514,776,857,	*310*	000	5035	20107	45.2	60 26	7.8	7.12	192,526	*11*	74

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	'								m.	°	'					
5036	2775	45.4	45	2	9	9.22	178,535	10	22	5072	20225	50.5	40	1	9.2	9.72	180,501	01	55
5037	2787	45.6	50	10	8	7.83	179,542,543,	243	222	5073	3116	51.0	60	12	9.5	9.52	192,526	11	20
							854,855	25	22	5074	20248	51.3	34	59	8	7.02	171,173,537,	440	285
5038	2826	46.0	45	10	9	9.57	178,535	22	66								543,854	20	52
5039	2823	46.0	45	15	9.5	10.02	178,535	01	55	5075	3125	51.3	65	15	9	9.44	208,536	00	14
5040	20124	46.3	65	35	6.6	6.13	150,167,196,	100	.22	5076	20239	51.4	60	16	8.8	8.32	192,526	11	75
							197	0	2	5077	3159	51.6	55	4	9	9.13	182,185	00	16
5041	2860	46.4	30	1	9.5	9.98	158,174	22	58	5078	20260	51.7	25	2	7.1	6.95	160,540	21	20
5042	20115	46.5	76	15	5.5	5.37	150,167,196,	703	535	5079	3196	51.9	29	59	9.5	10.04	172,174	01	n8
							197,517,522,	521	655	5080	3172	51.9	55	7	9	9.38	182,185	01	46
							552,553,565,	113	686	5081	20263	52.0	42	44	2.8	2.74	150,167,197,	R00	413
							844	1	p								517,552,553,	201	123
5043	20135	46.6	30	10	6.7	6.60	172,174,543,	021	621								565	0	7
							556,564	22	00	5082	3188	52.0	45	7	9.5	10.02	178,535	21	55
5044	20132	46.6	37	23	5.7	5.22	150,167,196	012	255	5083	20267	52.2	50	9	9.2	9.40	179,542	22	42
5045	20144	46.9	25	2	8	7.85	160,540	21	22	5084	3232	52.5	49	56	9.2	9.44	179,542	00	24
5046	2895	47.1	40	10	9.8	10.08	180,501	00	n6	5085	20286	52.6	41	42	3.3	3.36	150,167,197,	102	102
5047	20104	47.3	82	38	5.9	5.52	148,152,167,	230	543								517,552,553	000	444
							173,514,564,	000	.44	5086	20284	52.7	45	2	8.5	9.27	178,535	11	35
							565,857	00	55	5087	20282	52.7	55	6	8	7.99	182,185,556,	201	000
5048	2925	47.5	39	57	9	9.42	180,501	23	84								854,855	02	55
5049	2911	47.5	60	6	8.5	8.26	192,526	12	22	5088	20290	52.8	50	2	8.5	9.00	179,542	00	00
5050	2946	47.8	25	11	9	9.05	160,540	23	20	5089	3189	53.0	75	7	9	9.01	531,542	01	00
5051	2949	47.9	25	8	9	9.35	160,540	21	22	5090	3198	53.1	74	57	8.5	8.75	531,543	00	13
5052	20157	47.9	59	42	5.9	5.33	150,167,196	211	756	5091	20313	53.5	30	19	7	7.16	172,174,543,	011	422
5053	2916	47.9	65	0	9.5	9.69	208,536	21	22								556,564	01	02
5054	20169	48.1	39	57	8.5	9.18	180,501	00	62	5092	20298	53.6	70	23	7.8	7.59	210,542,854,	321	141
5055	2944	48.1	55	1	8.5	8.31	182,185,556,	212	332								855,857	01	12
							854,855	33	11	5093	3318	53.8	30	1	9	9.46	172,174,543,	010	553
5056	2980	48.3	25	10	9	9.05	160,540	12	02								556,564	11	55
5057	2962	48.3	49	59	9.5	9.20	179,542	01	01	5094	20324	53.9	29	57	9	8.74	172,174	01	21
5058	2986	48.5	39	59	9	9.58	180,501	00	41	5095	20309	53.9	70	3	9	9.40	210,542	00	44
5059	2982	48.6	54	59	9.5	9.73	182,185,556,	530	722	5096	20305	54.2	75	15	9	9.11	531,542	11	11
							854,855	11	25	5097	20280	54.3	79	55	7.0	6.86	204,514,525	110	111
5060	20174	48.7	62	22	5.8	5.19	151,167,196	320	655	5098	3369	54.7	50	0	9	9.14	179,542	10	11
5061	20189	49.2	52	24	6.0	5.57	151,167,196,	224	343	5099	3305	54.7	75	4	8.5	9.09	210,542	22	63
							517,522,552,	001	344	5100	3421	55.4	45	3	9.5	10.08	178,535,854,	431	666
							553	0	3								855,857	24	69
5062	3012	49.2	59	57	9.5	9.32	192,526	11	21	5101	3452	56.0	45	4	9.5	10.02	178,535	12	55
5063	20125	49.4	84	23	5.9	5.80	150,167,197,	151	241	5102	3471	56.3	45	7	9.5	9.77	178,535	22	35
							514,514,563,	100	202	5103	3364	56.3	79	59	9	9.33	204,514,525	121	333
							776,857	42	02	5104	20367	56.5	63	38	5.9	5.19	150,167,197	101	7p7
5064	20208	49.6	25	12	8.8	8.60	160,540	11	21	5105	3486	56.7	59	58	10	9.39	192,201	12	31
5065	20203	49.6	33	27	5.8	5.32	151,167,197	201	755	5106	20392	56.8	32	15	5.8	5.52	152,167,197	120	414
5066	20202	49.8	47	28	6.8	5.74	151,167,197	130	313	5107	20398	57.1	40	12	9	8.73	180,186	32	52
5067	3056	49.8	50	11	8	7.60	179,542	22	41	5108	3532	57.2	39	56	9	9.10	180,186,501,	352	321
5068	3082	50.0	34	59	9.5	9.38	171,173	22	44								561,854	10	13
5069	3076	50.0	40	4	9.5	9.52	180,501	12	32	5109	3509	57.2	59	57	9.5	9.24	192,201	22	13
5070	20152	50.2	83	31	8.2	8.00	204,514,525	021	050	5110	3513	57.3	60	4	8.5	8.34	192,201	01	52
5071	20229	50.5	34	50	7.8	8.34	171,173	01	23	5111	3561	57.4	34	58	9	9.28	171,537	11	10

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5112	*3553*	57.5	40	9	9	9.18	180,186,501,	441	222
							561,854	21	22
5113	*3523*	57.6	65	0	8.8	8.44	208,536	12	13
5114	*3576*	57.7	30	5	8	7.70	172,174,543,	120	335
							556,564	11	33
5115	*3539*	57.9	70	7	8.5	8.90	210,542	11	11
5116	*3590*	58.2	45	6	9.5	9.94	178,535,854,	530	444
							855,857	43	44
5117	20431	58.3	24	53	3.5	3.20	160,537,540,	020	p38
							552,553,565	101	230
5118	20430	58.3	45	12	8.8	9.07	178,535	11	13
5119	20428	58.3	46	40	4.3	3.84	152,155,167	112	p2p
5120	*3637*	58.6	30	8	9	9.14	172,174,543,	134	111
							556,564	10	11
5121	20435	58.6	45	12	8.8	8.72	178,535	32	31
5122	20442	58.7	40	11	7.8	7.98	180,186	22	50
5123	*3626*	58.7	50	5	9	9.34	179,542	10	35
5124	20444	58.8	40	41	5.7	5.34	152,155,167	020	565
5125	20443	58.8	45	0	8.8	8.92	178,535	01	11
5126	*3630*	58.8	50	9	8	8.12	179,542,854,	143	411
							855,857	31	11
5127	20419	58.9	75	5	7.5	6.94	210,542	01	66
5128	20433	59.2	70	19	7	6.94	210,542	10	96
5129	20447	59.4	64	53	6.8	5.89	208,536	11	p5
5130	20462	59.5	30	10	6.8	6.62	172,174,543,	042	994
							556,564	31	44
5131	*3701*	59.7	45	5	9.2	9.37	178,535	22	24
5132	20471	59.9	25	24	7.0	6.70	160,540	11	p8
5133	20473	0.1	30	2	8	8.08	172,174	11	44
5134	*3736*	0.1	35	1	8.5	8.48	171,537	22	32
5135	20423	0.1	80	23	8.8	8.43	204,514,525	011	211
5136	20472	0.2	45	2	9	9.16	178,535,854	412	222
							855,857	24	22
5137	*3760*	0.4	40	14	9.2	9.18	180,186	00	22
5138	20484	0.5	30	32	6.5	6.00	152,155,167,	351	121
							517,552,553,	111	255
							565	1	5
5139	*3793*	0.9	35	15	9	9.28	171,537	11	35
5140	20496	1.3	45	11	8	7.41	175,535	21	6p
5141	20509	1.7	40	12	6.2	6.09	152,155,167	330	212
5142	20513	2.0	42	29	6.5	6.01	152,155,167	210	010
5143	20514	2.1	44	54	4.8	4.34	152,155,167,	220	284
							175	3	5
5144	*5*	2.5	70	14	9	9.18	210,537	11	22
5145	*74*	2.7	25	2	9	9.45	160,540	01	64
5146	*89*	2.8	29	57	9	9.82	172,174,543,	122	886
							556,564	01	56
5147	*62*	2.8	55	12	10	10.08	182,183,185,	123	641
							540	4	4
5148	*66*	2.9	55	10	9	9.34	182,183,185,	311	313

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							540,556	11	13
5149	20535	3.0	24	56	8	9.00	160,540	00	32
5150	*37*	3.3	75	10	7.5	7.52	210,537	11	32
5151	*117*	3.6	55	12	9.2	9.36	182,183,185	020	211
5152	20543	3.8	54	58	6.3	5.57	182,183,185,	242	p77
							540,552,556	313	968
5153	*139*	3.9	50	7	9.5	9.63	179,531	00	64
5154	20545	4.5	70	11	7.8	7.77	210,537,561,	412	222
							563,564	02	24
5155	20564	4.7	40	20	8	7.83	180,186	32	32
5156	*194*	4.7	55	16	9.5	9.72	182,183,185,	130	424
							540,556	02	22
5157	20566	4.8	44	54	7	6.31	175,535	32	2p
5158	20565	4.8	44	54	7.8	7.06	175,535	22	p7
5159	20560	4.8	60	1	8	7.44	192,201	00	61
5160	20554	4.8	69	42	6.2	5.28	152,167,197,	414	5p8
							517,552,553,	110	797
							565	2	9
5161	20570	5.0	48	22	4.5	4.17	152,167,197	101	760
5162	20571	5.0	48	22	6.2	5.94	152,167,197	200	014
5163	20572	5.1	51	43	3.6	3.46	151,167,196,	101	n85
							517,552,553	121	000
5164	*263*	5.5	35	0	9	9.68	536,537	00	72
5165	20568	5.6	70	9	7.1	6.98	210,537	11	28
5166	20582	5.6	35	7	8	8.13	536,537	23	14
5167	*278*	5.7	35	2	9.2	9.43	536,537	10	41
5168	*246*	5.7	59	58	8.5	10.14	192,201,526,	NN1	NN6
							859	0	6
5169	20587	6.0	55	21	7	7.36	182,183,185	121	646
5170	20591	6.1	44	8	5.5	4.97	151,155,196,	142	982
							517	0	4
5171	20579	6.3	70	2	7.1	6.68	210,537	11	38
5172	*309*	6.4	50	2	9.5	9.46	179,531,854,	1R2	503
							857,858	02	00
5173	20603	6.7	24	55	8	10.20	540,556	11	77
5174	20607	6.9	25	19	8	8.12	540,556,560,	644	111
							561,563	12	11
5175	*358*	6.9	40	12	9.5	9.76	180,186,501,	443	653
							561,563	15	36
5176	*383*	7.3	40	3	9	9.43	180,186	32	42
5177	*389*	7.4	40	15	9	9.18	180,186	33	22
5178	*384*	7.4	45	14	9	9.36	175,206	11	44
5179	*325*	7.6	75	11	9	9.68	210,537	01	25
5180	20630	7.7	24	56	6.5	6.43	160,540,552	322	p42
5181	*424*	7.7	40	10	8.5	8.88	180,186	33	01
5182	*447*	8.0	25	7	9.5	9.50	540,556	22	05
5183	20651	8.5	31	9	5.5	5.01	151,167,196,	333	757
							197,517,552,	112	770
							553	1	5
5184	*382*	8.5	74	58	8	7.78	210,537	12	04

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5185	20625	8.8	75	12	7.8	6.88	210,537	01	36
5186	20649	8.9	60	35	5.6	5.25	151,155,196	111	6.7
5187	495	9.0	55	15	8.5	8.60	182,183,185,	022	111
							540,556	12	11
5188	20654	9.2	63	15	5.5	4.85	151,167,196	111	p98
5189	541	9.3	35	9	9	10.08	536,537	11	66
5190	20666	9.3	45	7	8.8	9.02	175,206	10	00
5191	553	9.4	25	1	8.7	9.10	540,556	22	16
5192	20672	9.5	41	8	5.8	5.19	151,193,196	121	805
5193	20668	9.6	58	26	4.7	4.00	151,167,193	111	pp2
5194	20657	9.6	68	19	3.1	3.00	151,167,193,	432	2p0
							196,197,517,	101	818
							552	1	0
5195	20624	9.6	80	5	8.8	8.33	204,514,525	314	232
5196	523	9.7	65	14	9	8.25	202,208	23	63
5197	599	10.0	30	13	9	9.18	172,174	00	42
5198	568	10.1	55	15	9	8.78	182,183,185,	331	300
							540,556	21	21
5199	614	10.5	45	0	9.5	9.76	175,206	11	33
5200	20671	10.7	75	13	8.8	8.62	210,537	00	41
5201	20695	10.8	60	8	5.9	5.35	151,155,192	101	754
5202	20693	10.8	66	8	var.	var.	517,552,553,	302	333
							565,857,858	234	333
5203	644	10.9	30	0	9	9.72	172,174,543,	232	777
							556,560	14	55
5204	20702	11.0	45	21	7.5	7.42	175,206	21	64
5205	20701	11.2	59	46	7.8	7.39	192,201	22	44
5206	642	11.3	60	1	7.8	7.69	192,201	23	33
5207	20713	11.5	47	31	5	4.18	151,155,193	011	p68
5208	20721	11.7	29	47	4.7	4.37	158,172,174,	201	4pp
							552,553,565,	211	112
							857,858	22	11
5209	714	11.8	30	7	8.5	8.94	172,174	12	41
5210	679	11.8	60	12	8	7.94	192,201,526,	430	663
							560,561	11	31
5211	660	11.9	70	0	9.2	9.43	210,537	10	22
5212	726	12.0	30	7	9	9.71	172,174,857,	122	255
							858,859	33	22
5213	724	12.2	45	4	9.5	9.92	175,206	32	44
5214	20731	12.4	40	26	6.2	5.69	151,155,180,	111	42p
							193	1	3
5215	755	12.6	25	11	9.5	9.80	157,540	33	23
5216	750	12.7	45	6	9	9.26	175,206	11	33
5217	802	13.4	35	15	8.2	9.18	536,537	00	74
5218	20766	14.7	60	0	8.5	8.14	192,201	21	74
5219	20768	14.7	60	0	9.5				
5220	20779	14.8	40	18	3.7	3.37	151,155,180,	32R	75p
							193,196,517,	222	146
							552	2	9
5221	20784	14.9	25	14	9	9.30	157,540	11	.3

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5222	893	14.9	50	16	9	9.43	179,531	22	44
5223	20782	15.0	40	24	7.0	6.13	180,186	01	pp
5224	871	15.0	64	59	8.5	8.70	202,208	11	33
5225	20789	15.1	40	9	8.5	8.57	180,186,501,	R64	144
							560,561	20	14
5226	20786	15.1	47	34	5.8	4.98	148,155,193	202	7pp
5227	20783	15.1	47	57	6.4	5.66	148,155,193,	222	155
							196,197	12	34
5228	20775	15.1	60	18	6.1	5.58	151,155,192	010	321
5229	20785	15.4	58	58	5.2	4.41	148,155,193	102	ppp
5230	20793	15.5	35	54	3.6	3.28	148,155,193,	210	255
							517,552,553,	300	022
							565	0	2
5231	20806	15.9	44	20	3.8	3.56	148,155,193,	T21	211
							196,197,517,	321	p1p
							544,552	03	01
5232	927	16.0	69	59	9	9.24	210,537	12	22
5233	995	16.2	30	6	9	10.24	172,174	12	n9
5234	20820	16.4	30	2	8.2	8.78	172,174	11	33
5235	20822	16.5	25	7	8.2	7.60	157,540	00	96
5236	1026	16.6	30	3	8.8	9.48	172,174,543,	011	557
							556,560	11	75
5237	20825	16.8	36	30	5.1	4.69	148,155,193	022	58p
5238	1022	16.8	50	8	9.5	9.68	179,531	32	42
5239	1036	17.2	55	3	10	9.90	182,183,185,	231	414
							540,556	01	44
5240	1027	17.3	65	0	9.5	8.70	202,208	11	33
5241	1028	17.3	65	0	10				
5242	1090	17.7	25	0	9.5	9.80	157,540	11	33
5243	20838	17.7	40	8	9	9.42	186,501	01	42
5244	1105	17.9	40	1	9.5	9.72	186,501	23	54
5245	20847	18.2	39	22	5.9	5.33	148,155,196	010	657
5246	1133	18.2	40	14	9	9.02	186,501	12	00
5247	1112	18.3	55	10	10	10.16	182,183,185,	111	724
							540,556	13	67
5248	1122	18.4	55	5	9.5	9.32	182,183,185,	424	301
							540,556	11	11
5249	1132	18.6	59	56	9.5	8.59	192,201	32	64
5250	20862	18.7	25	18	8	7.55	157,540,556,	121	244
							560,561	R0	44
5251	20861	18.8	38	22	5.1	4.63	148,155,197	122	p69
5252	1076	18.8	75	13	9	9.26	220,536	01	33
5253	1207	19.2	30	13	9.2	9.66	172,174,543,	353	777
							556,560	13	77
5254	1186	19.3	56	0	8.5	9.07	183,185	21	11
5255	1213	19.4	40	11	9	9.08	186,501	33	11
5256	20885	19.8	45	9	7.8	7.46	175,206	11	53
5257	1240	20.0	54	58	9	9.05	183,185,540	131	002
5258	20818	20.1	84	9	5.9	5.70	148,155,158,	110	24p
							162,193,196,	111	.52

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						202,203,514,	213	. . 1
						517,544	22	32
5259	*1215*	20.2	70 2	8	8.61	210,537,543,	421	141
						560,561	42	41
5260	20900	20.4	44 57	9	9.66	175,206	00	55
5261	*1292*	20.5	40 1	9	9.18	186,501	33	02
5262	*1288*	20.5	45 7	8.8	9.22	175,206	12	42
5263	20878	20.6	73 2	5.8	5.61	148,155,193	010	253
5264	20909	20.9	36 25	6.0	5.60	148,155,196,	263	314
						517,544,552,	141	233
						553	2	3
5265	20906	20.9	49 46	7.8	8.33	179,531	12	33
5266	*1297*	21.0	60 4	10	9.62	201,526	23	11
5267	20913	21.2	40 18	7.2	6.78	186,501	33	2p
5268	20918	21.4	44 47	8	8.02	175,206	12	20
5269	*1330*	21.4	55 10	10	9.92	183,185	11	46
5270	20911	21.4	55 16	7.5	7.92	183,185,540	143	114
5271	*1370*	21.7	35 14	8.8	9.33	171,536	10	55
5272	20931	21.8	40 23	8	8.82	186,501	21	30
5273	20937	21.9	24 49	8	7.30	157,540	11	55
5274	*1377*	21.9	45 12	9	9.76	175,206	22	88
5275	20917	21.9	65 15	8	7.95	202,208	10	03
5276	20926	22.0	50 6	8.8	9.33	179,531	11	31
5277	*1360*	22.0	60 8	8.5	8.52	201,526	11	30
5278	*1420*	22.2	30 13	9.5	10.08	172,174	00	97
5279	20940	22.2	50 23	8	7.88	179,531	11	11
5280	20925	22.3	65 11	8.5	7.85	202,208	10	25
5281	*1321*	22.3	75 9	8.2	8.81	217,536	00	30
5282	20948	22.4	46 23	5.9	4.88	148,155,196	143	5pp
5283	20957	22.7	40 16	8	8.82	186,501	01	80
5284	20963	22.9	40 10	7.2	7.18	186,501	33	66
5285	*1474*	23.1	35 3	8.3	8.53	171,536	01	33
5286	*1507*	23.8	45 1	9	9.76	175,206	00	68
5287	*1428*	23.8	74 59	8.5	8.26	217,536	21	12
5288	20981	23.9	45 4	7.3	7.72	175,206	21	31
5289	*1562*	24.4	40 14	9	9.98	186,501	22	75
5290	*1517*	24.4	65 1	10	9.38	202,208,556,	041	141
						561,563	40	11
5291	*1575*	24.5	24 57	9	8.95	157,540	21	10
5292	21006	25.1	50 19	7.8	8.07	179,220,531	334	3.1
5293	*1628*	25.5	35 12	8.5	8.93	171,536	12	31
5294	*1600*	25.6	65 1	9	8.98	202,208,556,	130	050
						561,563	00	20
5295	*1653*	26.1	50 14	8.5	9.04	179,531	22	05
5296	*1676*	26.4	45 12	8.8	9.86	175,206	22	99
5297	21048	26.7	40 9	6.9	6.52	186,501,857,	433	933
5298	*1708*	26.8	40 8	9.5				
						858,859	42	33
5299	*1635*	26.8	75 14	9	9.31	217,536	11	33
5300	*1710*	27.0	50 4	8.5	9.18	179,531	22	24

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5301	*1730*	27.3	49 58	9.5	9.88	179,531	10	44
5302	21046	27.3	64 46	7.5	7.20	202,208	00	76
5303	21045	27.3	65 16	7.0	6.40	202,208	22	16
5304	*1754*	27.4	35 1	9	9.63	171,536	01	.6
5305	21051	27.6	65 59	4.6	4.07	148,155,167	111	p94
5306	*1760*	27.7	50 6	9	9.48	179,531	11	05
5307	21077	28.0	24 46	7.5	7.70	157,207	22	21
5308	21080	28.2	39 53	8	8.28	186,501	22	31
5309	*1832*	28.3	39 58	9.2	9.48	186,501	11	33
5310	21084	28.5	40 50	3.2	2.96	148,152,155,	123	n61
						517,544,552	111	350
5311	*1839*	28.6	49 57	8.5	8.98	179,531	00	22
5312	21095	29.0	44 37	5.2	4.76	148,152,155,	522	583
						193,196,517,	211	2p2
						544	1	3
5313	21078	29.2	73 7	6	5.76	148,152,155,	3R1	3n2
						193,196,517,	100	232
						544	3	1
5314	21111	29.3	25 24	7.4	7.35	157,207	01	22
5315	21102	29.3	44 4	6.2	5.29	148,152,155,	035	947
						517,544,552,	122	967
						553	1	7
5316	*1925*	29.6	44 58	9	9.52	175,206	21	55
5317	*1919*	29.8	55 1	9.5	9.59	183,185,540	111	433
5318	21129	30.1	30 15	9	9.74	172,174	12	54
5319	21103	30.2	69 54	6.8	6.45	217,537	12	04
5320	21134	30.4	40 19	7.8	7.72	186,501	21	31
5321	*1996*	30.6	40 5	9	9.48	186,501	22	53
5322	*2016*	30.8	30 5	10	10.20	172,174,543	332	416
						556,560	12	67
5323	*2020*	31.0	39 56	9.5	9.72	186,501	23	75
5324	21153	31.3	42 14	4.7	4.04	148,155,162	103	9pp
5325	21150	31.3	52 2	5.8	5.40	148,155,162	112	886
5326	*2050*	31.5	50 7	9	9.83	179,531	00	38
5327	*2041*	31.5	55 2	9	9.06	182,183,185,	225	111
						540,556	13	13
5328	*2059*	31.6	50 1	8.5	8.93	179,531	12	11
5329	21163	31.7	45 23	7.4	7.22	175,206	12	33
5330	21160	31.9	55 6	7.5	7.16	182,183,185	002	638
5331	21177	32.1	38 48	6.1	5.86	148,155,162,	201	231
5332	*2112*	32.5	50 7	9	9.63	179,531	01	44
5333	*2075*	32.6	70 14	9	9.48	217,537,543,	352	555
						560,561	43	55
5334	*2136*	32.8	39 55	8.5	9.21	186,501,857,	253	774
						858,859	20	44
5335	*2135*	32.9	50 9	8.5	8.78	179,531	00	20
5336	*2169*	33.3	50 9	9	9.58	179,531	00	31
5337	21207	33.4	34 5	5.1	4.44	148,155,162,	313	74p
						193	3	9
5338	21183	33.4	69 57	7.7	7.50	217,537	11	33

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5339	*2176*	33.5	50 3	9	9.68	179,531	11	42
5340	*2210*	33.6	25 2	9	9.85	157,207	23	66
5341	*2154*	33.8	70 13	8.5	9.30	217,537	22	33
5342	21223	34.1	39 45	8	8.88	186,501	22	91
5343	21201	34.2	69 58	8.5	7.95	217,537	21	00
5344	21226	34.3	44 20	5.2	4.51	148,152,155	142	849
5345	21231	34.4	35 6	7.2	7.58	171,536	11	11
5346	*2245*	34.4	49 57	9.5	9.88	179,531	12	64
5347	*2254*	34.6	54 59	9	9.72	183,185	33	75
5348	21239	34.7	25 16	8	8.15	157,207	10	12
5349	*2279*	34.7	45 12	8.5	8.62	175,206	43	42
5350	*2312*	35.0	30 9	9	9.78	172,174	00	38
5351	*2261*	35.0	65 4	9	8.65	202,208	01	22
5352	21258	35.7	29 50	8	7.74	172,174,556,	210	335
						560,565	31	35
5353	21243	35.7	59 58	6.9	6.64	192,201	12	29
5354	21269	36.1	37 6	5.8	5.22	151,162,193	210	765
5355	*2409*	36.2	45 11	9.5	9.42	175,206	43	14
5356	21274	36.3	34 23	5.1	4.75	151,162,193	131	6p5
5357	*2434*	36.4	30 10	9.5	9.68	172,174	11	27
5358	*2399*	36.4	59 55	8	8.14	192,201,526,	3R1	441
						543,560	33	41
5359	*2413*	36.5	55 8	9.5	9.77	183,185	21	66
5360	*2391*	36.6	65 10	8.5	8.45	202,208	01	66
5361	*2455*	36.9	34 55	8.5	8.58	171,536	22	61
5362	21282	36.9	49 54	7.0	6.68	179,531	10	8p
5363	*2444*	37.0	55 12	9	9.17	183,185	32	22
5364	21286	37.1	54 47	8	7.67	183,185	21	13
5365	*2435*	37.1	65 6	10	10.00	202,208	11	32
5366	21301	37.2	25 6	9.5	7.20	157,207	22	26
5367	21302	37.2	25 6	8				
5368	21300	37.2	30 13	7.8	7.54	172,174	01	53
5369	*2500*	37.4	35 9	8.8	8.98	171,536	22	50
5370	*2509*	37.5	35 3	9	9.53	171,536	10	53
5371	*2528*	37.8	45 12	8.5	9.76	175,206	22	88
5372	21317	37.9	30 24	8	7.44	172,174	01	16
5373	21315	37.9	34 58	8.2	8.78	171,536	00	30
5374	*2542*	38.0	45 12	8.5	9.16	175,206	11	22
5375	*2394*	38.3	80 13	8.5	9.20	204,514,525,	000	457
						544	1	5
5376	21326	38.5	30 22	7.6	7.24	172,174	01	36
5377	*2562*	38.5	50 13	8.5	8.50	179,535	10	00
5378	21329	38.7	34 47	7.5	7.73	171,536	01	12
5379	21319	38.7	65 8	6.1	5.81	152,162,193	311	122
5380	*2567*	39.0	65 12	8.5	8.82	202,208,543	102	000
5381	*2636*	39.5	44 57	9	9.36	175,206	11	24
5382	21344	39.6	30 2	9	9.38	172,174	33	44
5383	21346	39.8	25 11	8.2	7.75	157,207	12	22
5384	*2637*	40.0	60 10	8.5	8.63	192,201,526,	622	241
						543,560	56	21

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5385	*2685*	40.2	49 58	9	9.44	179,535	01	41
5386	*2688*	40.3	50 7	9	9.14	179,535	11	11
5387	21360	40.4	34 22	5.8	5.65	151,162,193	112	043
5388	21353	40.6	60 4	6.9	6.59	192,201	00	24
5389	21363	40.6	35 12	7.0	6.53	171,536	01	.3
5390	21364	40.7	35 13	7.5				
5391	21361	40.7	50 17	7.0	6.54	179,535	10	p5
5392	*2761*	40.8	24 56	8.8	9.10	157,207	11	16
5393	21366	40.8	39 53	6.8	6.40	186,501,543,	641	641
						561,563	20	22
5394	*2743*	40.8	45 7	9	9.56	175,206	22	66
5395	*2812*	41.7	45 3	8.5	9.22	175,206	01	24
5396	21396	42.1	24 55	7.8	7.45	157,207	23	61
5397	21399	42.5	52 54	6.0	5.89	151,162,193	211	211
5398	*2872*	42.7	50 14	8.5	8.90	179,535	10	11
5399	*2785*	42.7	75 11	8.2	8.31	217,536,857,	430	311
						858,859	20	11
5400	*2858*	42.8	60 9	10	9.59	192,201	00	11
5401	21426	43.2	45 6	6.6	6.18	178,206,544,	331	033
						552,553	01	01
5402	*2924*	43.3	50 12	9	9.84	179,535	21	33
5403	21421	43.3	54 45	6.2	5.70	151,162,183	111	535
5404	21434	43.4	29 57	9	9.14	172,174	01	11
5405	*2968*	43.7	30 11	9	9.44	172,174	12	44
5406	21428	43.8	64 51	7.0	6.40	202,208	00	1p
5407	*2966*	43.9	40 0	9.5	9.48	218,501	22	23
5408	*2981*	44.0	25 7	8.2	8.90	157,207	11	64
5409	*3003*	44.3	25 14	9.2	9.30	157,207	00	33
5410	21454	44.6	33 20	4.2	4.20	154,162,167,	001	364
						544,552,553,	010	227
						857	1	2
5411	*3039*	44.7	29 56	8.8	9.24	172,174	12	22
5412	21463	45.0	45 12	7.8	7.72	178,206	10	33
5413	21470	45.2	44 59	7	6.78	178,206	11	72
5414	21472	45.4	50 19	6.9	6.30	179,535	11	p2
5415	21460	45.6	68 19	5.7	5.31	154,162,167	221	466
5416	21484	46.4	63 7	3.1	3.09	154,162,167,	011	65n
						221,222,544	100	441
5417	*3138*	46.5	55 2	9	9.02	183,185	00	00
5418	21497	46.7	50 12	8	7.74	179,535	32	31
5419	*3181*	46.8	29 57	9	9.16	172,174,542,	122	222
						556,560	33	22
5420	*3171*	46.8	40 0	9	9.28	186,501	44	31
5421	*3140*	46.9	65 15	9	9.05	202,208,543,	044	000
						556,560	12	20
5422	21419	47.0	83 57	7	7.76	154,154,193,	422	.n2
						196,197,204,	011	420
						544,552	11	38
5423	21499	47.2	59 53	6.2	6.05	154,162,167,	233	011
						192,193,544	101	000

15h

S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5424	21510	47.4	50 3	7.5	6.81	179,203	21	22
5425	21511	47.4	50 3	7.8				
5426	*3223*	47.5	34 58	9	9.33	171,536	10	*33*
5427	21521	47.6	25 2	5.5	4.72	157,197,207,	*221*	pp6
						533,544	*22*	33
5428	21509	47.7	60 11	6.2	5.98	154,162,167,	*331*	012
						192	*1*	0
5429	21519	47.8	45 10	8	8.98	178,206	*11*	*50*
5430	*3260*	48.0	24 57	9.1	9.40	157,533	*11*	11
5431	*3225*	48.0	60 4	10	9.54	192,201	*21*	22
5432	21532	48.2	30 8	8	7.98	172,174,542,	*233*	252
						556,560	*13*	00
5433	*3228*	48.3	65 10	8.5	8.73	202,208,543,	*033*	111
						556,560	*12*	11
5434	*3278*	48.6	39 58	9.5	9.58	186,501	*11*	*34*
5435	21546	48.7	24 57	6.7	6.00	157,533,544	*033*	p62
5436	21512	48.7	75 20	8	7.51	217,536	*23*	35
5437	*3319*	49.3	50 11	9	9.55	179,203,535,	*231*	*646*
						542,543	*20*	*44*
5438	21547	49.3	59 55	8	7.24	192,201	10	86
5439	21560	49.4	35 23	7.0	7.88	171,173	00	*44*
5440	*3369*	49.6	30 3	9	9.18	172,174,542,	*053*	*220*
						556,560	*42*	*22*
5441	*3367*	49.6	35 8	9	9.18	171,173	*22*	*24*
5442	*3356*	49.6	40 15	9	9.18	186,501	*11*	*42*
5443	*3350*	49.6	50 15	9	9.07	179,203,535,	*150*	*113*
						542,543	*12*	*11*
5444	*3318*	49.7	65 12	9	9.45	202,208,543,	*222*	*222*
						556,560	00	*24*
5445	*3382*	49.8	40 11	9.2	9.28	186,501	*11*	*31*
5446	21552	49.8	64 45	6.1	5.86	154,162,167	*010*	001
5447	21574	50.0	49 58	8.5	7.94	220,535	*11*	*11*
5448	*3401*	50.1	35 2	8.5	9.08	173,536	*11*	*33*
5449	*3423*	50.3	25 9	9	9.16	157,533,561,	*221*	*342*
						563,564	*10*	00
5450	21586	50.5	33 40	5.6	5.08	154,162,167	*121*	n61
5451	21587	50.5	33 40	6.2				
5452	*3445*	50.8	40 5	9.2	9.58	186,501	22	*14*
5453	*3482*	51.1	24 59	9.4	9.80	157,533	*11*	*13*
5454	*3481*	51.1	30 8	9	9.38	172,174,542,	*254*	*444*
						556,560	*41*	*44*
5455	21600	51.2	45 1	9.2	9.58	178,206	*11*	*66*
5456	*3496*	51.3	24 57	8.6	8.60	157,533	*22*	*11*
5457	*3506*	51.7	49 57	9	9.46	179,203	*10*	*55*
5458	*3526*	51.8	30 11	9.1	9.26	172,174,542,	*121*	*333*
						556,560	*41*	*33*
5459	*3518*	51.9	50 13	9	9.65	179,203,535,	*210*	*646*
						542,543	00	*44*
5460	*3551*	52.3	50 12	9	9.51	179,203	10	*53*
5461	*3565*	52.4	30 9	9.8	9.82	172,174,542	*212*	*133*

S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5462	*3587*	52.6	25 11	9	9.05	157,533	01	*52*
5463	21629	52.6	30 13	9	9.72	172,174,542,	*2*R*4*	*392*
						556,560	*22*	*22*
5464	21630	52.7	41 27	5.5	4.87	154,162,167	*211*	*16*p
5465	*3614*	53.1	30 12	8.1	8.53	172,213	*45*	00
5466	21644	53.2	40 22	7.2	6.28	186,501	*22*	55
5467	*3624*	53.3	30 2	9	9.63	172,213	10	*63*
5468	21657	53.4	29 47	7.3	7.18	172,213	*44*	*32*
5469	21653	53.4	38 6	3.8	3.77	152,155,167,	121	*372*
						221,222,544	*210*	*208*
5470	21647	53.4	45 9	7.5	7.68	178,206	*22*	11
5471	*3618*	53.4	50 7	9.5	9.86	179,203	*11*	*77*
5472	*3596*	53.4	60 13	9.5	9.18	201,526	*21*	33
5473	*3660*	53.9	44 59	9	9.48	178,206	*22*	*55*
5474	21673	54.1	45 4	8.8	8.82	178,206	01	*33*
5475	21676	54.2	40 9	6.8	6.42	186,501	*12*	22
5476	21677	54.2	40 9	10				
5477	*3672*	54.4	60 3	9	8.28	201,526	*32*	27
5478	*3682*	54.5	60 3	9.5				
5479	*3697*	54.7	60 6	9	8.88	201,526	*11*	13
5480	*3701*	54.7	60 7	8.5				
5481	21663	54.7	72 7	6.1	5.68	152,155,167	1*10*	333
5482	*3714*	55.0	60 12	8.5	8.38	201,526	*21*	44
5483	21688	55.2	60 13	6.8	6.88	201,526	*11*	66
5484	*3726*	55.2	60 14	8.5				
5485	21708	55.4	24 55	8.5	7.80	157,533	00	34
5486	21694	55.4	57 29	5.5	4.82	152,155,167	*242*	p08
5487	*3753*	55.6	59 56	8.5	8.40	201,526,857,	*422*	111
						858,859	23	11
5488	*3803*	55.8	34 59	8.8	8.58	173,536	*11*	*41*
5489	21710	55.8	48 57	5.2	4.66	152,155,167,	*364*	p3p
						193,196,544,	*132*	131
						552	*3*	3
5490	*3822*	56.1	34 58	8.8	8.58	173,536	00	22
5491	21705	56.1	65 12	9.5	9.25	202,208	*12*	00
5492	*3827*	56.2	34 55	8.7	8.54	173,536	01	22
5493	21646	56.5	82 30	10	9.57	553,561,563	N*11*	11*1*
5494	*3857*	56.7	35 0	8.2	8.18	173,536,543,	R*11*	460
						556,560	11	*22*
5495	21732	56.8	29 59	8.8	8.38	172,213	*11*	14
5496	21728	56.8	38 19	5.6	5.10	152,155,167,	351	40*1*
						544,552,553,	*221*	446
						565	1	6
5497	*3838*	56.8	55 4	9	9.52	183,185	*11*	*35*
5498	*3839*	56.9	55 9	9.5	9.87	183,185	*21*	*54*
5499	21738	57.0	35 6	8	8.14	173,536,543,	*231*	17*1*
						556,560	05	*11*
5500	*3898*	57.2	34 57	9.5	9.58	220,536	*11*	*16*
5501	*3873*	57.2	50 13	9	9.61	179,203	00	*66*
5502	*3887*	57.3	45 12	9	9.72	178,206	01	*77*

15^h — 16^h

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5503	21760	57.6	35	10	7.5	7.22	220,536,543,	420	632
							556,560	11	33
5504	3957	58.1	40	7	8.5	8.98	186,501	11	20
5505	3989	58.3	25	0	8.5	8.60	157,533	11	31
5506	3968	58.3	45	14	9	9.52	178,206	23	53
5507	3990	58.5	40	2	9	9.62	186,501	21	44
5508	3972	58.6	60	5	8.5	7.88	201,526	32	66
5509	3998	59.1	59	55	9.5	9.32	201,526	12	11
5510	21792	59.5	44	54	4.9	4.78	152,155,167,	133	45p
							178	1	2
5511	21803	59.8	40	10	8.2	7.22	186,501	12	32
5512	21810	0.0	36	32	4.9	4.42	152,155,167	232	8p1
5513	21780	0.0	75	1	8.5	7.76	217,536	22	27
5514	21809	0.2	45	4	7.2	7.32	178,206	23	77
5515	4094	0.3	45	0	9	N	178,206	NN	NN
5516	21827	1.0	57	40	6.0	5.84	152,162,167	132	221
5517	4084	1.0	69	55	9.5	9.33	210,537	23	00
5518	4165	1.1	30	8	9	9.63	172,213	23	34
5519	21839	1.2	45	6	8.5	8.38	178,206	11	14
5520	21836	1.3	54	55	8	7.03	182,183,185	303	228
5521	21846	1.4	30	17	8	7.93	172,213	01	13
5522	21843	1.9	65	5	9.2	8.63	202,208,543,	144	324
5523	21845	2.1	65	5	9				
							556,560	21	21
5524	21855	2.0	45	14	8.8	8.82	178,206	01	33
5525	31	2.4	50	11	8.5	9.51	179,203	11	n7
5526	58	2.5	39	56	9.5	10.12	186,501	23	66
5527	21861	2.6	55	5	8	7.83	182,183,185	220	232
5528	91	2.7	25	6	8.7	8.70	221,533	00	22
5529	98	2.8	29	59	8.2	8.63	213,537	10	16
5530	88	2.8	35	14	8.5	8.34	218,535	12	22
5531	21862	2.9	65	6	8.8	8.00	202,208	11	88
5532	105	3.1	45	4	8.8	9.58	178,206	00	68
5533	21880	3.4	39	52	7.2	7.18	186,535,542,	331	812
							561,563	10	20
5534	154	3.5	29	57	9.5	10.28	213,537	11	88
5535	21887	3.5	33	17	6.0	5.88	152,162,167	110	012
5536	21885	3.5	35	22	7.5	7.20	218,535,543,	241	633
							556,560	42	33
5537	171	3.7	30	1	9	9.58	213,537	22	66
5538	155	3.7	45	7	9	9.72	178,206	32	25
5539	21888	3.8	50	17	7.8	7.16	179,203	01	63
5540	206	4.2	25	6	8.2	8.50	221,533	11	02
5541	210	4.2	25	10	9	9.20	221,533	11	22
5542	192	4.2	40	10	9	9.28	186,535	00	33
5543	21899	4.3	45	4	7.2	6.68	178,206	22	33
5544	21903	4.4	39	52	7.5	7.88	186,535,542,	523	311
							561,563	00	41
5545	100	4.4	75	2	9.5	9.46	217,536	21	20
5546	207	4.6	50	3	9.5	9.96	179,203	21	53

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5547	270	5.1	25	9	9.2	9.35	227,533	12	44
5548	265	5.1	35	7	9	9.74	218,535	10	22
5549	21881	5.3	78	27	5.2	4.73	152,162,167	012	87p
5550	21918	5.4	55	17	6.3	5.99	182,183,185,	T42	558
							544,552,553	241	020
5551	21886	5.5	78	25	5.5	5.19	152,162,167,	414	446
							544,552,553,	111	033
							565	0	3
5552	21921	5.6	54	22	5.5	5.10	152,162,167	121	794
5553	333	5.9	25	10	9	9.45	227,533	12	11
5554	259	6.1	70	14	8.5	8.43	210,537	12	41
5555	21939	6.4	63	26	4.3	4.04	152,162,167	100	076
5556	21889	6.8	82	19	7.1	6.95	204,544,553,	501	000
							857,858,859	211	000
5557	373	6.8	45	7	9	9.42	178,206	01	14
5558	380	6.9	45	7	9.5				
5559	21951	7.1	67	41	6.3	6.14	152,162,167	112	101
5560	402	7.4	55	2	9	9.37	182,183,185,	123	442
							560,561	33	44
5561	423	7.5	30	13	9	9.43	213,537	10	44
5562	393	7.5	65	3	9	8.75	202,208	10	02
5563	21967	7.6	57	39	6.0	5.84	152,167,196	320	.22
5564	21973	7.6	29	57	7.8	7.78	213,537	11	63
5565	444	7.8	29	58	9.5				
5566	21974	8.0	47	7	5.4	5.31	152,167,196,	522	775
							544,552,553,	120	222
							565	2	2
5567	21991	8.4	42	39	6.6	6.10	152,167,196	122	105
5568	21385	8.5	89	3	8	8.29	204,514,544,	211	221
							553,561,563,	111	212
							564,565	12	22
5569	509	8.6	25	11	9.2	9.35	227,533	01	11
5570	503	8.7	40	9	9.5	9.68	186,535	11	52
5571	21937	8.7	81	43	7.5	7.35	204,544,553	302	111
5572	21995	8.8	53	34	6.0	5.42	162,167,196	212	532
5573	22004	8.8	25	13	6.4	6.27	207,227,544	021	100
5574	526	8.9	25	13	10				
5575	525	8.9	30	5	10	10.38	213,537	00	67
5576	528	9.0	35	1	9.2	9.44	218,535	01	44
5577	22005	9.2	45	8	8	8.28	178,206	00	32
5578	22012	9.6	49	49	5.4	4.95	162,167,179	000	44.
5579	21943	9.7	83	21	7.2	7.88	204,544,553,	011	111
							561,563,564	101	141
5580	559	9.8	44	58	9.5	10.02	178,206	01	55
5581	567	9.9	45	7	9	9.68	178,206	22	25
5582	557	9.9	54	58	8	8.53	182,183,185	123	555
5583	21950	10.1	83	20	8.5	8.97	204,544,553	012	252
5584	22034	10.6	45	12	8.8	9.08	178,206	00	11
5585	648	10.7	24	59	9	8.80	207,533	11	23
5586	667	11.3	50	14	8.5	8.90	179,203,542,	502	441

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						561,563	12	11
5587	673	11.4	50 9	8.5	8.51	179,203	11	03
5588	22058	11.6	49 55	8.2	8.20	179,203,542,	402	330
						561,563	02	00
5589	689	11.7	54 57	9	9.73	182,183,185	101	225
5590	745	12.1	35 10	8.2	8.58	218,535	11	14
5591	22082	12.3	42 26	5.7	5.64	167,196,197	011	032
5592	743	12.3	44 57	9	9.22	178,206	21	22
5593	22075	12.4	49 55	4.6	4.19	162,167,179	210	953
5594	22074	12.4	54 54	6.6	5.97	182,183,185,	113	622
						560,561	52	32
5595	741	12.5	60 14	9.5	9.28	201,540	11	12
5596	22097	12.7	35 15	6.9	6.68	218,535	22	33
5597	802	12.8	30 11	8.2	8.48	213,539	11	50
5598	787	13.0	60 13	10	9.58	201,540	22	00
5599	22108	13.2	30 40	6	5.51	167,193,196,	401	330
						197	2	.
5600	808	13.2	49 54	8.5	9.01	179,203	21	55
5601	774	13.4	69 55	7.5	6.93	210,537	10	36
5602	22119	13.9	55 19	7.5	7.09	182,183,185	012	997
5603	695	13.9	80 6	9	8.70	237,544	00	31
5604	22126	14.1	47 57	7	6.62	167,196,197,	121	145
						222,544,552,	032	121
						553,564,565,	111	220
						566	2	2
5605	863	14.1	55 0	9	8.93	182,183,185,	240	111
						560,561	01	11
5606	22037	14.3	83 20	8.8	8.54	204,544,553	111	000
5607	942	14.7	25 9	9	8.95	207,533	12	02
5608	937	14.8	30 7	9	9.53	213,539	21	55
5609	22147	15.0	49 20	5.9	5.40	173,196,197	131	441
5610	22143	15.0	54 48	7.8	8.01	182,183,185,	120	020
						560,561	01	22
5611	915	15.0	59 54	9	8.58	201,540	22	44
5612	22158	15.1	25 21	3.4	3.02	157,207,533,	123	233
						544,552,553,	311	035
						564,565	01	55
5613	868	15.3	75 5	9.5	9.48	210,536	11	22
5614	980	15.5	29 55	9.5	9.76	213,539,542,	340	653
						556,561	11	33
5615	22167	15.8	39 59	8	8.78	186,535	11	3n
5616	22164	16.0	55 13	7.8	7.99	182,183,185	001	002
5617	22169	16.3	54 59	7.8	7.86	182,183,185,	R12	111
						560,561	12	11
5618	1050	16.6	35 12	9	9.28	218,535,543,	524	113
						556,560	10	33
5619	1064	17.0	44 55	8.9	9.48	178,206	22	55
5620	22166	17.1	74 59	7.2	7.28	210,536	01	75
5621	1078	17.2	45 7	9.5	10.00	175,178,206	121	435
5622	22194	17.3	38 58	5.8	5.32	173,196,197	021	745
5623	22198	17.5	44 57	8	7.82	175,206	10	57
5624	1113	17.6	29 57	8	7.86	213,539,542,	443	313
						556,561	11	11
5625	22185	17.6	69 52	5.6	4.99	173,196,197	121	699
5626	22196	17.7	55 0	8.5	8.92	183,185	11	74
5627	22202	17.8	45 7	6.9	6.42	175,206	01	64
5628	1135	17.9	29 56	8.5	8.54	213,539,542,	142	000
						556,561	13	02
5629	22208	17.9	37 20	5.8	5.46	173,196,197	320	332
5630	22211	18.0	34 57	7.8	7.54	218,535	10	53
5631	22170	18.1	78 41	3.9	3.94	152,173,196,	221	710
						222,223,544,	212	116
						552	1	6
5632	1131	18.2	54 58	9.5	10.02	183,185	22	85
5633	22212	18.7	63 50	5.8	5.26	173,196,197	111	265
5634	22231	18.9	25 8	8.5	8.80	207,533	11	33
5635	22227	19.1	54 45	8	7.42	183,185	22	66
5636	1236	19.2	35 0	10	N	218,535	NN	NN
5637	22245	19.6	30 13	8.8	8.93	213,539	21	11
5638	22243	19.6	34 45	8	8.24	218,535	12	02
5639	22236	19.8	58 23	6.1	5.77	173,196,197	221	221
5640	22244	19.8	47 20	7	4.67	167,196,197	101	331
5641	22246	19.8	47 20	5				
5642	1371	21.3	34 54	8.5	8.88	218,535	22	11
5643	1391	21.4	24 56	9.5	9.58	207,533,561,	313	334
						563,564	00	11
5644	22277	21.9	61 25	5.8	5.11	167,196,197	123	877
5645	1399	22.0	50 9	9	9.51	179,203	11	55
5646	22296	22.1	25 14	7.1	6.85	207,533	01	22
5647	1409	22.1	40 12	9	9.28	186,542	00	33
5648	22297	22.5	46 2	5.9	5.38	167,196,197,	112	252
						222,223	22	24
5649	1449	22.6	29 55	10	10.03	213,539	21	33
5650	1442	22.6	30 3	9.5	9.66	213,539,542,	130	572
						556,561	01	22
5651	1447	22.8	45 2	9.5	9.81	175,206,556,	R10	333
						561,563	21	33
5652	1456	23.0	45 7	9	9.82	175,206	43	68
5653	22090	23.0	87 24	7.0	6.44	204,544,553	111	46p
5654	22305	23.1	44 58	9.5	9.36	175,206	11	44
5655	22293	23.3	70 47	5.9	5.53	544,552,553,	011	555
						564,565,566,	321	535
						857	5	5
5656	1460	23.4	60 4	9.5	9.33	201,540	01	00
5657	22253	23.5	83 3	7.0	6.37	204,544,553	111	166
5658	22180	23.6	86 11	6.2	6.04	173,196,197,	121	412
						208,210,217,	203	4..
						222,566	32	42
5659	22325	23.8	24 46	8	7.80	207,533	11	22
5660	1468	23.8	65 10	10	9.67	202,208,556,	234	110

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S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							560,561	32	52
5661	22327	23.9	24	56	7.5	7.40	227,533	00	86
5662	22331	24.1	24	53	5.5	4.92	172,227,533,	021	497
							544,552	22	36
5663	22269	24.1	81	35	9.8	9.56	204,544,561	222	211
5664	22312	24.4	71	41	6.7	6.68	167,196,197	123	477
5665	*1568*	24.7	39	59	9.5	9.58	186,542	11	11
5666	22340	24.7	41	36	5.9	5.48	167,221,222,	331	332
							223,544,552,	202	335
							565	2	5
5667	22347	24.8	34	29	4.6	4.46	167,221,222,	052	153
							223,544,552,	215	355
							553	1	0
5668	*1584*	24.8	40	0	8.2	8.53	186,542	10	32
5669	*1558*	25.1	60	4	9	9.38	201,540	00	26
5670	*1585*	25.3	60	2	9.5	9.32	201,540	12	04
5671	*1579*	25.3	60	3	8.5	8.52	201,540	12	53
5672	*1603*	25.4	45	3	9	9.16	175,206	11	22
5673	*1626*	25.5	40	6	9.5	10.10	186,542,543,	330	666
							556,560	01	56
5674	*1615*	25.7	55	0	9	9.82	183,185	AT	68
5675	22354	26.1	65	17	6.0	5.45	167,196,197	313	606
5676	22337	26.1	75	16	7.5	8.03	210,536	22	20
5677	*1690*	26.3	29	58	9	8.82	213,539,542,	232	663
5678	*1693*	26.3	29	59	9				
							556,561	10	33
5679	22373	26.5	45	0	9	9.32	175,206	12	33
5680	*1746*	27.0	24	55	9.3	9.55	236,533	01	14
5681	22390	27.0	43	50	5.5	5.16	167,221,222,	110	034
							544	1	3
5682	22407	27.2	35	20	7	7.64	218,535	01	12
5683	*1781*	27.7	44	55	9	9.46	175,206	22	55
5684	*1792*	27.8	40	8	9.5	9.33	186,542	12	00
5685	22417	27.9	45	2	7	6.42	175,206	10	8p
5686	*1797*	28.0	50	6	9	9.36	179,203	00	44
5687	*1798*	28.1	50	9	9	9.41	179,203	23	44
5688	*1851*	28.6	40	0	9	9.53	186,542	21	20
5689	22431	28.8	44	57	8.8	8.72	175,206	01	23
5690	22393	28.8	77	18	4.5	4.22	152,167,196,	110	767
5691	22429	28.9	54	46	7.2	6.77	183,185	10	22
5692	*1825*	28.9	65	9	8.7	8.59	202,208,556,	241	442
							560,561	20	21
5693	*1883*	29.0	40	7	9.5	9.78	186,542	00	23
5694	*1777*	29.1	74	55	9	8.98	210,536	32	22
5695	*1908*	29.2	30	3	9	9.23	213,539	21	74
5696	*1889*	29.2	45	11	8.5	8.76	175,206	00	20
5697	22441	29.4	42	39	6.0	5.53	152,221,222	200	555
5698	*1921*	29.5	34	53	8.5	9.58	218,535	00	68
5699	22444	29.5	44	57	7.8	7.66	175,206	00	33
5700	22449	29.6	40	6	7.5	7.08	186,542	00	99

S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5701	*1954*	29.8	24	57	8.8	9.20	227,533	22	72
5702	22456	29.8	25	10	8.5	9.05	227,533	10	n2
5703	22454	29.8	35	3	4.4	4.08	152,221,222,	0R1	8p3
							223,544,552,	122	411
							553	0	1
5704	*1945*	29.8	35	6	9	9.28	218,535	33	33
5705	22450	29.8	45	7	7.8	8.52	175,206	10	35
5706	*2016*	30.5	25	7	10	9.85	227,533	10	13
5707	*1809*	30.5	80	10	9	8.50	237,544	11	53
5708	*1991*	30.6	50	11	9	9.46	179,203	10	55
5709	*1983*	30.9	60	1	9	8.78	201,540,857,	434	022
							858,859	13	20
5710	*2047*	31.1	29	54	9.5	9.58	213,539	00	41
5711	22459	31.1	68	6	6.4	6.00	152,196,222	011	120
5712	*2063*	31.4	40	4	8.8	9.23	186,542	01	20
5713	22469	31.7	70	23	7.2	7.44	210,540	10	11
5714	22488	32.1	50	1	7.5	6.91	179,203	12	99
5715	22482	32.1	60	15	6.8	6.22	201,540	22	84
5716	*2145*	32.3	25	7	9.2	9.30	227,533	22	30
5717	*2148*	32.3	25	10	9.8	9.70	227,533	11	52
5718	22503	32.4	37	1	6.2	6.18	152,221,222	303	223
5719	22500	32.5	44	57	8.5	8.26	175,206	11	35
5720	22496	32.9	65	13	9.5	9.05	202,208	10	30
5721	22516	33.0	29	43	7.5	7.23	213,537	01	33
5722	22522	33.0	30	16	7.8	7.63	213,537	21	21
5723	*2208*	33.2	35	3	9	9.08	231,535	00	11
5724	*2177*	33.2	55	6	8.5	8.67	183,185	23	22
5725	22529	33.5	39	43	8	7.28	186,542	22	77
5726	*2211*	33.6	49	55	9.5	9.90	179,203,543,	132	444
							560,561	00	44
5727	*2244*	33.9	40	6	9	9.33	186,542	01	23
5728	22534	33.9	48	34	6	5.63	152,221,222	402	130
5729	*2254*	34.1	39	59	9	9.38	186,542	11	12
5730	22540	34.1	49	27	6.0	5.91	152,221,222	121	223
5731	*2286*	34.2	25	4	8.5	9.25	227,533	01	72
5732	*2242*	34.2	55	11	8.5	8.85	185,540,561,	113	000
							563,564	12	01
5733	*2248*	34.3	54	58	8.8	8.67	183,185	10	12
5734	*2303*	34.6	30	0	9	9.38	213,537	11	94
5735	22556	34.6	45	10	7.0	7.22	175,206	10	33
5736	*2259*	34.6	60	9	9	9.28	201,540	11	11
5737	22584	35.8	30	20	7.5	7.58	213,537	11	16
5738	*2354*	35.8	49	55	9	9.22	179,203,543	022	242
5739	*2381*	35.9	40	6	8	8.36	186,542,543,	321	412
							556,560	21	22
5740	*2395*	36.0	34	12	9	R	R	R	R
5741	*2436*	36.6	35	1	9.5	9.63	231,536	01	31
5742	22590	36.6	60	22	8	7.62	201,540	01	24
5743	22582	36.6	66	55	5.6	5.28	152,196,221	123	377
5744	*2453*	36.8	30	12	9	9.03	213,537	12	20

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
5745	2471	36.9	24	55	9.5	9.75	227,533	21	35
5746	2462	36.9	25	2	10	10.05	227,533	21	55
5747	2434	36.9	55	3	9	9.13	183,540,561,	200	111
							563,564	10	11
5748	2460	37.2	45	11	9.5	9.86	175,206	11	44
5749	2492	37.3	35	0	10	N	231,536	NN	NN
5750	22615	37.8	40	39	5.9	5.68	154,221,222	110	000
5751	22613	37.8	58	19	6.1	5.89	154,196,222	001	113
5752	22607	38.0	68	51	2.2	1.89	154,196,222,	201	595
							223,544,552,	113	821
							553,564,565,	101	119
							566	2	6
5753	2584	38.5	30	13	9	9.43	213,537	21	44
5754	2593	38.6	25	2	9	9.20	227,533	00	42
5755	22626	38.8	58	9	6.0	5.74	154,196,222	022	222
5756	2624	39.2	30	6	9.5	10.08	213,537	00	66
5757	2597	39.2	55	7	9	9.67	183,540,561,	412	555
							563,565	21	57
5758	2643	39.3	25	11	9	9.55	227,533	01	66
5759	22658	40.0	39	12	6.0	5.45	154,221,222	020	533
5760	2687	40.1	34	58	9.5	9.98	231,536,560,	52R	788
							561,563	14	88
5761	22662	40.2	45	17	7.8	7.86	175,206	11	11
5762	2715	40.5	34	57	9.2	9.48	231,536	00	23
5763	22668	40.6	45	13	7.0	7.52	175,206	10	15
5764	22675	40.7	25	21	7	6.35	227,533	10	p6
5765	2755	41.0	34	59	9.5	9.53	231,536	01	10
5766	22627	41.0	79	54	8	7.94	237,544	10	43
5767	22672	41.1	58	52	3.8	3.60	154,196,222,	112	362
							223,225,552	012	414
5768	2808	41.9	40	1	9	9.48	235,542	11	55
5769	22701	42.1	30	11	8.5	8.38	213,537	00	44
5770	22695	42.2	44	49	8	7.92	175,206	43	16
5771	22686	42.2	65	12	6.5	6.22	202,208,552,	102	633
							553,560	03	10
5772	2833	42.4	44	54	8.8	9.42	175,206	21	64
5773	22699	42.4	49	47	8	7.81	179,203	21	22
5774	22706	42.6	49	55	10	10.21	179,203	01	25
5775	2689	42.7	79	55	9.5	9.61	237,544,857,	301	141
							858,859	22	11
5776	2874	42.8	40	10	8.5	8.38	235,542	11	11
5777	2867	42.8	45	4	9	9.46	175,206	22	75
5778	22691	42.8	70	0	7.2	7.44	210,540	01	14
5779	22711	43.0	49	52	7	6.36	179,203	22	28
5780	22712	43.0	49	52	7.5				
5781	22721	43.1	35	8	9	9.36	231,536,560,	23R	446
							561,563	22	64
5782	2908	43.2	25	4	9	9.20	227,533	11	04
5783	2882	43.2	50	10	9	9.46	179,203,543,	321	555
							560,561	22	55

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn.		Julian Day.	Resid.	
					Cat.	S. M. P.		Phot.	Est.
		m.	°	′					
5784	2897	43.3	44	57	9	9.92	175,206	01	74
5785	2895	43.3	45	3	9.3	9.72	175,206	01	52
5786	22727	43.5	24	54	8	7.45	227,533	01	16
5787	22731	43.7	34	7	2.3	2.29	154,171,221,	4T3	60p
							222,223,225,	002	257
							552,553	20	38
5788	2947	44.1	50	8	8.5	8.56	179,203	01	01
5789	2979	44.2	30	5	8.8	9.23	213,537	10	77
5790	2990	44.3	35	1	9.5	10.08	231,536	11	66
5791	2954	44.4	59	54	9	9.46	236,540,857,	443	555
							858,859	01	55
5792	3017	44.5	25	4	10	9.70	227,533	11	50
5793	22748	44.5	41	4	5.9	5.48	154,221,222,	122	605
							857,858,859	120	533
5794	22761	45.1	37	53	3.6	3.26	154,221,222,	011	533
							223,225,552,	204	352
							553	3	2
5795	3049	45.2	40	12	8.5	9.18	235,542	22	02
5796	3069	45.3	29	59	9.2	9.53	213,537	01	30
5797	3067	45.3	30	5	9.5	9.78	213,537	11	63
5798	22763	45.3	41	41	7.5	6.78	857,858,859,	213	722
5799	3084	45.5	30	12	9	9.43	213,537	01	44
5800	22778	45.6	37	51	3.9	3.74	154,221,222,	311	751
							223,225,552,	143	113
							553	1	1
5801	22769	45.7	54	55	8	7.91	183,540,561,	501	111
							563,564	22	13
5802	3104	46.0	50	4	8.5	8.46	179,203	32	50
5803	22795	46.4	44	56	8.2	8.56	175,206	11	62
5804	22781	46.4	65	9	7.8	8.00	202,208	00	03
5805	3189	46.8	25	11	9.2	9.20	227,533	11	22
5806	22811	46.8	30	16	7.5	7.33	213,537	21	72
5807	3174	46.8	40	9	9	8.93	235,542	12	11
5808	22825	47.0	25	6	9	8.45	227,533	10	41
5809	22812	47.0	42	12	5.8	4.96	154,221,222,	114	p75
							223,225	00	50
5810	22819	47.1	44	44	7.5	7.68	178,206	33	22
5811	22823	47.3	50	2	7.2	7.28	179,203,543,	141	374
							560,561	21	22
5812	22827	47.3	41	40	7	6.95	857,858,859	201	000
5813	22830	47.4	30	15	7.5	8.28	213,537	22	55
5814	22815	47.5	60	0	8.2	8.12	236,540	11	11
5815	22832	47.6	42	12	3.6	3.53	154,221,222,	431	ppp
							223,225,552,	013	935
							553	0	0
5816	3267	47.7	29	58	9.5	9.63	213,537	10	31
5817	22835	47.7	44	55	9	8.98	178,206	22	55
5818	22849	47.8	24	55	8	7.90	227,533	00	64
5819	22853	48.0	24	58	9.5	9.50	227,533	22	30
5820	22842	48.0	40	22	7	7.18	235,542	00	0p

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5821	22843	48.0	41 0	6.4	6.11	857,858,859	120	111
5822	*3288*	48.2	45 11	8.3	8.32	178,206	12	22
5823	22855	48.4	44 57	7	N	206	N	N
5824	22839	48.5	65 3	7.0	6.60	202,208	11	44
5825	*3308*	48.6	55 7	9	9.17	183,540,561,	300	222
						563,564	23	24
5826	*3320*	48.7	49 57	9	8.82	179,203,543,	231	030
						560,561	12	02
5827	22841	48.9	69 7	6.2	6.00	154,196,221	011	201
5828	22775	48.9	82 11	7.1	7.24	162,172,204	210	. . 4
5829	22903	49.6	25 23	7.5	7.35	227,533	10	66
5830	*3421*	49.8	30 10	9.2	9.63	213,537	10	44
5831	22914	49.9	40 22	7.5	7.03	235,542	12	5p
5832	*3422*	50.0	44 55	9	9.58	178,206	00	66
5833	*3435*	50.1	45 4	8.8	9.12	178,206	21	46
5834	*3450*	50.2	39 59	9	9.03	235,542	10	00
5835	*3456*	50.4	44 55	9	9.44	178,535,543,	521	144
						561,563	22	44
5836	22921	50.4	45 12	8.5	8.87	178,535	00	11
5837	22916	50.4	55 50	3.2	3.02	154,193,196,	111	425
						223,225,552	111	5p5
5838	22931	50.6	33 6	6.0	5.31	154,193,221	221	457
5839	22923	50.6	50 29	6.0	5.65	154,179,193,	460	544
						196,222,552,	402	404
						553	2	4
5840	*3496*	50.9	44 55	9	9.42	178,535	21	44
5841	22936	51.0	40 11	10	9.68	235,542	00	42
5842	22940	51.1	40 11	7.5	7.33	235,542	21	97
5843	*3509*	51.1	45 1	9	9.67	178,535	00	75
5844	22941	51.6	53 0	4.2	4.17	154,193,196,	001	956
						553,565,566	201	222
5845	*3573*	51.8	30 4	8.2	8.48	213,537	11	35
5846	*3552*	51.8	45 9	9	9.02	178,535	01	02
5847	22858	51.8	82 15	6.9	7.45	192,204,544	311	.23
5848	*3548*	51.9	55 9	9	9.42	183,540	11	44
5849	*3557*	52.0	54 58	8.2	8.55	183,540,561,	515	121
						563,564	22	14
5850	*3621*	52.3	29 57	8.8	8.68	213,537	11	22
5851	*3640*	52.4	30 1	9.2	9.53	213,537	01	35
5852	*3541*	52.5	70 9	8.8	8.50	210,540	11	23
5853	22983	53.0	44 50	7.0	6.57	178,535	11	40
5854	*3675*	53.1	50 2	9	9.51	179,203	11	53
5855	22989	53.2	45 18	7	6.47	178,535	00	p5
5856	*3733*	53.7	25 1	9.5	9.60	227,533	22	11
5857	23004	53.8	24 56	6.3	5.57	227,533,552	111	631
5858	22997	53.8	44 52	8.8	8.42	178,535	10	44
5859	*3726*	53.9	45 3	9	9.57	178,535	11	66
5860	23009	54.0	24 50	6.1	5.58	227,533,552,	233	431
						553,565	16	04
5861	*3750*	54.0	30 5	8.5	8.73	213,537	01	22
5862	*3744*	54.1	45 7	8.5	8.86	178,535,543,	530	044
						560,561	R3	74
5863	*3751*	54.3	50 2	8.5	9.21	179,203	21	40
5864	23005	54.3	54 55	8.5	9.45	183,540,561,	512	462
5865	23007	54.4	54 55	9.2				
						563,564	22	74
5866	*3757*	54.4	45 6	9	9.64	178,535,543,	520	366
						560,561	R0	46
5867	*3779*	54.7	45 5	8.5	9.42	218,535	12	64
5868	*3787*	54.8	44 57	9	9.72	218,535	01	57
5869	*3790*	55.1	55 5	9.5	9.65	183,540,561,	020	461
						563,564	31	16
5870	23024	55.2	50 0	7.5	7.01	179,203	00	52
5871	23022	55.2	50 1	8.5				
5872	23018	55.2	53 5	5.9	5.39	154,193,196	001	552
5873	*3644*	55.2	79 57	9.5	9.03	237,544,857,	150	200
						858,859	32	00
5874	*3846*	55.3	25 8	8.2	8.10	227,533	11	44
5875	23035	55.4	31 59	5.7	5.15	154,193,221	212	873
5876	*3859*	55.5	24 58	9.5	9.60	227,533	22	41
5877	*3852*	55.5	30 9	9.2	9.48	213,537	22	35
5878	23033	55.5	44 42	7.4	6.82	218,535	10	77
5879	23031	55.6	50 15	7.5	7.61	179,203	01	14
5880	*3870*	55.8	30 6	10	9.93	213,537	21	44
5881	*3882*	55.9	24 54	8.5	8.52	227,533,857,	613	033
						858,859	41	00
5882	23034	55.9	57 34	6.2	5.90	154,193,196	122	010
5883	23015	56.3	74 55	8	7.43	210,536	00	46
5884	23058	56.4	39 56	7.5	7.43	235,542	10	22
5885	23030	56.9	75 14	7.8	7.38	210,536	10	44
5886	23072	57.0	38 0	6.5	6.06	154,193,221,	202	110
						857,858,859	102	441
5887	23065	57.0	45 6	8.2	7.36	218,535	11	64
5888	*3962*	57.1	29 59	8.7	9.13	213,537	10	14
5889	*3935*	57.1	49 55	8	7.91	179,203	10	11
5890	*3938*	57.2	55 8	9	9.32	183,540	00	13
5891	23073	57.2	37 42	7.1	6.81	857,858,859	221	422
5892	*3968*	57.3	35 8	8.2	8.33	231,536	10	31
5893	23063	57.3	60 17	7.8	7.19	236,540,556,	434	863
						560,561	24	63
5894	*3999*	57.6	29 56	8.5	8.68	213,537	11	22
5895	23086	57.8	45 21	6.7	6.36	218,535	00	46
5896	23093	58.0	39 54	9	8.38	235,542	11	21
5897	*4033*	58.1	35 10	8.5	8.63	231,536	01	11
5898	23098	58.2	33 59	5.5	4.98	154,193,221	011	529
5899	*4030*	58.2	44 58	8.5	8.76	218,535	00	20
5900	*4049*	58.3	30 4	9	9.33	213,537	21	55
5901	*4083*	58.8	29 53	8.2	8.03	213,537	21	02
5902	23111	58.9	34 56	9	8.78	231,536	22	03
5903	*4071*	59.4	65 11	8.5	8.40	202,208	11	61

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5904	23133	59.9	35	19	6.7	6.28	231,536	11	72
5905	23143	0.1	30	1	7.5	7.48	213,537	11	55
5906	*4188*	0.2	30	4	9.2	9.33	213,537	01	31
5907	*4227*	1.0	35	4	8.5	8.38	231,536	00	41
5908	*4261*	1.3	30	10	9.5	9.58	213,537	11	61
5909	23159	1.3	44	54	8.8	9.06	218,535	33	13
5910	23161	1.5	45	1	8.8	9.12	218,535	10	13
5911	*4191*	1.5	69	57	9	9.40	210,540	00	44
5912	23165	1.6	34	52	7.5	7.23	231,536	21	65
5913	23173	1.8	24	52	7.5	7.25	228,533	21	25
5914	*7*	1.8	35	2	9.5	9.88	231,536	AF	41
5915	23174	1.9	29	55	7.8	7.24	236,539	10	06
5916	23181	2.2	29	51	8	7.82	236,539,564,	121	274
							565,566	13	42
5917	*45*	2.2	29	54	9.2	9.24	236,539	01	23
5918	23189	2.4	30	16	6.2	5.88	193,197,221,	202	304
							222	0	1
5919	23172	2.5	59	57	8.5	7.90	237,556	22	38
5920	23196	2.7	40	5	8.8	8.13	235,542	13	21
5921	*94*	2.8	25	1	10	9.70	228,533	11	30
5922	*71*	2.8	49	55	8.5	8.66	203,543	01	12
5923	*85*	3.0	49	59	9	9.36	203,543	10	22
5924	23206	3.5	44	26	5.7	4.93	193,197,221,	516	869
							222,223,552,	121	1p9
							553	2	7
5925	23209	3.7	49	59	7.5	7.46	203,543	10	32
5926	*133*	3.9	55	6	9.5	9.45	218,235,535,	401	414
							561	6	1
5927	23234	4.5	45	10	9.2	9.22	218,535	12	22
5928	*198*	4.7	45	4	9.2	9.61	218,535,564,	450	464
							565,566	32	66
5929	23237	4.8	54	44	7.2	7.22	235,556	11	03
5930	23250	5.0	43	6	3.6	3.37	193,197,221,	010	622
							223,225,552,	144	324
							553	0	4
5931	23260	5.2	24	54	8.5	8.22	228,533,857,	612	032
							858,859	40	33
5932	*262*	5.3	25	12	9	9.26	228,533,858,	221	213
							565,566	10	31
5933	*253*	5.3	30	1	9	9.38	236,539	11	44
5934	23257	5.3	39	23	5.9	5.72	193,197,221	210	134
5935	*265*	5.4	25	11	9.5	9.60	228,533	00	21
5936	*250*	5.4	34	53	9.2	9.43	231,536	01	42
5937	23025	5.4	87	11	8.2	7.92	204,544,553,	T40	433
							561,563,564,	133	113
							565	1	3
5938	23275	6.1	25	8	6.6	6.33	228,533,552	001	751
5939	*282*	6.1	50	11	8.5	9.30	203,543	00	33
5940	23027	6.1	87	18	8	7.55	182,204,544	332	.16
5941	23284	6.3	25	6	8	7.75	228,533	21	p7

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
5942	*327*	6.4	25	9	9	8.85	228,533	12	22
5943	23192	6.5	82	41	6.8	6.79	204,544,553	000	220
5944	23295	6.8	25	3	9	8.15	228,533	10	66
5945	23288	6.8	45	13	8	8.26	218,535	11	12
5946	*347*	7.0	45	4	9	9.52	218,535	12	25
5947	*369*	7.2	35	11	9	9.21	231,536,560,	221	222
							564,565	10	22
5948	23315	7.7	35	1	7.8	7.93	231,536	12	13
5949	23320	7.9	29	56	10	9.38	236,539	11	12
5950	*410*	8.4	55	12	8.5	8.76	231,556	32	13
5951	23337	8.7	33	26	5.8	5.55	193,197,221	212	224
5952	23349	9.1	30	9	8.5	8.28	236,539	00	03
5953	23323	9.1	69	56	7.0	6.50	210,540	11	51
5954	*415*	9.1	69	58	9.5	9.50	210,540	11	00
5955	*418*	9.2	69	58	9.5				
5956	*510*	9.3	24	53	9	9.85	228,533	12	66
5957	23312	9.3	75	14	7.1	6.98	210,536	00	02
5958	23356	9.5	30	6	6.5	6.15	236,539,552	001	313
5959	*495*	9.5	50	5	8.5	9.00	203,543	00	07
5960	*527*	9.6	24	53	9.5	9.00	228,533	33	02
5961	23358	9.7	35	38	6.1	6.18	552,553,566,	211	302
							580,582,858	224	212
5962	*520*	9.8	50	3	9	9.41	203,543,565,	230	122
							566,584	21	44
5963	*471*	10.1	69	59	9.2	9.24	210,540	21	33
5964	*576*	10.2	24	52	9.5	9.08	228,533,858,	524	113
							859	2	1
5965	23374	10.3	25	12	7.2	6.90	228,533	00	38
5966	*569*	10.4	45	10	9	9.16	218,535	22	22
5967	23376	10.5	30	15	7.4	7.24	236,539	12	p8
5968	23377	10.5	32	33	5.9	5.48	193,197,221,	211	331
							553	0	4
5969	23372	10.6	50	6	7.5	7.10	203,543	11	61
5970	*578*	10.9	55	3	9	9.07	235,556	10	11
5971	23390	11.0	30	3	7.5	6.88	236,539	00	66
5972	23362	11.0	70	1	5.8	5.61	193,196,221,	010	332
5973	23392	11.1	35	7	8.2	7.77	231,536,560,	514	772
							564,565	02	44
5974	23366	11.2	70	0	9	9.64	210,540	01	14
5975	23385	11.3	55	1	7.5	7.42	235,556	11	31
5976	23369	11.3	70	20	7.8	7.20	210,540	00	66
5977	*673*	11.4	25	0	9	9.05	228,533	12	20
5978	*533*	11.4	74	57	8.5	8.38	210,536	10	41
5979	23397	11.5	46	32	6	5.54	193,197,221	112	331
5980	23378	11.5	67	40	5.4	4.70	193,196,221	202	770
5981	23405	11.8	49	58	7.0	6.44	203,543,857,	121	866
							858,859	02	64
5982	23421	12.0	29	46	7.5	7.84	236,539,564,	142	200
							565,566	15	24
5983	*693*	12.0	45	9	9	9.62	218,535	12	66

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
5984	23416	12.1	45 32	7.2	7.22	858,859	01	*24*
5985	23422	12.1	34 53	6.1	5.85	193,197,221	321	412
5986	*719*	12.2	34 53	9.5				
5987	*751*	12.5	30 6	9.5	9.56	236,539,564,	0*3*0	*311*
						565,566	11	*11*
5988	*639*	12.8	74 52	9.5	9.23	210,536	10	0*2*
5989	23360	12.8	80 46	6.4	5.95	171,183,204,	*2*R*2*	. . 2
						858,859	*21*	.0
5990	*777*	13.0	30 8	9.5	9.48	236,539	1*1*	00
5991	*769*	13.4	55 4	9	8.67	235,556	0*1*	33
5992	23439	13.5	45 19	7.2	7.16	218,535	1*1*	83
5993	23452	14.0	40 11	8.8	8.73	235,542	10	*42*
5994	*821*	14.0	49 54	8.5	9.40	203,543	00	*46*
5995	*818*	14.2	55 4	9	9.22	235,556	1*1*	00
5996	*866*	14.3	40 10	9	9.73	235,542	*23*	*22*
5997	*881*	14.5	30 11	9	9.38	236,539,564,	120	*212*
						565,566	*12*	*22*
5998	23468	14.6	39 56	9	9.28	235,542	*11*	*13*
5999	23469	14.6	40 16	8	8.13	235,542	10	11
6000	23455	14.6	62 46	6.2	5.83	193,196,221	010	113
6001	*906*	14.8	24 52	9.5	9.30	228,533	*33*	*52*
6002	*933*	15.4	40 0	9	9.08	235,542	00	*11*
6003	23490	15.5	24 49	6.8	6.55	228,533,564,	R*1*0	202
						565,566	*21*	94
6004	*912*	15.5	55 2	9	9.47	235,556	*1*0	*50*
6005	23429	15.6	80 59	7.7	7.70	204,544,553,	32*1*	1*22*
						582,587,588	*122*	333
6006	*961*	15.7	24 58	9.5	9.52	228,533,564,	R1*1*	*203*
						565,566	01	00
6007	23500	15.8	24 54	3.6	3.48	223,230,241,	*335*	*255*
						552,553,566,	*310*	003
						580,582,584,	020	055
						859	*1*	3
6008	23486	15.8	47 23	5.8	5.44	193,197,221	200	333
6009	*930*	15.8	54 59	8.5	8.72	235,556	00	13
6010	23502	16.0	30 7	9	8.10	236,539,564,	220	444
						565,566	*12*	17
6011	*977*	16.1	35 9	9	9.69	231,536,560,	3*11*	*557*
						564,565	*22*	*75*
6012	*981*	16.2	45 7	9	9.22	206,213	10	*22*
6013	*998*	16.3	45 5	9.5	9.21	206,213,535,	0*21*	100
						560	2	3
6014	23512	16.4	40 2	8.2	8.28	235,542	00	72
6015	*1029*	16.6	40 1	9	9.48	235,542	*11*	00
6016	23518	16.7	40 7	8.5	8.78	235,542	*22*	22
6017	*991*	16.7	60 3	9	9.23	237,556,857,	*423*	*322*
						858,859	52	*22*
6018	23529	17.0	25 0	7.0	7.50	230,241	*22*	p0
6019	23522	17.0	44 4	5.8	4.98	193,197,201	30*3*	670
6020	23516	17.0	55 27	2.8	2.72	193,196,201,	20*2*	618

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						222,223,225	*102*	511
6021	23515	17.0	56 17	3.6	3.42	193,196,201,	00*1*	*121*
						222,223,225	0*13*	*141*
6022	*1052*	17.1	34 52	9.5	9.88	231,536,560	ANN	*4*NN
6023	*965*	17.1	69 59	8	7.84	210,540	01	55
6024	23525	17.3	50 22	7.2	7.60	203,543	*11*	*21*
6025	23532	17.4	44 55	7.2	6.72	206,213	*32*	18
6026	*1035*	17.4	64 55	9	8.25	202,208	10	33
6027	23541	17.5	34 42	7.3	6.88	231,531	1*1*	61
6028	*1094*	17.9	40 7	9.5	9.98	235,542	*11*	*55*
6029	23555	18.0	29 47	7.8	7.74	236,539,564,	1*23*	3*21*
						565,566	01	13
6030	*1130*	18.1	24 52	9.5	10.10	230,241	*33*	*98*
6031	*1113*	18.1	40 0	9.5	9.73	235,542	*12*	*22*
6032	23549	18.2	50 33	5.8	5.26	193,196,201	3*12*	675
6033	*1076*	18.2	64 52	8	7.23	202,208,566,	3*20*	888
						584,585	*11*	pp
6034	23562	18.3	45 11	8.5	8.12	206,213	01	47
6035	*1090*	18.3	60 9	8.8	8.76	237,556	0*1*	20
6036	*1132*	18.6	50 3	8.5	9.14	203,543,560,	61R	*336*
						565,566	*24*	*36*
6037	*1159*	19.0	50 5	9	9.70	203,543	00	*45*
6038	*1169*	19.0	40 11	9	9.68	244,542	*11*	*55*
6039	*1156*	19.0	50 12	9	9.58	203,543,857,	*301*	*466*
						858,859	*41*	*64*
6040	23591	19.4	45 46	6.2	5.34	193,197,201	30*1*	574
6041	*1214*	19.6	40 8	8.8	9.84	244,542	01	*86*
6042	*1234*	19.8	40 8	9.2	9.38	244,542	*22*	*42*
6043	*1249*	20.1	40 3	9	9.14	244,542	*12*	*11*
6044	23603	20.4	55 6	6.6	5.97	244,552,553,	*232*	452
						564,566	11	35
6045	*1281*	20.5	30 0	9.2	8.94	236,539	01	*11*
6046	*1278*	20.6	40 6	9	9.68	244,542	*22*	*22*
6047	*1308*	20.8	25 11	9.5	10.05	230,241	*43*	n8
6048	23629	21.0	29 47	4.6	4.31	236,539,540,	*202*	pp*3*
						552,858	*12*	22
6049	*1303*	21.0	35 0	8.8	9.62	231,531	10	*66*
6050	*1323*	21.3	34 52	9	9.82	231,531	*12*	*88*
6051	*1328*	21.3	39 57	9	9.88	244,542	1*1*	*94*
6052	*1336*	21.6	45 9	9	9.26	206,213	*22*	*33*
6053	23635	21.7	50 19	7.2	7.96	203,543	*10*	00
6054	*1307*	21.7	65 2	9.5	9.55	202,208	0*1*	*63*
6055	*1389*	22.1	25 8	9.5	10.15	230,241	0*1*	n9
6056	23636	22.1	60 37	3.7	3.76	193,196,201,	02*4*	026
						222,223,225	*211*	1p2
6057	*1385*	22.2	35 7	9.2	10.22	231,531	12	n7
6058	*1400*	22.5	44 53	9.5	9.63	206,213,535	31*2*	*443*
6059	*1367*	22.6	65 0	9.5	9.55	202,208	*10*	*11*
6060	23672	23.2	50 17	8	8.16	203,543,560,	*32*R	*220*
						565,566	*10*	20

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.
		m.	° ′					
6061	23681	23.7	50 9	8.8	8.96	203,543	10	02
6062	*1504*	23.8	30 10	9.2	8.74	236,539	01	33
6063	23698	24.0	37 13	3.2	2.84	193,197,201,	330	22p
						222,223,225,	125	421
						582	2	2
6064	23694	24.1	49 47	2.9	2.86	193,197,201,	122	119
						222,223,225,	102	111
6065	*1529*	24.3	39 53	8.5	8.44	260,542	01	11
6066	*1524*	24.6	54 52	9	9.39	244,556,561,	031	422
						564,566	21	22
6067	*1577*	24.9	30 1	9.5	9.12	236,539,564,	212	111
						565,566	03	11
6068	23680	25.1	74 50	7.8	7.48	210,536	01	50
6069	*1603*	25.2	30 10	8.2	7.94	236,539	12	66
6070	23715	25.2	59 41	8	7.71	237,556,563,	222	133
						566,584	21	35
6071	23615	25.3	84 4	8	7.78	204,544,553,	011	224
6072	23737	25.5	44 57	9	9.12	206,213	10	11
6073	*1674*	26.0	30 2	10	9.88	236,539	11	34
6074	*1658*	26.0	35 6	9	9.78	231,531	11	88
6075	*1663*	26.0	34 55	8.8	8.92	231,531	23	11
6076	23741	26.0	54 49	8	6.78	244,556,561	213	ppp
6077	23731	26.0	64 58	7.5	7.35	202,208	10	68
6078	*1686*	26.2	30 2	9	8.78	236,539	00	25
6079	*1649*	26.3	55 6	8	7.78	244,561	01	22
6080	23771	26.6	30 18	8	7.24	236,539	21	68
6081	23755	26.6	59 46	6.7	6.56	237,563	12	12
6082	23778	26.8	37 2	2.0	1.79	193,197,201,	201	p79
						222,223,225,	022	p57
						552,553,580,	100	72p
						582	1	2
6083	23773	26.8	44 56	7.5	7.12	206,213	01	11
6084	23789	26.9	24 58	9.2	9.68	241,561,858,	221	722
						859	2	7
6085	*1748*	27.3	45 3	9	9.42	206,213	10	44
6086	*1744*	27.3	49 52	9	9.56	203,543	10	66
6087	*1756*	27.4	45 3	9	9.06	206,213	00	11
6088	23800	27.6	30 20	7.8	7.44	236,539	01	43
6089	*1793*	27.9	40 0	8.3	7.94	244,542	01	13
6090	*1789*	28.0	45 1	8.5	8.52	206,213	01	50
6091	23811	28.1	32 31	5.8	5.85	193,197,201	301	221
6092	*1819*	28.3	30 9	9.5	9.32	236,539,564,	034	112
						566,584	21	13
6093	23805	28.3	46 26	5.5	4.54	193,197,201	312	95p
6094	*1816*	28.7	55 4	8	7.78	244,561	00	22
6095	23821	28.8	30 8	8.5	8.58	236,539	00	44
6096	*1838*	29.0	55 1	9	9.48	244,561	10	35
6097	*1857*	29.1	45 8	9.5	9.72	206,213	01	22
6098	23828	29.3	44 49	7.2	7.37	206,207	11	61
6099	23841	29.6	38 34	4.7	4.19	193,197,201	312	4pp

S. M. P.	Design.	R. A. 1900	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.
		m.	° ′					
6100	23835	29.7	49 59	6.6	5.78	203,543,552	111	774
6101	23844	29.9	45 5	9	8.27	206,207	11	22
6102	23838	29.9	54 26	5.8	5.22	193,197,201	100	666
6103	23696	30.0	85 11	6.4	6.38	179,204,544,	523	.61
						553	1	2
6104	23849	30.1	42 56	2.1	1.99	154,192,193,	020	302
						222,223,225,	222	977
						552,553,580,	220	0pp
						582	0	5
6105	*1968*	30.7	34 59	9	9.48	231,531	00	55
6106	*1951*	30.8	54 59	8.5	8.78	244,561	22	22
6107	*1982*	31.0	40 3	9	8.94	244,542	12	11
6108	*1983*	31.0	34 57	9	9.62	231,531	10	34
6109	*1953*	31.0	60 3	8.2	8.22	237,563	11	03
6110	23864	31.2	44 49	8	7.73	206,207,535,	1T1	p25
						560,561	11	52
6111	*1958*	31.3	65 9	9.5	9.40	202,208	22	12
6112	*2015*	31.4	40 1	9	9.24	244,542	01	20
6113	*2018*	31.4	40 8	9.5	9.74	244,542	01	45
6114	*1990*	31.4	55 3	9	9.48	244,561	11	33
6115	*2032*	31.5	29 59	10	9.48	236,539	00	00
6116	*2000*	31.6	54 56	8.5	8.62	244,561	01	22
6117	23876	31.7	24 54	9	8.65	241,561	12	12
6118	*2002*	31.7	60 7	9	8.62	237,563	00	14
6119	*1936*	31.8	74 56	9.5	9.13	210,536	11	11
6120	*2051*	31.9	40 7	9	9.28	244,542	33	33
6121	*2040*	32.3	59 51	8.2	8.52	237,563	22	33
6122	*2091*	32.4	30 4	8.8	8.74	236,539	10	21
6123	*2090*	32.6	45 5	9	9.12	206,207	01	61
6124	23888	32.6	49 21	5.6	4.85	154,192,193	210	888
6125	23881	32.7	59 59	9.5	9.32	237,563	00	12
6126	*2119*	32.8	35 10	9	9.68	231,531	11	47
6127	*2113*	32.8	35 11	9	9.98	231,531	00	7n
6128	23904	33.0	29 54	7.8	7.50	236,539,564,	134	035
						566,584	21	55
6129	23894	33.0	49 54	8	7.43	203,543,858,	403	482
						859	2	1
6130	*2135*	33.1	39 54	8	7.88	244,542	22	33
6131	*2139*	33.3	45 0	9	8.72	206,207	01	23
6132	*2074*	33.3	69 59	9.5	9.24	210,540	01	00
6133	*2152*	33.5	44 54	8.8	8.32	206,207	21	05
6134	*2148*	33.5	49 59	8	8.64	203,543,560,	33R	221
						564,565	10	14
6135	*2104*	33.5	65 11	9.5	9.30	202,208	11	21
6136	*2200*	33.9	30 10	9	8.78	236,539	11	22
6137	23843	33.9	83 12	8	7.30	174,204,544,	241	.35
						553,582,586,	211	527
						587,588	21	57
6138	23923	34.0	35 6	7.8	9.12	231,531	10	13
6139	23928	34.1	40 2	8.5	7.38	244,542	11	68

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S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
6140	*2191*	34.2	49	56	8.5	9.30	203,543	11	55
6141	*2178*	34.3	60	6	8.2	8.46	237,563	12	05
6142	23948	34.6	34	55	8.2	7.80	231,531,535,	R13	742
							560,565	32	24
6143	23945	34.6	40	4	8	7.53	542,563	01	55
6144	23942	34.6	44	44	8	7.77	206,207	22	24
6145	*2204*	34.6	60	1	9	8.96	237,563	10	00
6146	*2264*	34.8	30	2	9.2	9.28	236,539	00	13
6147	*2261*	34.9	40	3	8.5	8.53	542,563	10	30
6148	*2269*	35.0	45	8	9	8.87	206,207	11	11
6149	23951	35.0	49	57	8	7.83	203,543,858,	303	223
							859	1	0
6150	*2283*	35.1	34	58	8.7	8.85	231,531,858,	615	300
							859	3	0
6151	*2267*	35.1	49	54	8.5	8.71	203,543,564,	231	722
							565	0	2
6152	*2301*	35.3	29	58	9	8.98	236,539	11	20
6153	*2293*	35.3	34	58	9.5	N	531,535	NN	NN
6154	23966	35.5	38	59	2.6	2.59	154,192,193,	122	6p4
							222,223,225,	120	420
							552	1	9
6155	23958	35.9	64	41	3.8	3.51	154,192,193,	222	4p3
							222,223,225	210	555
6156	23982	36.1	36	54	6.2	5.42	154,192,193	100	655
6157	*2334*	36.1	49	53	8.5	8.90	203,543	11	42
6158	23974	36.2	51	47	5.7	5.33	154,192,193	121	347
6159	*2376*	36.3	24	57	9.5	9.65	241,561	01	31
6160	*2366*	36.3	40	2	9	9.28	542,563	00	03
6161	*2385*	36.5	29	56	10	9.74	236,539	12	25
6162	*2373*	36.5	35	9	8.5	9.08	531,535	11	33
6163	*2389*	36.7	35	9	8.5	8.58	531,535	00	11
6164	*2397*	36.7	35	9	9				
6165	*2375*	36.7	49	54	8	7.76	203,543	10	02
6166	*2405*	36.7	29	53	9.5	8.44	236,539	10	61
6167	*2410*	36.8	29	53	9				
6168	23998	36.8	35	15	7.5	6.58	531,535	22	p4
6169	*2353*	36.9	65	0	9.5	9.90	202,208	11	44
6170	24014	37.1	30	8	7.5	7.68	236,539	11	32
6171	*2419*	37.1	34	55	8.5	8.68	531,535	22	22
6172	*2372*	37.2	65	1	9.5	9.60	202,208	11	11
6173	*2456*	37.3	25	2	9.5	9.45	241,561	01	11
6174	*2441*	37.3	40	4	8.8	8.73	542,563	10	33
6175	*2440*	37.3	35	1	9	8.98	531,535	22	22
6176	*2448*	37.4	35	0	9				
6177	23989	37.4	69	53	7.8	7.54	210,540	12	22
6178	24029	37.6	34	44	8	7.92	531,535	32	31
6179	24023	37.6	45	8	9.5	7.92	206,207	21	11
6180	24022	37.6	45	9	8.2				
6181	24028	38.1	59	57	6.8	6.66	237,563	01	33
6182	24034	38.2	60	13	7.2	7.26	237,563	01	21

S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
6183	23954	38.3	81	25	7.8	7.30	185,204,544	101	.p2
6184	*2526*	38.7	30	9	9.2	9.04	236,539	10	00
6185	*2517*	38.7	35	9	8.5	8.90	531,535,858,	341	411
							859	1	1
6186	24064	38.8	34	59	9.2	9.72	531,535	10	52
6187	*2567*	39.6	49	56	9	9.50	203,543	00	35
6188	24041	39.6	74	59	8.2	8.13	210,536	11	14
6189	24084	39.8	34	51	7.8	7.48	531,535	33	53
6190	*2560*	40.4	69	53	8	8.34	210,540	12	13
6191	24107	40.5	40	6	3.3	3.10	154,192,197,	403	194
							222,223,225,	110	352
							552	0	4
6192	24109	40.6	34	49	7.8	7.80	531,535,858,	163	440
							859	3	2
6193	*2670*	40.8	24	53	9	9.15	241,561	10	34
6194	*2676*	41.2	45	0	9	8.72	206,207	10	11
6195	*2711*	41.5	25	9	8.5	8.50	241,561	00	00
6196	*2715*	41.7	30	11	9	9.28	236,539	00	13
6197	24134	41.7	39	52	7.8	7.08	542,563	00	77
6198	24151	42.1	35	2	7.5	7.62	531,535	43	11
6199	24147	42.3	53	35	6.2	5.79	154,192,197	212	221
6200	24142	42.3	54	42	8	7.78	244,561	22	22
6201	24148	42.5	60	8	6.2	5.74	154,192,197	100	233
6202	24169	42.7	31	40	5.5	4.95	154,192,197	012	305
6203	24171	42.8	35	21	7.5	7.42	531,535	32	11
6204	24179	43.0	37	1	3.4	3.22	154,192,197,	032	145
							221,223,225,	115	446
							552	3	8
6205	24182	43.1	40	4	5.6	4.89	154,192,197	303	736
6206	24174	43.1	50	16	7.8	7.46	203,543	01	32
6207	*2818*	43.3	40	6	9	9.48	542,563	00	55
6208	24192	43.5	35	8	7.8	7.88	531,535	11	33
6209	*2832*	43.7	50	5	9.5	9.81	203,543,560,	23R	833
							564,565	34	33
6210	*2844*	44.0	50	10	8.5	9.10	203,543	11	33
6211	*2863*	44.2	50	5	9	9.23	203,543,560,	422	242
							564,565	23	20
6212	24221	44.3	24	50	7.5	7.70	241,561	22	31
6213	*2865*	44.3	50	9	9.5	9.60	203,543	11	16
6214	*2886*	44.4	35	2	8.5	7.52	531,535	10	33
6215	24214	44.4	35	3	8				
6216	24217	44.4	35	19	7.8	6.98	531,535	11	72
6217	*2904*	44.8	35	1	8.5	9.08	531,535	22	34
6218	*2929*	45.0	40	2	9	9.48	542,563	00	33
6219	*2950*	45.1	25	3	9.5	9.60	241,561	11	24
6220	24232	45.2	35	21	7.5	7.48	531,535	22	02
6221	*2947*	45.3	35	4	8.5	8.77	531,535,560,	621	003
							565,566	21	33
6222	24153	45.4	81	29	7.0	6.35	204,544,553	020	484
6223	24239	45.5	34	52	9	9.18	531,535	11	42

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6224	*2960*	45.5	34 59	8	8.38	531,535	22	14
6225	24240	45.6	34 47	7.2	6.08	531,535	33	99
6226	*2963*	45.6	40 4	9	9.13	542,563	10	11
6227	*2974*	45.7	34 57	8.5	8.38	531,535	33	41
6228	*2908*	45.9	70 9	8	8.70	210,540	11	27
6229	*2968*	46.1	60 8	9.2	9.32	237,563	00	21
6230	*3032*	46.3	30 4	8.8	8.88	236,539	22	11
6231	24256	46.3	35 0	7.2	6.45	531,535,543,	521	6p6
						560,565	33	68
6232	*3024*	46.3	40 0	9.5	9.88	542,563	22	74
6233	*3030*	46.4	35 9	8.5	8.75	531,535,543,	R11	302
						560,565	12	00
6234	*2989*	46.4	59 58	9.2	9.22	237,563	00	03
6235	*3035*	46.5	40 0	9	9.43	542,563	10	21
6236	24259	46.6	39 51	8	8.28	542,563	22	25
6237	24262	46.7	34 42	7.5	6.33	536,543	01	pp
6238	24266	46.7	34 52	6.8	5.73	536,543	12	pp
6239	24265	46.7	34 59	7.8	7.28	531,535,543,	R42	p22
						560,565	20	74
6240	*3029*	46.8	55 8	9.5	9.68	244,561	10	52
6241	24271	47.1	34 45	7.5	6.63	536,543	12	pp
6242	24270	47.1	34 46	8	7.28	536,543	22	79
6243	24272	47.1	34 49	8	7.88	536,543	22	66
6244	24254	47.1	64 48	8	8.15	202,208	01	31
6245	24258	47.2	65 6	7.5	7.10	202,208	11	44
6246	24275	47.3	34 43	7.5	6.18	536,543	11	pp
6247	24276	47.3	34 48	7.2	6.48	536,543	11	pp
6248	24285	47.6	34 42	7.5	7.08	536,543	11	49
6249	24282	47.6	34 48	8	7.63	536,543	01	64
6250	24290	47.7	34 51	8	7.18	536,543	00	56
6251	*3130*	48.0	34 50	8.5	8.63	536,543	12	22
6252	24278	48.0	60 18	8	7.92	237,563	00	11
6253	*3147*	48.2	35 4	8	8.03	536,543	23	20
6254	*3156*	48.4	34 57	9	9.38	536,543	11	44
6255	24299	48.4	44 54	8.2	8.17	206,207	11	20
6256	*3164*	48.5	35 7	8	8.78	536,543	11	36
6257	24312	48.7	24 52	6.6	6.20	241,552,553	000	233
6258	*3177*	48.7	35 9	9	9.78	536,543	00	38
6259	*3215*	49.1	30 0	8	7.64	236,539	10	46
6260	24317	49.1	35 0	8.8	9.83	536,543	10	38
6261	*3225*	49.2	29 57	8.2	8.28	236,539	00	52
6262	24320	49.4	35 1	8	8.43	536,543	23	11
6263	24322	49.5	35 1	7.2	6.78	536,543	11	9p
6264	24321	49.5	44 19	5.4	4.87	154,192,197	011	588
6265	24328	49.8	39 55	7.8	7.33	542,563	01	71
6266	24329	49.8	39 55	9.5				
6267	24330	50.0	40 17	7.5	6.48	542,563	00	57
6268	*3274*	50.0	29 50	8.5	8.34	236,539	10	22
6269	24335	50.1	35 11	8	7.83	536,543	01	22
6270	*3168*	50.2	75 7	8.5	8.48	210,536	01	00
6271	*3293*	50.3	29 54	8.5	8.18	236,539	00	33
6272	24342	50.5	34 57	9.5	9.58	536,543	22	11
6273	*3284*	50.5	50 8	9.5	9.89	203,543,560,	613	947
						564,565	21	44
6274	*3307*	50.6	35 8	9.5	9.78	536,543	00	33
6275	*3308*	50.6	39 50	9	9.33	542,563	10	51
6276	24348	50.7	41 42	5.3	4.71	154,192,197	111	pp3
6277	*3343*	51.0	24 59	9	8.60	241,561	00	44
6278	*3331*	51.1	44 57	9	8.87	206,207	00	41
6279	*3351*	51.2	29 50	9.5	9.28	236,539	11	22
6280	*3298*	51.2	65 5	9	9.30	202,208	00	31
6281	*3365*	51.4	25 4	9	8.95	241,561	01	00
6282	*3360*	51.5	40 1	8.5	8.48	542,563	00	02
6283	24377	51.6	30 3	8.2	7.68	236,539	11	55
6284	24380	51.8	35 3	8.5	8.57	218,536,560,	R03	144
						565,566	12	44
6285	*3381*	51.8	35 8	8.5	9.18	218,536	11	44
6286	24392	52.1	25 8	8.8	9.10	241,561	00	41
6287	*3396*	52.1	35 7	8.6	8.78	218,536	33	20
6288	*3430*	52.4	30 8	9	9.32	236,539,560,	131	212
						564,566	21	11
6289	24393	52.5	49 54	7.2	7.76	203,543	01	22
6290	24389	52.6	59 55	9	8.66	237,563	10	33
6291	24407	52.7	30 14	5.8	5.05	154,192,197	141	428
6292	24408	52.7	30 14	8				
6293	*3441*	52.7	39 57	9	9.33	542,563	01	33
6294	*3438*	53.1	60 10	9.5	9.53	237,563,566,	322	323
						584,585	12	00
6295	24410	53.3	60 8	7.0	7.02	237,563	11	25
6296	24405	53.5	65 5	8.8	8.28	202,208,560,	130	352
						566,584	21	24
6297	*3521*	53.7	25 9	9	8.80	241,561	00	20
6298	24442	53.8	25 4	8.5	8.25	241,561	10	63
6299	*3522*	53.8	30 9	9.5	8.98	236,539	00	05
6300	*3525*	53.9	29 53	8.2	8.04	236,539,560,	622	552
						564,566	21	20
6301	24439	53.9	40 6	8.5	8.92	542,563,566,	520	111
						584,585	10	11
6302	24446	54.1	29 49	7.8	7.28	236,539	00	75
6303	*3504*	54.2	60 10	9	8.86	237,563	12	31
6304	24457	54.4	29 51	8.5	8.80	236,539,560,	121	220
						564,566	12	00
6305	*3567*	54.5	29 54	9	8.84	236,539	01	02
6306	*3560*	54.5	39 52	9	9.73	542,563	21	25
6307	*3570*	54.7	40 6	9	9.28	235,563	00	33
6308	*3597*	54.9	30 9	9.5	9.18	236,539	00	23
6309	24465	54.9	35 0	8.8	8.44	218,536	01	11
6310	*3614*	55.0	25 6	9.5	9.30	241,561	00	23
6311	*3606*	55.0	29 52	9.5	9.38	236,539	00	11
6312	24424	55.1	75 6	7.2	6.93	210,536	01	86

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° '					
6313	*3612*	55.1	32 42	9	8.80	858,859	33	22
6314	*3620*	55.2	29 52	9.5	9.14	236,539	10	54
6315	*3534*	55.2	69 55	9	9.30	210,540	22	33
6316	24467	55.4	59 52	8	8.22	237,563	11	03
6317	*3639*	55.5	40 5	9.5	9.08	235,563	22	11
6318	*3608*	55.6	55 7	9.5	9.52	244,561	33	30
6319	*3590*	55.7	65 10	8.5	8.55	202,208	01	11
6320	*3679*	55.8	25 1	9	9.05	241,561	10	20
6321	24504	56.1	24 52	8.2	8.15	241,561	21	46
6322	24176	56.1	87 40	5.8	5.24	154,192,201,	101	555
						204,207,213,	212	6..
						218,221,223,	131	..8
						225,227,236	122	867
6323	24501	56.2	39 50	8.8	8.93	235,563	10	11
6324	24503	56.3	39 53	9	9.38	235,563	00	11
6325	*3705*	56.6	34 58	9	9.04	218,536	01	00
6326	24524	56.8	34 51	8.2	8.44	218,536	01	11
6327	24477	57.0	75 12	7.8	7.63	210,536	00	22
6328	24536	57.2	29 52	7.8	7.48	236,539	11	pp
6329	24533	57.2	39 57	9.5	9.58	235,563	00	01
6330	24483	57.3	75 53	6.0	5.56	154,192,201	001	444
6331	*3761*	57.4	40 1	9.5	9.16	235,563,566,	312	022
6332	*3764*	57.4	40 1	9				
						584,585	10	20
6333	24546	57.7	44 55	8.5	8.72	206,207	23	21
6334	*3785*	57.8	44 56	9.2	9.56	206,213	11	66
6335	24456	58.3	82 32	8.5	7.79	204,544,553,	412	577
						582,586,587,	511	447
						588	2	7
6336	*3806*	58.5	60 4	9.5	9.46	237,563	10	33
6337	24584	58.8	24 41	7.8	7.60	241,561	00	11
6338	24574	58.8	50 6	3.9	3.84	192,193,201,	100	0pp
						221,223,225	102	232
6339	24559	58.9	63 40	4.6	4.39	192,193,201	111	036
6340	*3908*	59.3	35 7	9	9.08	218,536	11	11
6341	24596	59.4	30 25	2.8	3.02	192,193,196,	213	556
						197,221,223,	000	036
						225	1	4
6342	24598	59.6	43 26	5.6	5.17	192,193,197	202	657
6343	24606	59.7	40 5	8.8	9.48	235,563	00	30
6344	24610	59.9	40 5	9	8.58	235,563	11	34
6345	24570	59.9	73 41	6.1	5.95	192,193,201	222	200
6346	*3974*	0.3	49 50	9.5	9.66	203,543	21	42
6347	24468	0.3	84 25	6.5	6.55	196,204,544	112	.14
6348	*3979*	0.4	49 57	8.5	9.00	203,543	11	22
6349	*3996*	0.5	44 55	9.5	9.41	206,213,560	353	112
						566,584	02	22
6350	*4012*	0.7	39 56	8.5	7.88	235,563	11	16
6351	24626	0.8	35 0	8.5	8.38	218,536	11	11
6352	*4023*	0.9	45 9	9.5	9.62	206,213	12	33

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° '					
6353	*4041*	1.0	40 7	9	9.53	235,563	10	20
6354	*4046*	1.1	40 4	9	8.73	235,563	12	43
6355	24618	1.1	62 1	5.8	5.42	192,193,201	022	335
6356	*4066*	1.2	25 7	8.5	8.55	241,561	01	11
6357	*4051*	1.2	35 2	8.5	8.44	218,536	23	14
6358	*4062*	1.3	29 52	9.5	9.58	236,539	11	11
6359	*4054*	1.3	35 5	9	9.68	218,536	00	52
6360	*4067*	1.6	45 8	9	8.92	206,213	01	11
6361	*1*	1.7	40 6	9.5	9.53	235,563	23	50
6362	*4006*	1.7	69 56	8.5	8.70	210,561	01	12
6363	*5*	1.8	34 50	8	8.43	218,565	10	14
6364	R	2.1	19 25	R	9.75	858,859	23	33
6365	*31*	2.2	40 6	9	9.08	235,563	00	11
6366	*45*	2.3	30 10	9	8.78	539,560,564,	111	020
						584	1	0
6367	24595	2.3	80 16	8	7.30	204,544,553	000	777
6368	24663	2.4	44 58	7	7.06	206,213	11	94
6369	24676	2.5	30 0	7.4	6.98	539,564	11	57
6370	R	2.5	21 16	R	7.80	858,859	22	33
6371	*54*	3.1	60 10	8.5	8.60	237,556	00	11
6372	*106*	3.3	34 53	8.8	8.93	218,565	01	11
6373	24708	3.6	30 45	6.2	5.61	192,193,196,	121	223
						197	1	2
6374	24703	3.9	45 58	5.2	4.54	192,193,197	020	5p9
6375	*29*	3.9	75 1	9.5	9.38	210,536	00	11
6376	24713	4.0	41 23	6.2	5.89	192,193,197	000	211
6377	24354	4.0	87 41	10	9.80	204,544,586	0F0	001
6378	24700	4.2	60 10	7.5	7.10	237,556	22	14
6379	24697	4.2	65 5	8.8	9.30	202,208	11	13
6380	24720	4.4	40 20	8	7.83	235,563	10	24
6381	*200*	4.6	35 8	9	9.13	218,565	12	11
6382	24711	4.6	65 13	8	7.90	202,208	11	11
6383	*204*	4.7	34 54	8.3	8.23	218,565	12	66
6384	*183*	4.8	55 0	8	9.25	556,561	10	44
6385	*226*	4.9	29 55	8.5	8.32	539,564	12	25
6386	24736	5.0	35 3	7.8	7.03	218,565	01	55
6387	*150*	5.0	70 7	8.5	8.52	210,561	01	20
6388	*250*	5.3	29 53	9.2	9.12	539,564	12	11
6389	*254*	5.4	29 57	9.5	9.42	539,564	12	11
6390	*256*	5.5	35 8	8.8	8.88	218,565	33	11
6391	*245*	5.5	49 50	9.5	9.60	203,564	00	66
6392	*243*	5.5	49 57	8.5	9.04	203,564	10	55
6393	*265*	5.6	34 53	9	9.28	218,565	33	13
6394	*286*	5.8	29 53	9.2	9.42	539,564,584	434	211
						585,586	34	11
6395	*285*	5.9	35 6	9.2	9.68	218,565	11	45
6396	*305*	6.0	24 52	9.5	9.95	241,561	01	55
6397	*300*	6.0	30 2	8.5	8.22	539,564,584,	241	333
						585,586	01	26
6398	*228*	6.1	69 51	8.5	8.96	210,561	00	55

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m	° ′					
6399	24763	6.2	41 22	6.2	5.72	192,193,197	100	010
6400	24745	6.2	63 5	6.0	5.62	192,193,201	132	133
6401	24774	6.6	44 41	8	7.52	206,213	01	p5
6402	*365*	6.9	25 1	9.5	9.70	241,534	33	42
6403	*355*	6.9	34 52	9	9.58	218,565	11	66
6404	*329*	6.9	55 8	8	9.15	556,561	12	44
6405	*359*	7.0	34 56	8.9	8.93	218,565	01	11
6406	24798	7.2	25 11	7.8	7.60	241,534	11	41
6407	*370*	7.2	39 59	8.5	7.88	235,563	11	31
6408	*399*	7.4	29 53	9.5	9.44	539,564,584,	351	211
						585,586	11	12
6409	24814	8.2	35 7	7.8	7.13	218,565	12	76
6410	24802	8.5	70 8	8.2	8.56	210,561	22	64
6411	*392*	8.5	70 9	8.5				
6412	24818	8.6	44 14	5.9	5.37	192,193,197	000	544
6413	*461*	8.6	44 56	9	9.10	213,566	10	11
6414	24756	8.6	79 58	7.5	7.33	204,544,553	311	797
6415	24829	8.7	29 51	6.8	6.78	539,564	22	77
6416	24816	8.7	56 4	5.7	5.48	192,193,201	010	303
6417	24830	8.8	35 4	7.5	7.23	218,565	10	66
6418	24842	9.1	34 56	8.5	8.83	218,565	01	22
6419	*489*	9.3	59 56	8.5	9.50	237,556	11	5n
6420	24856	9.6	35 17	8	7.13	218,565	01	44
6421	*561*	9.9	30 10	9	8.98	539,564	22	22
6422	24821	10.2	75 5	5.8	5.48	192,201,208,	002	534
						210	1	4
6423	24659	10.3	86 16	7.8	8.05	204,544,553	201	505
6424	*594*	10.4	29 54	9	8.98	539,564	11	22
6425	24881	10.5	25 10	9	8.95	241,534	12	00
6426	24886	10.6	25 3	9	8.55	241,534	10	24
6427	24890	10.7	25 3	9.5	9.28	244,534,585,	241	022
						586,587	31	22
6428	24888	10.9	36 48	3.3	2.96	192,197,208,	112	25p
						221,223,225	142	272
6429	*622*	11.0	44 59	8.8	8.96	213,566	10	22
6430	24819	11.3	80 17	6.4	5.88	178,204,544,	410	.71
						553	2	3
6431	*663*	11.5	29 50	9.2	9.64	539,564,584	141	144
						585,586	12	41
6432	24899	11.7	59 53	7.0	7.10	237,556	00	11
6433	*691*	11.8	25 7	9	8.80	244,534	00	22
6434	24918	11.9	34 44	7.2	6.93	218,565	10	93
6435	*701*	12.2	30 6	9	9.41	236,539,564	122	444
6436	*711*	12.5	45 0	9	9.40	213,566	12	44
6437	*714*	12.7	49 57	8.5	9.20	203,564	11	44
6438	24930	12.8	60 4	9	9.60	237,556	22	66
6439	24963	13.5	34 49	8	7.58	218,565	33	61
6440	*793*	13.7	35 2	9	9.21	231,565,585,	400	242
						586,587	20	22
6441	*818*	14.0	25 0	9.5	9.25	244,534	23	12

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6442	24958	14.0	61 33	4.4	4.15	192,208,221	320	884
						223,225,552	224	p33
6443	24981	14.2	25 6	9.5	9.35	244,534	21	11
6444	24987	14.6	29 53	2.8	2.69	202,237,544,	101	210
						552,553,564,	000	273
						580,582	20	83
6445	*864*	14.9	29 54	9.2	9.48	237,564	22	05
6446	*833*	14.9	60 6	8.5	9.30	237,556	22	55
6447	*868*	15.1	35 8	8	8.33	231,565,585,	412	211
						586,587	20	11
6448	25007	15.3	24 58	var.	6.08	202,228,534,	030	199
						552,553,580,	123	757
						582	0	7
6449	*878*	15.3	30 8	8.5	8.32	237,564,584,	331	212
						585,586	10	22
6450	25003	15.4	38 43	5.6	5.09	192,197,208,	122	145
						220	1	7
6451	*862*	15.4	54 52	8	8.56	513,556	32	64
6452	24993	15.4	59 40	7.4	7.56	237,556	21	36
6453	*896*	15.5	29 52	9.5	9.63	237,564	10	14
6454	25009	15.6	45 9	9.2	9.70	213,566	11	45
6455	*882*	15.6	49 59	9	9.54	203,564	12	55
6456	*931*	16.0	24 57	9	8.88	228,534,585,	R41	111
						586,587	31	11
6457	*894*	16.0	55 5	9	9.11	513,556	11	66
6458	25020	16.1	36 44	6.0	5.55	197,208,220	021	311
6459	*957*	16.4	25 1	9.5	9.55	228,534	32	11
6460	25016	16.4	55 1	8	7.46	513,556	21	35
6461	*950*	16.5	45 1	8.8	8.76	213,566	00	30
6462	*936*	16.5	49 54	8.2	8.24	203,564	01	23
6463	*919*	16.5	55 8	8.5	8.96	513,556	10	22
6464	*913*	16.5	60 9	8	8.40	237,556	11	11
6465	25037	16.7	36 18	6.2	5.55	197,208,220	201	322
6466	25032	16.8	49 42	6.7	6.64	203,564	01	44
6467	25041	17.0	34 57	9	9.58	231,565	11	68
6468	25040	17.0	44 9	5.7	5.45	197,208,220,	124	425
						552,553,580,	110	443
						582	0	6
6469	25056	17.4	35 3	7.8	7.68	231,565	00	20
6470	*998*	17.5	40 1	9	9.63	235,563	01	14
6471	25060	17.6	34 25	2.2	1.93	197,208,220,	105	015
						221,223,225,	212	556
						552,553,580,	011	1pp
						582,588	23	46
6472	25055	17.6	53 41	6.8	7.11	197,197,208,	224	56n
						220,552,553,	220	633
						580,582	11	61
6473	*1049*	18.1	29 49	8.2	8.03	237,564	01	52
6474	*1038*	18.1	39 50	8.5	8.83	235,563	10	33
6475	25086	18.6	30 48	6.0	5.48	197,221,223	202	565

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S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
6476	25076	18.6	54	57	9.5	9.66	513,556	0*1*	*55*
6477	*1084*	18.9	45	1	9	8.90	213,566	01	1*1*
6478	25098	19.1	30	18	7.5	7.58	237,564,584,	5*11*	44*1*
							585,586	*4*1	*11*
6479	25094	19.1	40	6	8.5	8.48	235,563	*22*	00
6480	25088	19.1	53	41	6.8	7.08	208,225,227	00*1*	n*66*
6481	25078	19.1	65	14	7.8	7.70	202,208	1*1*	*22*
6482	25095	19.3	48	10	6.2	5.36	197,221,225	0*22*	55*1*
6483	*1125*	19.5	40	5	8.5	9.08	235,563	*22*	*23*
6484	25105	19.6	46	1	3.5	3.69	197,221,227,	12*2*	336
							552,553,580,	101	*22*7
							582	*1*	3
6485	25117	20.1	30	7	9.5	9.78	237,564	*11*	*83*
6486	25083	20.1	74	1	6.4	5.77	220,223,225,	020	1*22*
							227,228,552,	0*3*0	200
							553	1	*1*
6487	25047	20.4	81	33	8.5	9.52	204,544,553,	11F	*555*
							582,586	F*1*	*53*
6488	25133	20.6	30	7	9	9.43	237,564	01	*42*
6489	*1207*	21.0	30	7	9.5	9.53	237,564	*12*	*50*
6490	*1198*	21.0	44	52	9	9.36	213,566	00	*46*
6491	25140	21.1	49	7	4.5	4.00	197,223,227	*1*01	p80
6492	25147	21.2	39	49	8.5	8.88	235,563	*22*	*41*
6493	*1231*	21.4	29	51	9.5	5.78	237,552,552,	*4*01	213
6494	25157	21.4	29	52	6.2				
							553	3	2
6495	25137	21.4	57	35	6.0	5.80	220,223,225	11*2*	*1*21
6496	25155	21.5	39	3	6.0	5.72	197,221,227	03*2*	330
6497	*1241*	21.7	45	1	9.5	10.00	213,566	00	*58*
6498	25077	21.7	81	53	6.3	6.28	204,544,553	*1*10	*111*
6499	25153	22.0	62	20	5	4.85	220,223,225	002	842
6500	25183	22.3	29	56	8.8	9.33	237,564	01	*31*
6501	*1251*	22.3	59	59	8.2	8.86	237,556	*32*	*44*
6502	25201	22.7	25	6	7.8	7.40	228,534	*33*	36
6503	25203	22.7	25	6	8				
6504	*1307*	22.7	29	58	8.5	8.42	539,564	*12*	14
6505	25185	22.8	54	42	8	7.86	513,556	*1*0	1*2*
6506	25219	23.4	29	53	8.2	8.90	539,564,584,	*2*41	11*2*
							585,586	1*3*	*21*
6507	25221	23.7	50	15	7.5	7.34	203,565	10	5*1*
6508	25045	24.0	85	40	8.8	8.30	204,544,553,	31*3*	522
							582,586,587,	01*2*	5 . 5
							588	0	5
6509	*1411*	24.4	39	51	8.5	8.68	235,563	*22*	*2*1
6510	25243	24.4	45	59	5.7	5.06	197,221,225	*111*	*495*
6511	25259	24.5	33	3	5.8	5.51	221,223,227	010	544
6512	25262	24.7	43	34	6.1	5.55	221,223,227	*111*	431
6513	25255	24.7	45	49	5.7	5.30	197,221,225	0*1*1	3n*5*
6514	25269	24.8	24	57	8	7.50	228,534	*33*	75
6515	*1437*	24.9	45	5	9.5	9.86	213,566	*11*	*47*

S.M.P.	Design.	R.A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
6516	25245	25.3	69	57	9	9.56	210,561,596	N2*3*	N*14*
6517	25280	25.4	30	8	8.2	8.53	237,564	*23*	00
6518	25274	25.4	39	46	5.6	5.34	221,223,227	002	662
6519	*1480*	25.8	29	55	9.5	9.08	237,564	*33*	*11*
6520	*1481*	25.8	29	56	9				
6521	*1499*	25.9	24	58	9.5	9.05	228,534	*34*	22
6522	25291	26.0	39	58	6.9	6.23	235,563	01	86
6523	25297	26.4	42	23	5.1	4.41	221,223,227,	1*23*	ppp
							228	*1*	6
6524	25167	26.4	83	39	8.2	7.71	204,544,553	2*1*0	*2*85
6525	25305	26.5	38	47	6.2	5.71	221,223,227	*1*20	1*21*
6526	25306	26.5	38	48	6				
6527	*1466*	26.7	69	59	10	9.52	210,561	*12*	30
6528	25320	26.9	30	8	8.5	8.46	237,564,584,	*4*31	000
							585,586	1*2*	02
6529	*1549*	27.0	29	56	9.5	9.50	539,564,584,	*2*30	*333*
							585,586	2*2*	*33*
6530	*1528*	27.2	60	9	8.5	8.80	237,556	*33*	*33*
6531	25330	27.4	33	5	5.6	5.38	221,223,227	*1*10	423
6532	25298	27.4	70	19	7.8	7.22	210,561	*12*	30
6533	25339	27.8	34	54	8.8	7.08	231,565	00	*13*
6534	25338	27.8	34	53	8				
6535	25227	28.0	83	25	6.4	7.13	197,204,544,	*1*11	.*11*
							553	0	6
6536	*1561*	28.2	65	7	9.5	9.75	202,208	0*1*	*53*
6537	25348	28.3	39	46	7.6	6.83	235,563	10	pp
6538	*1615*	28.4	35	1	9	9.38	231,565	1*1*	*44*
6539	*1614*	28.4	35	7	8.5	8.88	231,565	1*1*	*41*
6540	*1628*	28.6	35	2	9.5	9.48	231,565	1*1*	*33*
6541	*1646*	29.1	35	0	9	9.68	231,565	00	*55*
6542	*1651*	29.2	35	0	8.5	8.18	231,565	1*1*	76
6543	25368	29.3	30	1	7.2	6.78	236,564	*11*	77
6544	*1618*	29.3	64	52	9	9.50	202,208	00	*33*
6545	25354	29.4	64	57	8	7.85	202,208	*12*	20
6546	*1669*	29.5	30	7	9	9.18	236,564	*22*	00
6547	25375	29.6	29	47	6.9	6.23	236,564	*23*	p4
6548	*1676*	29.8	45	0	9	8.80	213,566	10	02
6549	*1719*	30.3	24	57	9	8.80	228,534	*22*	24
6550	25371	30.3	64	49	7.8	7.55	202,208,566,	1*21*	2*14*
							584,585	*2*1	2*1*
6551	*1737*	30.6	24	54	9	9.15	228,534	*1*0	30
6552	25398	30.8	34	56	8.2	8.08	218,565	*11*	*11*
6553	*1725*	30.8	50	6	8.5	8.99	203,565	3*3*	*25*
6554	*1744*	31.0	44	53	9.5	9.35	213,566,584,	3*4*2	*122*
							585,586	*12*	*22*
6555	25366	31.0	74	50	9	9.10	210,561	*11*	*11*
6556	25404	31.3	50	8	8.5	8.89	203,565	00	*11*
6557	25383	31.3	71	31	4.2	4.04	220,223,225,	*1*20	27p
							580,582,587,	2*2*1	022
							588	1	0

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6558	1772	31.6	34 54	9	9.48	218,565	00	55
6559	1783	31.7	29 58	9.5	9.58	236,564	11	01
6560	25429	32.3	30 7	7.1	6.83	236,564	23	27
6561	1811	32.3	40 0	8	7.63	235,563	01	76
6562	25428	32.4	43 16	5.8	5.11	221,223,227,	113	657
						228	2	6
6563	1794	32.4	54 51	9	9.01	513,556	11	00
6564	25418	32.7	64 44	6.9	6.45	202,208	10	64
6565	25464	33.7	35 15	8	7.68	218,565	11	10
6566	25454	33.8	64 39	6.2	5.83	220,223,225	111	324
6567	25370	33.9	83 32	7.2	6.58	204,544,553	211	106
6568	1914	34.3	25 5	9.5	9.78	231,534,584,	411	636
						586,587	41	66
6569	1890	34.5	55 3	8.5	8.91	513,561	11	44
6570	1929	34.6	25 6	9.5	9.25	231,534	23	20
6571	25519	35.4	25 5	8.2	8.35	231,534	01	61
6572	25500	35.7	64 58	5.3	4.76	220,223,225	102	757
6573	1943	35.9	64 58	9				
6574	1980	35.8	35 8	9.5	9.48	218,565	22	30
6575	2004	36.2	24 49	9.5	9.65	231,534	01	41
6576	1962	36.2	64 54	8.2	8.50	202,208	11	03
6577	25509	36.2	70 5	8.2	8.06	210,561	11	11
6578	1950	36.3	70 7	9	9.32	210,561	12	13
6579	25412	36.4	84 4	8.8	7.61	204,544,553	120	694
6580	25546	36.7	25 8	7.8	8.35	231,534	21	14
6581	25548	36.9	38 25	5.4	5.18	221,223,227	220	245
6582	25527	37.4	73 6	6.2	6.20	220,223,225	000	423
6583	25488	37.4	80 51	6.6	6.74	204,544,553	001	223
6584	25565	37.6	35 45	5.2	4.91	221,223,227	212	475
6585	2052	37.7	54 55	9	9.26	513,561	21	33
6586	2074	37.8	40 7	9	8.43	235,563	01	44
6587	25572	38.0	39 48	5.8	5.44	221,223,227	233	410
6588	25573	38.0	39 51	7	6.68	235,563	11	58
6589	1954	38.0	79 58	8.8	8.93	204,544,553	403	111
6590	2097	38.1	44 52	9	8.90	213,566	11	11
6591	25600	38.6	25 7	6.2	5.90	201,231,534,	211	111
						552	0	1
6592	2122	38.6	35 5	9	9.33	218,565	12	33
6593	2123	38.7	44 58	8.5	8.36	213,566	10	41
6594	25574	38.8	65 11	6.1	5.93	220,223,225	001	113
6595	25604	39.2	50 12	6.8	6.49	203,565	11	55
6596	25610	39.4	39 58	8.8	9.23	235,563,585	12	22
6597	25619	39.7	39 50	7.5	6.63	235,563	10	p9
6598	25613	39.7	49 45	7.2	7.04	203,565	01	85
6599	2152	39.7	64 54	8.5	8.09	202,208,566,	143	414
						584,585	12	64
6600	25638	40.3	39 41	7.5	8.28	235,563	11	22
6601	2207	40.3	44 51	9.5	9.10	213,566	01	13
6602	25644	40.4	29 45	7.2	6.73	236,564	01	88
6603	25597	40.4	75 5	7.5	7.35	210,561	10	14

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6604	2242	40.7	25 2	9	9.55	231,534	01	66
6605	25647	40.7	40 31	5.5	5.13	221,223,227,	203	344
						228	3	6
6606	25659	41.3	39 43	7.3	7.13	235,563	21	46
6607	25666	41.6	43 48	5.7	5.69	221,223,227	101	100
6608	25665	41.7	49 50	7.8	8.09	203,565	22	41
6609	2231	41.8	70 2	8.8	8.57	210,561,584,	441	111
						585,586	02	11
6610	25689	42.0	24 52	8.5	8.85	231,534	12	03
6611	2313	42.2	30 7	9.5	9.53	236,564	23	30
6612	25691	42.4	43 32	6.0	5.79	221,225,227	302	121
6613	25686	42.4	54 49	9	9.46	513,561	21	55
6614	25699	42.7	34 51	7.0	6.38	217,565	22	48
6615	25673	42.7	69 57	8.8	8.16	210,561	11	30
6616	2328	42.8	35 8	8.5	8.69	217	A	5
6617	25692	42.9	62 18	4.3	4.35	223,225,227	012	548
6618	2346	43.1	35 8	9.5	9.78	565,584,585,	110	633
						586	2	3
6619	25718	43.2	34 38	8	8.03	217,565	12	22
6620	2367	43.5	30 7	9	8.88	236,564	22	11
6621	25726	43.7	45 8	8.8	7.80	227,228,235	221	pp7
6622	25725	43.7	49 53	9.2	8.69	203,565	11	22
6623	2335	43.7	65 1	8.8	8.85	202,208,566,	241	200
						584,585	14	00
6624	25748	44.7	52 13	5.7	5.19	223,225,227	001	523
6625	25764	44.9	30 8	9	8.58	236,564	22	22
6626	25759	44.9	35 4	8	8.63	218,565	23	31
6627	25755	44.9	44 39	7	7.16	213,566	00	22
6628	2378	44.9	69 54	8.8	8.46	210,561	11	33
6629	2447	45.0	25 6	9.5	9.50	231,534	11	21
6630	25758	45.1	46 42	5.9	5.44	221,223,225,	510	302
						227,228,552,	241	112
						553	1	4
6631	25779	45.6	46 42	6.9	6.35	221,223,225	102	445
6632	25791	45.7	24 46	8	8.20	231,534	00	22
6633	2455	45.8	55 1	8.5	8.66	513,561	32	22
6634	2398	45.8	74 54	9.5	9.55	210,561	10	21
6635	2497	46.2	25 6	9.8	10.15	231,534	21	56
6636	25797	46.2	35 9	8	8.33	218,565	01	33
6637	25806	46.3	30 51	6.8	6.84	221,223,225	200	486
6638	25802	46.3	34 40	8	8.03	218,565	10	00
6639	25801	46.5	49 47	7.8	8.04	203,565	32	00
6640	25786	46.6	67 21	var.	var.	223,225,227,	302	114
						228,235,236,	R03	446
						237,253,552,	202	414
						553,580,582,	525	666
						587,596	15	11
6641	2523	46.8	25 0	9.5	9.75	231,534	21	43
6642	25815	46.8	50 0	6.8	6.49	203,565	11	55
6643	25721	47.9	83 37	7.5	7.45	204,544,553	211	836

18h — 19h

S.M.P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.	S.M.P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S.M.P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
6644	25858	48.2	24 53	8	7.33	231,534,553	021	578	6688	*2957*	57.0	44 54	9	9.40	213,566	12	44
6645	25861	48.4	24 50	8.5	8.65	231,534	12	14	6689	26055	57.1	35 3	8	7.88	218,565	33	43
6646	25847	48.4	54 41	7.8	7.56	513,561	01	21	6690	26059	57.3	40 2	9	9.13	235,563	01	13
6647	25845	49.0	70 4	8.2	8.02	210,561	12	50	6691	*2931*	57.4	69 58	9	9.22	210,561	10	02
6648	25870	49.2	42 50	5.8	5.35	221,223,225	100	101	6692	*2982*	57.5	30 6	10	9.72	236,564,586,	263	422
6649	*2610*	49.2	49 58	8.5	8.64	203,565	12	42							587,588	10	22
6650	25872	49.7	60 20	5.4	5.07	223,225,227	001	362	6693	26084	58.0	31 12	5.9	5.65	221,225,227	110	043
6651	*2657*	49.8	24 54	9.5	9.55	231,534	01	41	6694	*2974*	58.1	65 5	9	9.30	202,208	11	33
6652	25891	49.8	25 10	8	7.40	231,534	22	24	6695	26068	58.3	64 59	9.2	9.55	202,208,566,	130	666
6653	25886	49.9	37 28	5.7	5.54	221,223,225	020	322							584,585	21	66
6654	*2671*	50.0	25 3	9	9.10	231,534	11	33	6696	26085	58.4	52 29	5.7	5.04	223,225,227,	022	975
6655	*2663*	50.0	29 49	9	9.08	236,564	11	11							228,253	20	58
6656	25897	50.5	53 4	5.2	4.86	223,225,227	013	107	6697	*3027*	58.5	29 52	9.5	9.58	236,564	22	63
6657	25906	50.6	24 45	7.2	7.60	231,534	11	21	6698	26101	58.7	24 58	8	8.60	231,534	11	41
6658	25902	50.6	39 57	6.6	6.43	235,563	10	02	6699	*3028*	58.8	45 2	9.2	9.06	213,566	33	11
6659	*2712*	51.3	45 4	9	9.26	213,566	11	33	6700	*3015*	58.8	60 3	9.2	9.42	237,563	00	42
6660	*2711*	51.7	60 0	8.5	9.12	237,563	00	13	6701	26104	58.9	24 49	7.8	8.12	231,534,584,	311	111
6661	25928	52.0	37 14	5.3	4.91	221,223,225	021	665							585,586	33	11
6662	25921	52.1	55 9	7.3	7.11	513,561	11	44	6702	26107	58.9	25 4	8	8.75	231,534	01	83
6663	25941	52.2	25 0	6.7	6.80	231,534,584,	111	520	6703	26091	59.3	68 35	5.7	5.24	223,225,227	012	566
						585,586	10	33	6704	26124	59.5	24 50	7.5	7.36	231,513,534,	664	446
6664	25937	52.2	39 40	6.7	6.53	235,563	21	85							584,585	41	43
6665	25868	52.2	81 34	8.2	7.78	204,544,553	120	224	6705	26123	59.7	37 12	4.6	4.28	221,225,227	101	648
6666	25918	52.3	65 2	8.2	8.20	202,208	11	20	6706	25049	59.8	89 15	5.8	5.47	R	R	R
6667	*2771*	52.6	44 58	9.5	9.57	213,566,584,	500	664	6707	*3089*	59.9	30 5	9	9.73	236,564	01	25
						585,586	14	64	6708	25992	0.5	84 54	8.5	7.93	204,544,553	100	166
6668	25923	52.8	68 54	6.1	5.94	223,225,227	101	211	6709	*3118*	0.6	30 7	8.5	9.18	236,564	11	24
6669	25935	53.0	65 3	8	8.05	202,208	10	00	6710	*3094*	0.6	60 4	9	9.32	237,563	00	31
6670	25960	53.6	35 3	8.5	8.63	218,565	12	41	6711	*3129*	0.8	30 6	8.5	8.68	236,564	11	31
6671	25939	53.9	74 54	7.5	7.35	210,561	10	14	6712	*3132*	0.9	29 48	9.5	9.53	236,564	12	00
6672	25986	54.2	25 5	6.6	6.35	231,534,552,	412	141	6713	26155	1.0	25 2	8.2	7.90	231,513	22	16
						580,582,584	121	240	6714	26158	1.1	24 41	8	7.65	231,513	21	64
6673	25976	54.2	35 1	8.8	8.38	218,565	11	21	6715	*3138*	1.1	39 55	9	8.72	235,565	12	11
6674	25978	54.3	37 12	7	6.38	221,225,227	220	674	6716	26162	1.3	40 39	5.0	4.41	221,225,227	221	6p1
6675	25981	54.3	37 12	7					6717	26160	1.4	45 14	7.5	7.86	213,566	11	11
6676	25973	54.3	45 16	7.2	7.76	213,566	00	33	6718	26150	1.4	59 43	8	8.42	237,563	00	22
6677	*2858*	54.8	35 2	9.2	9.43	218,565	12	22	6719	26168	1.7	40 7	8.5	7.88	235,565	11	33
6678	25989	55.2	59 53	8	7.76	237,563	10	34	6720	*3130*	1.7	64 58	9	9.55	202,208	01	46
6679	25977	55.3	69 58	8	8.16	210,561	11	22	6721	26157	1.8	60 12	7.8	7.47	223,225,227	210	n5n
6680	26007	55.4	34 57	8.5	8.48	218,565	22	23	6722	*21*	2.0	30 1	9	9.43	236,564	34	14
6681	26014	55.5	35 9	7	7.13	218,565	10	94	6723	26166	2.0	60 9	neb.	cum.	552,553,563,	RRR	RRR
6682	26028	56.0	34 46	7.5	7.23	218,565	01	85							584	R	R
6683	26027	56.1	42 14	5.2	4.76	221,225,227	201	p27	6724	26182	2.1	24 49	6.7	6.42	231,513,534,	320	620
6684	26026	56.2	51 9	6.2	5.99	223,225,227	001	000							552,553	11	11
6685	26045	56.3	24 59	6.1	5.80	231,499,534,	101	640	6725	26177	2.3	50 7	8.2	7.90	245,565	11	11
						552,584,585	202	21.	6726	26195	2.6	25 14	7.0	6.80	231,513	00	p7
6686	26041	56.3	30 1	3.1	2.69	221,225,227,	041	301	6727	26189	2.7	38 4	4.2	4.22	221,223,225,	101	844
						228,253,499,	610	617							552,553,580,	101	222
						552,553	01	33							582	1	4
6687	26044	56.5	38 24	6.1	5.75	221,225,227	100	442	6728	26191	2.7	39 59	7.2	6.38	235,565	00	6p

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6729	26194	2.8	34 39	7.8	7.24	218,563	10	3p
6730	50	2.9	40 6	9	9.02	235,565	23	00
6731	26198	3.0	42 3	6.2	5.92	221,223,225	211	001
6732	26206	3.1	39 30	4.1	3.99	221,223,225,	311	427
						552,553,580,	211	000
						582	0	0
6733	52	3.2	55 5	9	9.02	260,564,586,	121	122
						587,588	01	20
6734	68	3.5	49 58	9	8.82	245,565	22	20
6735	99	3.8	24 57	10	10.04	231,513,534,	452	255
						584,585	01	55
6736	26232	4.1	30 10	6.7	6.65	236,564,586	301	161
6737	82	4.1	59 51	8.8	8.62	237,563	22	16
6738	26239	4.4	29 59	8.2	7.73	236,564	12	85
6739	112	4.4	45 8	9.2	8.99	241,566,586,	421	002
						587,588	10	00
6740	137	4.7	24 58	9.5	9.65	231,513	21	11
6741	26247	4.8	35 4	8	7.48	218,563	11	57
6742	133	4.9	44 48	8.5	9.46	241,566	11	55
6743	26254	5.0	29 40	6.5	6.38	236,552,553	101	611
6744	152	5.3	34 48	9.5	9.54	218,563	12	30
6745	26241	5.3	64 42	8	8.14	245,566	01	11
6746	168	5.6	30 3	9.5	9.48	236,564	33	00
6747	26293	6.5	34 53	8.8	8.98	218,563	11	20
6748	26299	6.6	24 40	7.8	6.85	231,513	23	79
6749	222	6.6	25 5	9	8.96	231,513,534,	241	002
						584,585	01	20
6750	227	6.8	29 49	8.2	8.53	236,564	12	53
6751	217	6.9	50 0	8.8	9.07	245,565	32	13
6752	213	6.9	55 4	9	9.48	260,564,586,	123	355
						587,588	12	55
6753	26306	7.0	30 0	9	9.53	236,564	23	55
6754	26287	7.1	66 50	5.6	5.63	223,225,227	210	422
6755	26317	7.3	8 7	5.9	5.50	497,499,582	101	222
6756	256	7.4	24 55	9.5	9.70	231,513,534,	144	252
						584,585	10	22
6757	26311	7.4	45 22	6.3	5.88	221,223,225	101	110
6758	234	7.5	59 54	9.5	9.72	237,563	22	22
6759	192	7.8	74 58	8.7	8.75	237,564	10	00
6760	26285	7.9	74 51	7.8	7.75	237,564	21	02
6761	26328	8.2	44 50	8.8	9.41	241,566	00	46
6762	26337	8.3	30 1	7.0	6.83	236,564	01	p2
6763	26324	8.3	55 10	8	8.10	260,564	11	21
6764	26340	8.4	39 51	8	7.92	235,565	10	33
6765	315	8.8	40 3	9.5	9.58	235,565	22	11
6766	329	9.1	30 0	10	9.88	236,564	33	34
6767	26355	9.1	45 39	5.9	5.28	221,223,225	211	565
6768	26351	9.1	50 10	7.8	7.76	245,565	10	34
6769	26335	9.4	70 4	7.8	8.39	237,563	11	42
6770	338	9.6	44 55	9	9.16	241,566	10	24
6771	26347	9.8	70 3	8.2	8.69	237,563	11	12
6772	26385	9.9	24 54	7.2	7.70	231,513,534,	341	111
						584,585	11	05
6773	367	10.1	39 53	9	9.18	235,565	00	22
6774	26396	10.7	49 49	8	8.32	231,565,585,	523	231
						586,587	11	11
6775	393	10.8	49 51	9	9.20	231,565,585,	141	220
						586,587	01	22
6776	26399	11.0	44 48	9.2	9.56	241,566	12	44
6777	414	11.3	35 8	9	8.48	218,563	33	03
6778	407	11.4	54 55	9	9.26	260,564,586,	110	333
						587,588	24	33
6779	425	11.5	39 55	9.5	9.22	235,565	10	22
6780	26404	11.5	40 4	8	7.82	235,565	10	24
6781	415	11.9	59 49	8.5	8.52	237,563	11	00
6782	413	12.9	74 52	8.5	8.34	237,564,586,	441	522
						587,588	02	21
6783	26444	13.1	35 36	5.9	5.78	221,223,225	000	002
6784	26421	13.4	70 18	7.8	7.64	237,563	10	91
6785	26386	13.4	81 44	7.7	8.03	204,544,553,	262	520
						582,586,587,	121	022
						588	1	0
6786	442	13.5	74 51	9	9.50	237,564	22	05
6787	26449	13.7	40 10	7.5	7.52	235,565	10	00
6788	527	13.9	44 52	9.2	9.41	241,566	10	24
6789	552	14.2	24 49	8.5	8.58	231,513,534,	261	114
						584,585	02	41
6790	569	14.7	34 55	8.5	8.64	218,563	10	42
6791	550	14.7	54 48	8.2	8.70	260,564,586,	231	122
						587,588	22	52
6792	26462	14.8	54 36	5.4	5.03	221,223,225	221	656
6793	26476	14.9	35 10	6.9	6.44	218,563	10	36
6794	26468	14.9	54 43	7.2	7.20	260,564,586,	021	363
						537,588	01	66
6795	26492	15.2	5 36	5.6	5.00	497,499,582	011	422
6796	26488	15.3	29 47	7.0	6.98	236,564	22	00
6797	26485	15.4	44 38	4	4.10	223,225,227,	411	113
6798	26486	15.5	44 38	7				
						228,253,552,	321	626
						553	2	1
6799	26415	15.4	81 57	7.0	6.65	204,544,553	222	144
6800	26490	15.5	40 5	8.8	8.82	235,565	10	20
6801	26498	15.7	29 42	7.0	7.23	236,564	12	20
6802	609	15.7	29 49	9	9.28	236,564	22	02
6803	26500	16.0	44 59	4.4	4.35	221,223,225,	010	616
6804	26522	16.6	34 49	9	9.08	218,563	22	11
6805	26527	16.9	40 48	4.0	4.13	221,223,225,	132	161
						227,228,253	331	p51
6806	26543	17.3	35 9	7.2	6.94	218,563	01	9p
6807	26512	17.3	69 50	6.9	6.74	237,563	10	33

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6808	26567	18.3	40 3	8.5	8.08	235,565	22	41
6809	26564	18.4	50 2	6.9	6.62	231,565	11	94
6810	26572	18.9	60 6	8.8	8.16	237,563	32	33
6811	756	19.0	39 49	9	8.92	235,565	01	01
6812	26592	19.2	24 42	5.4	5.08	231,513,552,	021	p44
						596	2	5
6813	26585	19.3	55 10	7.8	8.14	260,566	32	6.
6814	26593	19.8	54 31	5.9	5.43	223,225,227	221	025
6815	26576	19.8	70 15	8	7.99	237,563	22	52
6816	767	20.0	65 5	9	9.36	245,566	32	54
6817	762	20.2	70 0	8	8.94	237,563	01	12
6818	800	20.5	59 48	9.5	9.56	237,563	10	11
6819	26618	20.6	29 56	5.8	5.75	236,552,553	100	021
6820	824	21.0	50 5	8.5	8.62	231,565,585,	210	221
						586,587	21	11
6821	850	21.5	50 4	8.5	8.82	231,565	00	50
6822	26632	21.5	54 59	8.2	8.54	260,566	54	05
6823	26635	21.6	29 42	7.5	7.98	236,564	00	22
6824	869	21.6	29 47	8.7	8.93	236,564	12	11
6825	868	21.9	49 59	9	9.28	231,565	10	33
6826	R	22.0	5 56	R	8.23	497,499,582	010	242
6827	26648	22.3	43 39	5.9	5.78	221,223,225	100	110
6828	908	22.6	29 54	9.5	9.43	236,564	23	42
6829	26669	23.1	29 55	8.5	8.28	236,564	22	45
6830	26670	23.1	29 55	10				
6831	R	23.6	6 23	R	8.67	497,499,582	320	27n
6832	26681	23.7	29 52	8.2	8.98	236,564	00	50
6833	890	23.7	75 2	8.5	8.78	237,564,586,	430	036
						587,588	21	33
6834	962	23.8	30 7	9.5	9.53	236,564	12	00
6835	26678	23.8	44 58	9	9.41	241,566	12	12
6836	957	23.9	44 50	9	8.81	241,566	12	10
6837	26697	24.0	24 54	9	8.85	230,513	23	22
6838	980	24.3	44 50	10	10.31	241,566	11	36
6839	26702	24.4	29 52	9	9.43	236,564	12	12
6840	26710	24.5	24 47	8.8	8.65	230,513	01	42
6841	969	24.5	59 51	9	9.26	237,563	10	53
6842	R	24.7	5 8	R	9.17	497,499,582	122	797
6843	26714	24.8	29 42	7.8	7.53	236,564	12	50
6844	26709	25.0	53 24	6.1	6.02	221,223,225	242	021
6845	26717	25.1	44 45	6.8	6.66	241,566	11	p3
6846	986	25.4	69 53	8.5	8.94	237,563	01	11
6847	1023	25.5	50 7	9.5	9.02	231,565	11	02
6848	R	25.9	5 53	R	9.07	497,499,582	111	6n6
6849	1053	26.1	39 57	9	8.78	235,565	11	33
6850	26741	26.1	45 29	6.0	5.72	221,223,225	211	122
6851	1016	26.1	70 2	9	9.24	237,563	12	02
6852	R	26.3	5 21	R	8.97	497,499,582	210	5n8
6853	1036	26.5	69 48	9	9.29	244,563	11	33
6854	26769	27.2	40 0	8.2	8.27	235,565,587,	141	212

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						588,596	31	21
6855	26765	27.2	49 54	8.5	8.18	231,565	01	32
6856	26776	27.3	40 15	6.0	5.91	221,223,225	111	112
6857	26780	27.8	48 19	5.4	4.95	221,223,225	100	507
6858	1140	28.3	24 51	9	8.75	230,513	10	30
6859	1100	28.3	70 4	8.5	9.14	241,563	10	31
6860	R	28.4	4 57	R	7.77	497,499,582	100	230
6861	26799	28.6	40 5	8.8	8.42	235,565	01	12
6862	1112	28.7	69 59	9	9.39	241,563	11	24
6863	26787	28.9	69 50	7.2	6.99	241,563	11	32
6864	26803	29.0	54 58	8	8.04	260,566,585,	231	0p5
						586,587	00	22
6865	R	29.2	4 40	R	9.03	497,499,582	122	555
6866	1168	29.2	50 1	8	8.32	231,565	00	51
6867	R	29.9	4 31	R	8.53	497,499,582	111	375
6868	26827	29.9	24 56	var.	5.67	230,230,513,	132	332
						552,553,580,	010	322
						588,596	10	11
6869	26818	30.2	64 46	7.2	7.21	245,566	00	03
6870	1208	30.4	55 1	9.8	9.90	260,566,585,	R31	444
						586,587	31	47
6871	26843	30.6	25 6	4.7	4.42	230,230,513,	331	pp8
						552	2	4
6872	1239	30.6	29 50	9.5	9.78	236,564	22	36
6873	1221	30.6	54 50	9.5	9.50	260,566,585,	R44	200
						586,587	00	03
6874	1225	30.6	39 58	8	8.17	235,565,587,	231	120
						588,596	02	20
6875	26811	30.7	75 0	7.8	7.68	237,564,586,	241	222
						587,588	01	13
6876	1248	30.8	29 48	9	9.13	236,564	23	11
6877	1266	31.1	25 4	9.5	9.50	230,513	11	50
6878	1265	31.1	34 57	9.2	9.18	218,563	11	20
6879	R	31.3	5 0	R	7.90	497,499,582,	0R2	4R4
						587	2	4
6880	R	31.5	4 30	R	8.47	497,499,582	122	575
6881	1274	31.6	50 5	9	9.18	231,565	21	44
6882	26835	31.9	74 41	8	7.85	237,564	01	60
6883	R	32.0	3 42	R	8.37	497,499,582	111	492
6884	26870	32.0	34 46	7.5	7.34	218,563	12	22
6885	1296	32.3	49 47	9	8.82	231,565	00	23
6886	26868	32.3	54 39	6.6	6.25	260,264,566	R01	813
6887	1323	32.4	30 2	9.5	9.88	236,564	11	46
6888	1306	32.4	44 59	8.8	8.87	241,566,587,	432	111
						588,596	12	11
6889	26887	32.5	4 52	5.8	5.47	497,499,582	010	251
6890	26873	32.5	50 11	7.8	7.26	231,565,585,	030	132
						587,588	11	42
6891	1331	32.7	35 3	8.5	8.78	218,563	33	38
6892	1335	32.8	40 5	9.5	9.22	235,565	01	02

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6893	*1338*	32.9	39 59	8	7.42	235,565	*12*	p6
6894	*1334*	32.9	44 53	9.3	9.46	241,566	*11*	*35*
6895	26890	33.1	39 40	6.8	6.68	235,565	00	88
6896	26905	33.4	24 47	9	9.30	230,513	*11*	*33*
6897	26910	33.5	24 49	9.8	9.45	230,513	*23*	*11*
6898	*1390*	33.8	24 52	9.5	9.10	230,513	00	*12*
6899	26920	34.1	25 3	8.8	9.05	230,534	*34*	*10*
6900	26899	34.5	70 15	8	7.64	241,563	10	64
6901	26940	34.9	29 59	8.5	8.48	236,564	00	00
6902	26953	35.0	5 41	6.9	6.60	497,499,582	*121*	004
6903	26945	35.0	25 6	9	9.40	230,534,563	2R*2*	*212*
6904	*1432*	35.4	45 6	9	8.86	241,566	*11*	*11*
6905	R	35.5	4 16	R	8.03	497,499,582	*131*	200
6906	*1449*	35.5	25 5	9	8.55	230,534,563	*1*R0	242
6907	*1438*	35.6	49 49	9	8.82	231,565	*44*	20
6908	26977	36.3	25 6	6.8	6.55	230,563	*21*	9p
6909	R	36.5	4 31	R	8.00	497,499,582	000	*555*
6910	26987	37.0	37 47	6.1	6.34	221,223,225	002	*433*
6911	*1527*	37.4	30 2	10	10.03	236,564	01	*25*
6912	26996	37.4	34 56	8.8	8.44	218,563	*23*	11
6913	26984	37.4	59 50	7.8	8.06	244,563	12	*11*
6914	26929	37.6	81 36	6.9	6.32	204,544,553	*111*	275
6915	27006	37.7	24 58	8.5	8.15	230,563	*10*	06
6916	26980	37.9	72 45	5.7	5.49	221,223,225	010	252
6917	27026	38.7	30 0	9	9.43	236,564	01	*42*
6918	*1564*	38.8	54 50	9.5	9.40	264,566	*11*	*12*
6919	27053	39.6	32 8	6.2	5.71	221,223,225	1*11*	*423*
6920	27043	39.9	56 36	5.5	5.60	221,223,225	000	*021*
6921	R	40.0	4 46	R	8.97	497,499,582	*111*	*585*
6922	27069	40.3	25 7	7.5	7.80	230,513	00	70
6923	27051	40.4	65 9	8	7.25	245,565	*12*	88
6924	*1683*	41.5	44 48	8.2	8.91	241,566	*11*	*44*
6925	R	41.6	3 54	R	8.33	497,499,582	*131*	*8*nn
6926	27083	41.6	61 18	6.2	6.44	221,223,225	*102*	*243*
6927	*1708*	41.8	34 51	8.5	8.68	218,563	*22*	*22*
6928	*1704*	41.9	45 2	9	9.66	241,566	*11*	*47*
6929	27100	42.2	59 26	5.5	5.54	221,223,225	*221*	001
6930	R	42.5	5 29	R	8.37	497,499,582	*111*	*744*
6931	*1740*	42.7	29 58	10	10.12	231,564	01	*66*
6932	*1739*	42.7	35 0	9	9.04	218,563	*12*	*22*
6933	*1742*	42.8	29 55	9	9.28	236,564	*11*	*11*
6934	R	43.7	4 45	R	8.40	497,499,582,	032	*699*
						587,588	*01*	*66*
6935	27135	43.7	34 54	9	8.88	218,563	*22*	*11*
6936	27142	44.1	39 50	8.2	8.68	235,565	*22*	12
6937	R	44.3	4 47	R	8.40	497,499,582	*231*	*444*
6938	27144	44.7	55 13	6.1	5.63	221,223,225	001	*116*
6939	27145	44.7	55 14	7.0	6.90	264,565,585,	330	131
						586,587	00	*11*
6940	27165	45.0	40 7	5.6	5.38	221,223,225	*101*	202

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6941	27173	45.2	25 9	8	7.45	230,513	*23*	46
6942	*1838*	45.3	25 2	9	9.15	230,513	*01*	*20*
6943	*1839*	45.4	25 2	9.7	9.70	230,513	00	*10*
6944	27183	45.5	4 56	6.8	6.83	497,499,582	11*1*	*326*
6945	27174	45.9	61 25	6.3	6.17	221,223,225	*100*	*223*
6946	27178	46.0	54 37	7.8	7.30	264,565	00	*17*
6947	*1863*	46.1	29 58	9.2	9.38	236,564	*11*	*44*
6948	*1861*	46.1	39 50	9	8.98	235,565	00	*15*
6949	27207	46.8	30 11	8	8.63	236,564	*12*	*16*
6950	*1883*	46.8	44 48	9	9.51	241,566	*23*	*35*
6951	R	48.1	4 50	R	8.60	497,499,582	02*2*	*161*
6952	27239	48.3	42 8	4.3	4.08	221,223,225	*101*	7*32*
6953	27219	48.3	69 25	5.9	5.82	552,553,580,	01*1*	202
						581,588,596	1*33*	000
6954	27237	48.7	59 10	5.5	5.31	221,223,225	*211*	152
6955	27224	48.7	69 1	6.7	6.53	221,223,225	0*11*	*504*
6956	R	49.0	5 18	R	8.74	497,499,582,	14*2*	*574*
						587,588	*01*	*55*
6957	27225	49.0	73 10	4.0	4.04	221,223,225,	220	*200*
						227,253,552,	*141*	*500*
						553	3	0
6958	*1971*	49.2	50 1	8.5	8.66	231,565,585,	0*40*	*122*
						587,588	01	*21*
6959	27251	49.3	59 47	8.2	7.66	244,563	*10*	33
6960	*1976*	49.4	49 53	8.5	8.78	231,565	*21*	*33*
6961	27228	49.4	75 2	7.4	7.60	241,564	*22*	*11*
6962	27232	50.4	79 42	7.5	7.76	245,553	*32*	00
6963	27285	50.6	34 50	8.8	8.14	218,563	01	*11*
6964	27283	50.6	39 39	7.8	7.72	235,565	01	*12*
6965	27278	50.6	55 12	8	8.44	264,565	01	*22*
6966	27273	50.7	67 13	5.9	5.70	221,223,225	*320*	*830*
6967	27291	51.6	65 4	7.0	6.80	245,565	*11*	22
6968	R	52.0	4 57	R	8.62	497,499,582,	03*2*	*464*
						587,588	*11*	*44*
6969	27298	52.2	67 13	5.6	5.20	221,223,225	*122*	603
6970	*2091*	52.5	39 58	9.5	9.38	235,565	*11*	*12*
6971	R	52.6	5 27	R	9.18	497,499,582,	*154*	*777*
						587	*1*	n
6972	R	52.9	6 37	R	8.40	497,499,582,	*223*	*642*
						587,588	21	*24*
6973	27329	53.1	49 37	6.4	6.17	231,552,553	020	330
6974	R	53.2	4 38	R	8.40	497,499,582,	*232*	*244*
						587,588	*23*	*44*
6975	27344	53.2	35 33	4.5	4.68	221,223,225	*112*	3n6
6976	27346	53.3	34 58	5.8	5.38	218,221,223,	*101*	841
						225	2	2
6977	27342	53.3	44 57	9	9.27	241,566,585,	*231*	*331*
						588,596	*11*	*33*
6978	27335	53.3	49 53	7	6.82	231,565	*11*	02
6979	27330	53.3	59 39	5.7	4.87	221,223,225	*212*	656

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
6980	27333	53.5	59 43	8	7.56	244,563	01	49
6981	27354	53.7	37 58	6.2	5.98	221,223,225	202	300
6982	27352	53.7	45 23	5.9	5.82	221,223,225	012	221
6983	27363	53.9	33 58	5.9	5.68	221,223,225	202	212
6984	*2146*	54.8	70 1	9	9.39	241,563	11	44
6985	27399	55.2	34 52	8	7.98	218,559	00	25
6986	27396	55.2	44 44	8.1	8.01	241,566	10	20
6987	*2202*	55.4	30 4	9	9.13	236,564	01	61
6988	27403	55.5	34 58	8.2	8.34	218,559	01	52
6989	R	55.6	4 35	R	7.50	497,499,582	011	533
6990	R	56.3	6 39	R	8.96	497,499,582,	024	885
						587,588	11	115
6991	27384	56.3	75 2	7	7.10	241,564	11	24
6992	27424	56.5	44 52	8.8	8.51	241,566	11	30
6993	27449	56.9	5 16	6.7	6.67	497,499,582	210	212
6994	27440	56.9	38 13	5.0	4.68	221,223,225	101	715
6995	27427	56.9	59 49	8.2	8.32	244,563	00	74
6996	27413	56.9	69 50	7.2	7.39	241,563	00	13
6997	*2249*	57.0	44 55	8.5	8.46	241,566	21	32
6998	*2232*	57.3	69 55	9	9.54	241,563	10	33
6999	27447	57.4	50 2	8.5	8.42	231,565	11	14
7000	*2257*	57.4	55 0	9	8.88	264,565,585,	1R0	244
						586,587	11	12
7001	27451	57.5	45 14	8	7.86	241,566	01	61
7002	R	57.6	7 58	R	8.43	497,499,582	010	442
7003	*2279*	57.6	45 2	9.5	9.93	241,566,585,	411	344
						588,596	13	42
7004	R	58.0	4 55	R	8.66	497,499,582,	343	595
						587,588	11	55
7005	27463	58.0	32 20	5.4	5.01	221,223,225	001	535
7006	27468	58.9	66 26	3.5	3.56	221,223,225,	101	814
						552,553,580,	301	414
						581	0	2
7007	27483	59.0	34 57	7.0	7.04	218,559	12	05
7008	27445	59.5	79 53	7.8	8.08	245,553	10	14
7009	27496	59.7	53 10	5.5	4.82	221,223,225	121	829
7010	27510	59.9	6 52	8.5	8.90	497,499,582,	232	797
						587,588	01	44
7011	*2359*	0.3	60 5	9.5	9.58	244,563,585,	641	111
						587,588	21	11
7012	*2379*	0.4	30 6	10	10.13	236,564	01	66
7013	*2365*	0.4	54 58	8	8.64	264,565	12	16
7014	*2386*	0.6	30 5	9.5	9.43	236,564	12	11
7015	27516	0.7	29 42	7.8	7.73	236,564	34	03
7016	*2390*	0.8	40 2	9.5	9.42	235,565	10	02
7017	27524	1.1	25 4	9.8	9.55	513,562	01	13
7018	*2402*	1.1	35 0	9	8.98	218,559	22	03
7019	27526	1.2	30 1	7.0	6.68	236,564	11	35
7020	27523	1.2	40 8	7.2	7.42	235,565	12	42
7021	27533	1.3	4 42	7.1	7.27	497,499,582	111	337

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7022	R	1.4	7 19	R	8.13	497,499,582	131	111
7023	*2412*	1.5	44 57	9.5	9.56	241,566	22	24
7024	R	1.6	8 29	R	7.86	497,499,582,	344	411
						587,588	01	44
7025	*8*	1.8	34 55	8.5	8.02	534,559	01	52
7026	27543	2.1	34 48	8	7.68	534,559	22	35
7027	*25*	2.3	24 53	9.2	9.25	513,562	01	00
7028	27555	2.5	24 59	9.5	9.50	513,562	00	00
7029	*32*	3.0	50 6	9	9.32	570,571	00	33
7030	*53*	3.2	34 50	9	9.08	534,559	11	16
7031	27575	3.4	29 48	8.2	8.73	236,567	12	22
7032	27498	3.6	83 37	6.4	6.27	245,553,582	210	122
7033	27577	3.7	29 56	8.5	8.73	236,567	12	42
7034	*105*	4.4	30 4	9	9.43	236,567	10	44
7035	27600	4.6	36 21	5.8	5.38	230,231,253,	420	121
						580,581,584,	110	345
						596	2	4
7036	27608	5.5	64 44	6.9	6.86	245,567	32	11
7037	27633	5.8	9 9	6.5	6.57	497,499,582	212	114
7038	27635	6.1	29 51	8	8.83	236,567	10	30
7039	27585	6.3	79 55	8	7.53	245,586	11	55
7040	*172*	6.7	44 55	9	9.16	241,570	22	22
7041	27647	6.7	52 45	6.1	5.74	230,231,253,	542	111
						264,580,581,	010	225
						584	0	1
7042	27680	7.6	35 0	8.5	9.42	534,559	21	44
7043	27695	8.4	40 2	8	7.87	235,570,585,	133	311
						588,596	32	11
7044	27690	8.6	59 57	7.8	7.86	244,559	01	11
7045	*234*	8.7	44 55	9	9.06	241,570	21	11
7046	27709	9.3	39 48	8	7.78	235,570	00	74
7047	*262*	9.8	39 51	9.5	9.13	235,570	12	11
7048	*268*	10.0	39 57	9.5	9.28	235,570	22	33
7049	27666	11.0	83 46	9	9.08	245,586,587	100	111
7050	27786	11.9	44 51	7.5	7.51	241,570	11	00
7051	*348*	12.6	45 3	8.5	8.31	241,570	11	22
7052	*353*	12.6	50 3	9	9.56	274,570	12	18
7053	27744	12.6	79 43	8	8.33	245,586	00	21
7054	*361*	13.0	30 0	9.3	9.43	236,567	12	42
7055	*369*	13.2	39 59	8	7.48	235,570	22	75
7056	27814	13.3	29 57	7.8	7.63	236,567	01	94
7057	27829	13.7	24 58	9	9.35	513,562	10	44
7058	27832	13.8	34 53	6.9	6.68	534,559	11	31
7059	*398*	14.0	29 59	8.8	9.13	236,567	10	11
7060	27820	14.0	55 7	8	8.44	534,559	21	41
7061	*407*	14.8	59 48	8.8	8.31	244,559	33	22
7062	*432*	15.0	49 45	8	8.20	274,570	00	00
7063	27874	15.1	6 40	7.5	6.43	497,499,582	021	111
7064	*446*	15.1	29 55	9	9.28	236,567	00	33
7065	*418*	15.1	64 54	9	9.13	245,567,585,	R20	111

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						588,596	01	11
7066	27799	15.1	80 52	8	7.55	245,586,587	200	4.4
7067	27879	15.7	42 21	5.5	5.73	230,231,253,	440	211
						264,580,581,	111	203
						584	1	3
7068	27878	15.7	44 54	8.5	8.01	241,570	10	20
7069	27852	15.9	74 36	7.8	7.95	245,569	10	00
7070	27890	16.4	54 51	7.7	7.89	534,559	13	11
7071	27836	16.6	81 17	6.3	5.75	230,231,231,	310	122
						235,253,570,	322	122
						580,581,584	100	322
7072	27909	17.1	42 44	5.6	5.73	230,231,253,	316	102
						264,580,581,	111	321
						584	1	3
7073	27916	17.2	24 48	8	9.05	513,562	12	22
7074	27918	17.7	57 3	2.1	2.05	230,231,253,	531	p85
						264,580,581,	121	8p5
						584,588,596,	223	5n0
						624	1	5
7075	*526*	17.8	34 47	9	9.18	534,559	11	44
7076	27942	18.1	35 2	8.5	8.92	534,559	32	22
7077	*534*	18.1	39 49	9.5	9.78	235,570	11	33
7078	27935	18.1	50 11	8	8.40	274,570	11	12
7079	27838	18.8	84 44	7.0	7.09	587,588,596	012	111
7080	27967	19.1	35 2	9.5	10.22	534,559	32	7n
7081	*580*	19.4	29 45	9	8.78	236,567	44	30
7082	*575*	19.5	49 50	9.5	9.56	274,570	21	44
7083	27991	20.1	40 15	8	8.73	235,570	10	15
7084	*613*	20.3	45 5	8.5	8.21	241,570	12	63
7085	28006	20.4	24 53	9.5	9.55	513,562	10	44
7086	28013	20.5	3 7	6.6	5.90	497,499,582	011	413
7087	*582*	20.9	74 58	8.5	8.95	245,569	10	22
7088	28015	21.0	39 51	8	7.88	235,570	00	63
7089	*656*	21.2	24 57	8.8	8.90	513,562	11	11
7090	27956	21.4	81 37	6.5	5.67	230,241,253,	310	335
						513,580,581,	112	833
						584	1	2
7091	28040	21.9	29 42	7.0	7.43	236,567	01	16
7092	28046	22.2	34 44	7.0	6.82	534,559	01	20
7093	28041	22.3	54 54	9.8	9.46	559,562	01	27
7094	28062	23.1	49 46	8.8	8.86	274,570	21	41
7095	*721*	23.3	44 50	8.8	8.81	241,570	22	00
7096	*727*	23.5	44 47	9	8.96	241,570	22	00
7097	28101	24.4	44 43	8	7.96	241,570	10	52
7098	*765*	24.6	30 1	8.2	8.13	236,567	12	71
7099	*763*	24.7	45 5	8.5	8.41	241,570,585,	600	122
						588,596	23	21
7100	28107	25.2	54 51	9	10.60	562,567	00	nn
7101	*789*	25.5	39 45	9.5	9.43	235,570	01	41
7102	*796*	25.6	34 50	8.2	8.08	559,569	11	41

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7103	*801*	25.8	34 50	9	9.72	559,569	12	75
7104	28110	25.9	69 57	6.5	6.11	245,534,580	220	311
7105	*808*	26.0	34 48	9	9.38	559,569	22	44
7106	*813*	26.2	44 54	8	8.46	241,570	11	33
7107	28125	26.2	54 48	9	9.31	562,567,585,	243	315
						588,624	11	33
7108	28132	26.4	25 12	7.5	7.10	513,562	22	76
7109	*839*	26.8	44 58	9.5	9.76	241,570	12	38
7110	28128	26.9	69 55	9	9.37	245,534,563,	620	212
						585,588	11	24
7111	28141	27.0	44 51	5.6	5.12	230,231,253,	310	198
						580,581,584,	113	416
						588	1	7
7112	28129	27.0	69 48	7.2	6.82	245,534	11	94
7113	28140	27.3	60 55	4.9	4.73	230,231,253,	501	588
						580,581,584,	221	287
						588	4	7
7114	28156	27.7	29 38	7.0	7.08	236,567	22	34
7115	28159	27.9	25 0	8	8.62	513,562,585,	811	141
						588,624	12	11
7116	28152	28.0	60 1	7.8	7.71	244,559	22	02
7117	28165	28.6	54 55	10	F	562,567	FF	RR
7118	*873*	28.6	64 59	9	9.32	245,567	22	13
7119	28182	28.9	44 41	6.8	6.51	241,570	23	23
7120	28173	28.9	60 2	8.5	9.01	244,559	22	20
7121	28179	29.2	61 52	4.9	5.02	231,253,580,	110	325
						581,584	00	28
7122	28186	29.3	40 2	8	8.13	235,570	10	41
7123	28162	29.7	76 32	6.3	6.12	230,231,253,	010	111
						580,581,584,	131	111
						588,596	11	21
7124	28171	29.8	75 42	6.8	6.45	231,253,580,	210	422
						581,584	31	24
7125	28203	29.9	24 43	7.8	7.25	513,562	12	68
7126	28213	30.6	47 39	3.1	3.20	231,253,580,	222	217
						581,584,585,	202	822
						588	0	7
7127	*946*	30.9	64 57	8	8.12	245,567	22	21
7128	*947*	30.9	64 57	10				
7129	28204	30.9	70 7	8	8.98	245,534	32	52
7130	28229	31.0	34 52	8.8	8.78	559,569	00	00
7131	*951*	31.0	64 51	9.5	9.56	245,567	21	31
7132	28214	31.3	69 52	8	8.08	245,534	21	21
7133	28239	31.5	44 52	7.7	7.36	241,570	10	66
7134	28236	31.8	60 53	5.5	5.24	231,253,580,	111	063
						581,584	21	33
7135	28245	31.9	49 41	7.5	7.56	274,570	10	11
7136	28199	32.1	80 41	8.5	8.45	245,586,587	001	121
7137	28259	32.8	67 7	5.6	5.32	231,253,580,	133	314
						581,584,585,	211	26n

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							588	4	3
7138	28217	32.8	80	13	8.2	7.56	245,586,587	013	214
7139	1035	33.2	45	0	9.5	9.61	241,570	12	11
7140	1041	33.8	59	48	8.2	8.16	244,559	10	12
7141	28297	33.9	35	4	9	9.58	559,569	11	66
7142	28305	34.1	33	47	5.8	5.48	231,253,580,	121	013
							581,584	00	52
7143	28303	34.3	54	55	8.5	8.76	562,567	01	36
7144	1080	34.6	50	1	8.5	9.06	274,570	21	31
7145	28264	34.6	80	30	7.8	7.63	245,586,587	110	226
7146	1112	35.2	24	52	9	9.20	513,562	22	22
7147	28337	35.2	31	57	6.1	5.78	231,253,580,	202	010
							581,584,585,	102	013
							588	3	0
7148	28340	35.4	45	15	6.9	6.96	241,570	00	22
7149	1130	35.9	55	1	9.5	9.50	562,567	00	03
7150	28338	36.0	66	34	3.3	3.54	231,253,580,	011	130
							581,584,585	002	350
7151	28361	36.3	39	55	6.7	6.41	235,570,580	010	112
7152	28363	36.7	52	17	4.7	4.73	231,253,580,	330	832
							581,584,585,	111	339
							588	2	1
7153	28359	36.8	64	47	7.5	7.56	245,567	10	11
7154	28067	36.8	88	9	10.2	F	245,586,587	FFF	RRR
7155	28379	37.2	29	47	6.9	6.88	236,567	00	11
7156	28371	37.2	59	58	8.5	8.60	244,559,585,	642	141
							588,624	01	44
7157	28377	37.3	45	8	8	8.31	241,570	01	21
7158	28396	37.7	25	3	8.2	8.55	513,562	10	11
7159	28410	38.3	39	56	8	8.23	235,570	01	33
7160	28432	39.2	35	1	9	9.62	559,569	01	46
7161	28444	39.8	39	34	5.8	5.67	236,253,580,	220	122
							581,584	21	23
7162	28430	39.8	69	9	5.7	5.52	231,253,580,	321	140
							581,584	52	52
7163	28450	39.9	24	51	8.5	8.70	513,562	11	21
7164	28460	40.9	59	36	7.5	7.41	244,559	33	31
7165	1304	41.4	24	51	9	8.95	513,562	21	30
7166	28490	41.7	44	22	5.4	5.18	236,253,580,	110	545
							581,584	20	63
7167	1313	42.1	54	46	10	10.00	562,567	00	34
7168	28510	42.6	46	36	5.3	4.90	236,253,580,	311	956
							581,584,585,	132	853
							588	3	5
7169	28468	43.1	81	0	8.5	8.38	245,586,587	111	213
7170	R	43.3	62	48	R	5.84	236,253,580,	102	811
							581,584	00	20
7171	28544	43.8	34	9	5	4.98	236,253,580,	212	220
							581,584	01	76
7172	28538	44.1	64	55	7.8	7.76	245,567	32	42

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
7173	1395	44.3	39	47	9	8.43	235,570	01	14
7174	28555	44.3	51	59	5.6	5.10	236,253,580,	331	315
							581,584,585,	111	515
							588	2	1
7175	28565	44.6	38	17	5.9	5.51	236,253,580,	422	232
							581,584,585,	301	543
							588	2	5
7176	1428	45.5	49	53	9.5	9.46	274,570	01	23
7177	28579	45.5	54	56	8.5	8.70	562,567	11	22
7178	28594	45.6	29	48	6.9	7.08	236,567	11	11
7179	28592	45.6	30	9	7.2	7.08	236,567	11	94
7180	28580	45.7	60	2	7.6	9.81	244,559	11	86
7181	28597	45.8	33	33	6.2	6.20	236,253,580,	132	221
							581,584	21	22
7182	28584	45.8	59	59	7.6	8.61	244,559	11	11
7183	28585	45.8	60	5	7.2	7.56	244,559	32	14
7184	1437	45.9	60	1	10	N	244,559	NN	NN
7185	1454	46.0	30	1	9	9.48	236,567	00	03
7186	28591	46.0	60	3	7.8	8.66	244,559	43	23
7187	28605	46.4	49	45	8.8	8.66	274,570	10	11
7188	1476	46.8	49	49	9.2	9.41	274,570,571	011	112
7189	1486	47.0	35	2	9	9.22	559,569	10	24
7190	28621	47.0	44	43	7.8	7.36	241,570	00	46
7191	28615	47.0	58	49	3.7	3.66	253,260,580,	210	721
							581,584,585	111	351
7192	28625	47.1	40	11	5.7	5.32	235,253,260,	201	815
							580,581,584	021	314
7193	1475	47.8	74	52	9.5	9.22	245,570	00	10
7194	28657	48.2	24	39	7.2	7.25	513,562	23	33
7195	28655	48.6	59	39	8	7.71	244,559	00	53
7196	28573	48.6	83	41	8.2	9.31	245,586,587	000	121
7197	28668	48.7	29	47	8.5	8.93	236,567	01	44
7198	1504	48.7	74	49	8.6	8.56	245,570	32	14
7199	28669	48.9	44	51	8.8	9.01	241,570	00	02
7200	1550	49.0	29	44	9.2	9.43	236,567	01	24
7201	28672	49.0	44	57	7.2	7.06	241,570	33	47
7202	1547	49.4	59	46	8.5	8.56	244,559	10	11
7203	28622	49.5	81	47	8	8.03	245,586,587,	320	202
							588,596,624,	121	202
							627	1	2
7204	28682	50.4	69	57	6.8	6.78	245,534,580	210	233
7205	1581	51.0	70	0	8.5	8.50	245,534,585,	610	023
							588,624	22	00
7206	1598	51.2	54	45	9	9.10	562,567	11	31
7207	1599	51.7	69	58	9.5	9.42	245,534	33	11
7208	28677	51.7	81	5	8	7.28	245,586,587	032	557
7209	28676	51.7	81	5	10				
7210	28722	51.8	24	52	8.5	8.28	513,562,585,	621	133
							588,624	20	33
7211	28724	52.1	24	57	8	8.70	513,562	00	32

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7212	28684	52.5	82 25	8	6.89	586,587,588	101	699
7213	28706	52.6	77 24	5.6	5.31	253,260,580,	141	341
						581,584	11	66
7214	1638	53.0	69 54	9.5	9.18	245,534	21	22
7215	28735	53.3	51 39	6.0	5.84	253,260,580,	021	001
						581,584,585,	210	012
						588	2	2
7216	1658	53.4	55 0	9	8.50	562,567	11	00
7217	28467	53.5	88 8	10	F	245,586,587	FFF	RRR
7218	28663	53.7	85 36	7.5	6.97	586,587,588	010	555
7219	28755	54.0	29 52	8.8	8.83	236,567	10	30
7220	28751	54.0	34 37	7.5	7.08	513,569	22	44
7221	28758	54.4	49 44	7.5	7.78	274,570,571	131	032
7222	28704	54.4	83 43	9	8.95	245,586,587	121	020
7223	28777	55.0	30 7	7	7.13	236,567	01	91
7224	28780	55.1	30 8	7.5	8.13	236,567	12	74
7225	28782	55.1	32 39	5.0	4.75	253,260,580,	220	568
						581,584,585,	201	270
						588	1	4
7226	28791	55.6	43 23	6.8	6.49	253,260,580,	141	130
						581,584,585,	111	000
						588	3	0
7227	28810	56.0	38 55	6.0	5.91	253,260,580,	212	110
						581,584,585,	000	101
						588	3	1
7228	28821	56.6	39 1	5.5	5.51	253,260,580,	011	132
						581,584,585,	101	101
						588	0	1
7229	28728	56.9	85 9	7.8	7.76	586,587,588	222	402
7230	28714	57.3	86 3	7.5	7.37	586,587,588	221	361
7231	28835	57.5	60 48	9	8.38	253,260,580,	321	42.
						581,584	12	.2
7232	28756	57.5	83 40	7.5	7.58	245,586,587	120	244
7233	28825	57.6	70 0	8.5	8.68	245,534	32	11
7234	28848	57.9	44 51	9	9.16	241,570	10	22
7235	28844	57.9	55 7	5.8	5.23	253,260,580,	101	424
						581,584,585,	212	540
						588	0	2
7236	28851	58.8	73 34	5.9	5.89	253,260,580,	321	110
						581,584	01	21
7237	28904	59.9	41 47	6	5.55	253,260,580,	212	101
						581,584	20	22
7238	28907	0.0	30 31	6.0	5.59	253,260,580,	321	330
						581,584	11	22
7239	28913	0.2	35 2	7.3	6.72	513,569	23	35
7240	28900	0.2	64 20	6.2	5.78	253,260,580,	111	000
						581,584	00	00
7241	28918	0.3	32 44	5.7	5.15	253,260,580,	430	432
						581,584	01	25
7242	1866	0.4	39 57	9.5	9.63	235,570	01	14

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7243	28916	0.5	54 37	6.8	7.00	562,571	11	04
7244	28818	0.5	84 43	9	7.53	586,587,588	001	ppp
7245	28820	0.6	84 43	8.8				
7246	28939	1.0	29 59	8.2	8.53	236,567	12	30
7247	28932	1.0	44 41	7.5	7.71	241,570	11	11
7248	28943	1.1	25 3	8.8	8.40	244,513	11	14
7249	1873	1.4	64 55	9	9.16	245,567	32	22
7250	28984	2.7	29 56	8	8.97	266,567	11	55
7251	28967	2.7	59 49	6.9	7.21	244,559	11	42
7252	28985	2.8	24 36	7.8	7.15	244,513	12	83
7253	28929	3.0	80 45	8	7.40	573,586,587	101	664
7254	28991	3.1	44 37	6.8	6.70	562,569	11	11
7255	28986	3.1	54 59	7.5	7.18	274,571	00	43
7256	28987	3.1	54 59	7.2				
7257	28922	3.4	82 37	8.2	8.13	586,587,588	221	414
7258	28995	4.0	70 32	5.5	5.04	253,260,262,	10R	555
						581,584	12	06
7259	29018	4.1	24 48	8.2	8.20	244,513	00	03
7260	29020	4.1	30 8	6.9	6.52	266,567	01	17
7261	28938	4.2	83 37	8	7.35	245,573,586	110	464
7262	64	4.9	74 49	9	9.21	570,571	00	22
7263	106	5.0	45 0	8.5	8.60	562,569	22	14
7264	29048	5.8	40 40	6.1	5.76	253,260,262,	214	221
						581,584	31	21
7265	29058	6.1	31 0	8	7.15	253,260,262,	321	22n
						580,581,584	310	244
7266	29067	6.5	50 12	8	8.00	274,570	00	30
7267	29075	6.6	39 50	5.7	5.24	235,253,262,	300	341
						581,584	42	04
7268	29066	6.8	60 7	7.5	7.67	244,559,624,	222	022
						627,629	12	12
7269	163	7.1	34 54	10	9.38	513,559	22	44
7270	29084	7.1	36 50	6.2	6.04	253,260,262,	011	202
						580,581,584,	110	021
						588	2	2
7271	29080	7.2	59 44	7.8	7.74	244,560	01	35
7272	29094	7.6	44 54	10	7.80	562,569	00	27
7273	29096	7.7	44 54	8				
7274	29111	8.0	30 5	7.2	7.67	266,567	11	35
7275	29062	8.3	80 32	7.5	7.63	573,574,586	120	224
7276	29115	8.5	44 57	8	8.15	562,569	00	03
7277	29117	8.6	53 41	6.0	5.80	253,260,262,	211	121
						580,581,584,	111	200
						588	0	2
7278	29124	8.9	44 54	8.2	8.95	562,569	22	52
7279	29137	9.2	39 52	8.5	8.38	235,569	22	44
7280	29135	9.2	39 53	8.8				
7281	232	9.3	49 46	8.5	8.40	274,570	22	12
7282	240	9.5	49 51	9	9.40	274,570	00	14
7283	29136	9.7	65 6	6.7	6.26	245,571	10	44

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
7284	29060	10.5	85 14	6.9	6.50	573,574,586	110	53p							624	1	4
7285	29165	11.3	74 45	9.5	9.66	570,571	01	52	7321	29327	18.5	24 51	6.8	6.80	244,513	22	22
7286	29200	11.9	32 36	4.9	4.84	253,260,262,	022	467	7322	29331	19.1	55 6	6.3	6.19	253,260,262,	211	010
						580,581,584,	212	827							580,581,584,	000	222
						588,627	22	pp							624	2	2
7287	29206	12.1	29 56	8.5	8.72	266,567	01	52	7323	29300	19.6	82 22	8	7.65	573,574,586	111	464
7288	313	12.1	44 45	9.5	9.45	562,569	02	22	7324	29336	19.8	69 57	5.9	5.42	253,260,262,	450	354
7289	29207	12.3	50 2	7.3	7.36	274,570	21	11							580,581,584,	111	428
7290	29205	12.4	54 59	7.8	8.24	274,571	21	20							624	1	2
7291	29211	12.5	49 49	7.5	7.78	274,570,571	111	121	7325	29358	20.2	38 16	6.0	5.70	253,260,262,	112	310
7292	29170	12.5	81 7	8	8.13	573,574,586	010	111							580,581,584,	132	113
7293	29216	12.7	53 52	4.8	4.56	253,260,262,	201	298							624	3	1
						580,581,584,	101	808	7326	29316	20.2	80 29	6.5	6.70	573,574,586	000	232
						588	1	8 ·	7327	587	20.3	24 49	8.8	9.00	513,562	00	20
7294	29212	12.8	59 39	7.8	8.31	244,559	22	32	7328	29366	20.3	24 55	7.3	7.10	244,513	11	21
7295	343	13.0	39 46	8	7.48	569,570	11	55	7329	573	20.3	59 48	8	7.87	244,559,624,	531	141
7296	354	13.3	39 54	9	9.08	569,570	00	11							627,629	11	11
7297	29232	13.6	45 27	6.0	6.07	253,260,262,	120	011	7330	594	20.5	24 55	9	8.90	244,513	11	11
						580,581,584,	111	111	7331	29368	20.6	42 59	6	5.56	253,260,262,	411	342
						624	1	1							580,581,584,	002	004
7298	348	13.6	64 50	8	7.56	245,571	32	46							624	0	0
7299	374	13.9	35 1	8	8.38	513,559,624,	241	222	7332	29387	21.6	44 53	8.5	8.35	562,569	22	22
						627,629	21	22	7333	627	21.7	44 49	8.8	9.35	562,569	20	44
7300	378	14.0	34 46	9	8.33	513,559	01	21	7334	29435	23.7	59 51	7.5	7.81	244,559	00	23
7301	379	14.1	29 47	8.3	8.27	266,567	00	11	7335	29427	23.9	69 56	7.5	7.41	534,571	22	43
7302	383	14.1	29 58	9	9.47	266,567	00	53	7336	695	24.0	49 56	9	8.86	274,570	10	11
7303	393	14.3	29 58	9.5	9.72	266,567	01	22	7337	677	24.2	69 54	9	9.26	534,571	01	33
7304	29248	14.4	41 14	4.8	5.01	253,260,262,	211	545	7338	29468	24.6	24 52	8.5	8.25	244,513	12	30
						580,581,584,	003	466	7339	29461	24.9	64 36	7.8	6.96	245,571	32	75
						624	1	2	7340	29475	25.5	60 9	7.5	7.61	244,559	11	21
7305	29252	15.2	70 10	6.8	6.51	534,571	11	35	7341	29484	25.8	24 53	8.8	9.15	244,513	10	20
7306	29210	15.3	83 28	7.1	7.11	573,574,586	112	411	7342	29482	25.8	41 38	5.7	5.36	253,260,262,	321	344
7307	29187	15.5	85 24	9	9.17	573,574,586	302	020							580,581,584,	000	544
7308	29234	15.6	80 22	7.8	7.39	573,574,586	230	611							624	0	0
7309	29281	15.9	29 36	6.7	6.65	266,567	01	44	7343	29490	26.2	34 24	6.1	6.22	253,260,262,	623	112
7310	29235	16.6	83 7	6.8	R	573,574,586	RRR	RRR							580,581,584,	311	022
7311	29294	16.7	29 52	7.3	7.63	266,567,624,	224	644							624	3	2
						627,629	10	66	7344	29492	26.5	34 48	8.5	8.53	513,559	12	00
7312	459	16.8	69 51	9	9.21	534,571	22	22	7345	29467	26.5	79 54	6.5	6.41	573,574	22	14
7313	29222	17.0	85 15	9.2	9.47	573,574,586	111	333	7346	783	26.6	35 2	9	9.13	513,559	23	11
7314	488	17.1	25 0	9	9.05	244,513	12	20	7347	29497	26.8	24 36	8	8.10	244,513	11	41
7315	482	17.2	55 1	8.5	9.04	274,571	21	02	7348	29496	26.8	25 2	6.5	6.48	244,513,580,	245	653
7316	494	17.3	29 59	9.5	9.62	266,567	10	46							581,584	22	52
7317	29303	17.4	40 13	7.8	7.52	569,570	10	53	7349	29495	26.9	45 18	6.0	5.57	253,260,262,	501	441
7318	29257	17.6	83 7	6.7	6.47	573,574,586	111	535							580,581,584,	000	424
7319	29314	18.0	41 26	6.1	5.87	253,260,262,	130	020							624	0	2
						580,581,584,	212	111	7350	794	27.2	39 52	9	9.38	569,570	11	64
						624	0	1	7351	29517	27.9	29 55	8.2	8.52	266,567	01	50
7320	29309	18.2	65 50	4.5	4.17	253,260,262,	125	2pp	7352	814	28.1	55 1	8.5	8.88	274,571	00	14
						580,581,584,	110	288	7353	834	28.3	24 56	9.3	9.45	244,562	12	12

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7354	29516	28.3	60 9	8	7.91	244,559	*22*	*11*
7355	*833*	28.5	39 58	8.5	8.58	569,570	00	*12*
7356	29433	28.5	86 18	8	7.82	573,574,586	1*10*	424
7357	29431	28.5	86 18	9				
7358	29535	29.0	30 8	6.4	6.67	266,567,580	*2*02	*122*
7359	29539	29.2	34 46	6.8	6.88	513,559,580,	*4*30	*446*
						581,584	01	*74*
7360	*825*	29.3	74 55	8.5	8.51	570,571	00	*30*
7361	29530	29.5	70 4	6.9	6.91	534,571	*11*	*14*
7362	29552	30.0	65 16	6.3	6.28	253,260,580,	*2*02	*133*
						581,584,624,	*111*	*133*
						627	*2*	*1*
7363	*872*	30.1	54 55	9	9.28	274,571	00	*35*
7364	*878*	30.2	54 55	9.5				
7365	29507	30.2	83 14	10	F	573,574,586	FFF	RRR
7366	29533	30.4	77 50	3.8	3.73	253,260,262,	*132*	2p5
						580,581,584,	101	333
						624	0	3
7367	29580	30.8	33 29	6.2	6.11	253,260,580,	*2*32	0*11*
						581,584,624,	002	*311*
						627	3	*3*
7368	29602	31.8	24 54	8.5	7.88	244,562,624,	221	111
						627,629	*11*	11
7369	*926*	32.1	69 49	9	8.86	534,571	*12*	*24*
7370	*942*	32.3	39 45	9	9.18	569,570	*11*	*22*
7371	*944*	32.3	39 52	9.5	9.42	569,570	10	*24*
7372	*961*	32.8	34 47	9.2	9.43	513,559	*23*	*44*
7373	29619	32.9	39 58	7.8	7.82	569,570	*21*	47
7374	29623	33.1	45 2	8	7.95	562,569	00	00
7375	29562	33.1	84 25	8.2	7.65	573,574,586	12*1*	644
7376	29631	33.2	24 54	7.8	7.60	244,562	00	*21*
7377	29636	33.6	29 55	9.8	9.17	266,567	00	*24*
7378	29637	33.6	29 55	9				
7379	29640	33.9	44 51	8.8	9.10	562,569	*11*	*33*
7380	29568	34.3	85 29	7.0	6.74	573,574,586	001	338
7381	29651	34.4	34 59	6.8	6.58	513,559	*22*	*42*
7382	*1020*	34.6	29 58	10	10.12	266,567	10	*36*
7383	29605	34.6	82 53	7.3	7.03	573,574,586	0*2*1	528
7384	29661	34.9	34 58	8	8.35	513,559,624,	R*11*	4*22*
						627,629	01	11
7385	*1047*	35.4	24 53	9.2	9.20	244,562	00	0*4*
7386	29624	35.6	83 10	5.7	5.41	260,569,573,	R0*1*	665
						574,580,581,	111	564
						584	*2*	3
7387	29688	36.2	25 6	8	8.25	244,562	*12*	*20*
7388	*1068*	36.5	49 59	9.5	9.76	274,570	0*1*	*33*
7389	29670	36.7	71 28	6.2	6.13	253,260,580,	*121*	0*11*
						581,584,624,	*1*11	*1*11
						627	0	*3*
7390	*1093*	36.9	39 53	10	9.92	569,570	10	*44*

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7391	29042	36.9	89 19	6.7	6.61	244,262,580,	100	*312*
						581,584	00	*1*.
7392	29700	37.0	54 57	7.1	7.18	274,571	*22*	*32*
7393	*1070*	37.0	69 47	9.5	9.71	534,571	*22*	*22*
7394	*1081*	37.2	69 49	8.5	8.11	534,571	*11*	11
7395	*1087*	37.3	69 56	9	9.26	534,571	0*1*	*53*
7396	29716	37.6	24 36	7.3	7.25	244,562	01	*12*
7397	*1123*	37.7	39 50	8.8	9.12	569,570	10	*11*
7398	*1149*	38.3	24 58	9	9.15	244,562	*2*1	0*2*
7399	*1150*	38.5	44 56	9.5	10.20	562,569	00	*77*
7400	29677	38.5	83 7	8.8	8.97	573,574,586	*2*10	020
7401	29731	38.7	49 57	6.6	6.56	274,570	*2*1	*11*
7402	*1107*	38.8	80 0	8.5	8.56	573,574	0*1*	*11*
7403	29737	39.0	33 29	4.4	4.41	253,260,580,	*3*12	24*4*
						581,584,624,	100	646
						627	1	p
7404	*1196*	40.2	39 43	8.5	8.88	569,570	00	*41*
7405	*1199*	40.4	54 47	9	9.24	274,571	*12*	*2*3
7406	*1217*	41.0	59 49	9.2	9.11	244,559	*22*	*11*
7407	*1221*	41.1	60 0	8.5	8.66	244,559	*1*0	*2*0
7408	*1228*	41.4	50 3	8.5	8.46	274,570	*3*2	33
7409	29787	41.6	39 58	8	7.52	569,570	01	53
7410	29785	41.7	47 45	5.8	5.69	253,260,580,	*211*	211
						581,584,624,	*111*	111
						627	1	3
7411	29795	41.9	31 22	5.2	5.25	253,260,580,	*2*31	343
						581,584	12	*2*5
7412	29794	42.3	65 10	6.0	5.63	245,253,260,	*212*	32*1*
						580,581,584,	012	302
						624	*1*	2
7413	29790	42.4	70 6	5.7	5.55	253,260,580,	*2*31	423
						581,584	*11*	42
7414	*1286*	42.6	39 57	10	9.68	569,570	*11*	*22*
7415	*1296*	42.9	29 44	9.5	9.82	266,567	*21*	*38*
7416	29830	43.1	24 55	8.8	9.00	244,562	*22*	0*5*
7417	29829	43.1	29 50	8	8.62	266,567	*21*	*14*
7418	29832	43.5	54 52	9	9.18	274,571	*11*	*22*
7419	29833	43.5	54 52	9.5				
7420	29834	43.6	60 6	8	7.71	244,559	*11*	*52*
7421	*1304*	43.9	69 56	8.5	8.61	534,571	*22*	*2*1
7422	29629	44.2	88 17	9	9.01	573,574,586	*2*20	200
7423	29850	44.4	59 53	8.5	8.66	244,559	*43*	*22*
7424	29867	45.0	55 7	7.5	7.24	274,571	*23*	*2*0
7425	29847	45.5	80 11	7.5	7.45	573,574,586	1*2*2	413
7426	29892	46.0	50 3	7.8	7.70	274,570	*11*	31
7427	*1403*	46.5	24 52	9.3	9.35	244,562	*1*0	*24*
7428	*1401*	46.6	44 47	9.5	9.75	562,569	00	*33*
7429	*1419*	47.1	39 44	10	10.18	569,570	00	*57*
7430	29917	47.1	55 2	9	9.24	274,571	*12*	*22*
7431	*1426*	47.5	54 52	9.5	9.17	274,571,629	ANN	1NN

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S. M. P.	Design.	R. A. 1900.	S. Dec 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7432	29935	47.9	37 50	3.0	3.20	253,260,580,	101	828
						581,584,624,	101	37p
						627	1	6
7433	29823	48.7	86 58	8.5	8.14	573,574,586	130	447
7434	29953	49.2	59 49	8.5	8.46	244,559	32	33
7435	*1476*	49.3	54 48	9	9.57	274,571,624,	R01	666
						627,629	02	66
7436	*1491*	49.4	34 47	9.5	10.18	559,562	00	77
7437	29965	49.5	34 59	9	9.13	559,562	21	11
7438	*1460*	49.5	74 55	9	8.81	570,571	11	00
7439	*1503*	49.7	34 52	9.5	9.83	559,562	10	33
7440	29980	49.9	39 47	8	7.78	569,570	22	42
7441	29967	49.9	59 57	7.8	8.06	244,559	10	11
7442	29989	50.4	37 44	5.8	5.67	253,260,580,	311	313
						581,584,624,	210	111
						627	1	1
7443	*1532*	50.6	29 49	9	9.37	266,567	00	14
7444	29990	50.6	50 10	7	7.55	274,571	32	66
7445	29991	50.7	44 47	8.5	8.66	295,569	01	11
7446	*1540*	50.9	44 44	9.2	9.70	295,569,624,	R13	772
						627,629	11	55
7447	30004	51.0	38 13	6.8	6.22	253,260,580,	104	223
						581,584,624,	111	036
						627	1	4
7448	29999	51.1	55 28	4.8	4.51	253,260,580,	230	3p7
						581,584	11	53
7449	30039	52.7	60 3	8.8	8.21	244,584	22	23
7450	*1582*	52.8	74 59	8.5	8.41	570,571	00	13
7451	30054	53.2	38 52	5.8	5.47	253,260,580,	321	352
						581,584,624,	012	025
						627	0	3
7452	30034	53.2	76 36	6.2	5.93	253,260,580,	201	210
						581,584,624,	111	313
						627	1	1
7453	30072	53.7	24 57	8.5	8.75	252,562	32	03
7454	*1616*	53.8	74 56	9	8.81	570,571	11	00
7455	*1656*	54.0	35 2	8	8.43	559,562	01	21
7456	30089	54.6	44 57	9.2	9.36	295,569	22	44
7457	*1664*	54.7	64 49	9.5	9.22	245,571	33	33
7458	30095	55.0	54 38	7.2	7.99	274,571,624,	233	555
						627,629	02	80
7459	*1691*	55.2	44 46	9.5	9.34	295,569,624,	513	353
7460	*1693*	55.2	44 45	9				
						627,629	13	13
7461	30045	55.2	83 51	8	7.41	573,574,586	211	168
7462	*1701*	55.5	54 58	9	9.08	274,571	00	11
7463	30105	55.7	57 11	5.2	4.79	253,260,580,	010	982
						581,584,624,	120	328
						627	2	2
7464	30121	56.2	34 52	8	7.68	559,562	11	52
7465	30123	56.5	44 52	9.2	9.60	295,569,624,	402	664
						627,629	00	44
7466	*1742*	56.7	49 49	9.5	9.70	274,571	11	22
7467	*1752*	57.1	59 44	9	9.21	244,559	33	24
7468	30136	57.1	65 13	7.5	7.26	245,571	32	21
7469	30162	57.9	29 50	7.3	7.55	266,567,624,	220	661
						627,629	10	16
7470	30176	58.9	60 7	6.0	5.60	244,253,260,	122	343
						580,581,584,	200	442
						624	1	2
7471	*1814*	59.6	70 2	9.5	9.73	571,572	32	25
7472	30198	59.7	50 10	7.8	8.05	274,571	12	22
7473	30200	59.9	45 2	8	7.72	295,569	11	31
7474	30209	0.1	40 2	4.7	4.52	260,264,580,	242	703
						581,584,624,	021	557
						627	2	5
7475	30210	0.2	34 53	8.2	8.68	559,562	11	15
7476	*1843*	0.3	69 46	9.5	9.43	571,572	32	22
7477	30213	0.8	59 48	7	7.01	244,559	11	30
7478	30230	1.1	30 7	8	8.07	266,567	11	11
7479	*1894*	1.5	59 59	8.5	8.51	244,559	11	40
7480	30234	1.8	59 47	7.5	7.87	274,559	11	11
7481	30241	1.9	47 27	1.9	1.92	260,264,576,	333	166
						580,581,584,	111	6p1
						624,627,629	111	491
7482	30246	2.0	24 53	8.5	8.10	562,572	00	11
7483	*26*	2.1	25 0	8.5	8.40	562,572	11	11
7484	*30*	2.2	29 59	9	9.22	266,567	21	00
7485	30257	2.5	35 3	7.1	6.98	559,572	11	02
7486	30260	2.6	33 29	4.7	4.64	260,264,562,	211	9p9
						576,580,581,	201	94p
						584,624	31	22
7487	30261	2.6	34 32	5.4	4.97	260,264,576,	432	676
						580,581,584,	001	n44
						624	3	2
7488	30265	2.7	39 57	8.5	8.18	562,572	11	03
7489	*74*	3.6	29 44	10	10.22	266,567	10	27
7490	30290	4.1	34 31	5.7	5.51	260,264,576,	122	232
						580,581,584,	311	002
						624	0	1
7491	30294	4.3	33 3	5.3	4.95	260,264,576,	211	382
						580,581,584,	101	070
						624	0	6
7492	*59*	4.5	79 51	9	9.56	573,574	12	46
7493	30307	5.0	40 2	8.5	7.93	562,572	21	11
7494	30305	5.2	65 6	8	8.17	569,571	01	00
7495	*118*	5.4	64 53	9	9.22	569,571	00	22
7496	30325	5.8	34 58	6.8	6.63	559,572	10	24
7497	*126*	5.8	64 44	9	10.12	569,571	00	66
7498	30336	6.1	30 2	8.8	9.17	266,567	00	24

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7499	30327	6.1	54 47	7.8	7.88	274,571	00	11
7500	30340	6.7	49 33	7.8	7.56	274,570	01	12
7501	30360	7.4	30 2	8.5	9.07	266,567	00	13
7502	189	7.7	59 48	8.5	8.72	274,559	10	22
7503	30350	8.1	78 1	5.9	5.63	260,264,576,	220	324
						580,581,584,	011	324
						624	0	4
7504	227	8.8	29 54	9	9.07	266,567	00	13
7505	30358	8.8	80 57	5.6	5.16	264,274,576,	131	746
						580,581,584,	200	786
						624	0	0
7506	226	9.1	54 44	8	8.88	274,571	11	17
7507	30393	9.4	44 57	6.4	6.13	295,572,580	111	241
7508	233	9.4	59 44	8.5	9.02	274,559	12	52
7509	30395	9.6	41 51	5.0	4.86	260,264,283,	131	663
						576,580,581,	111	486
						584	3	3
7510	30372	9.6	81 3	10.5	F	573,574,591	NFF	NRR
7511	30373	9.6	80 57	9	8.97	573,574,591	001	220
7512	30376	9.7	80 58	9.2				
7513	30381	9.9	79 48	8.5	8.41	573,574	11	11
7514	257	10.1	49 44	9.5	9.46	274,570	10	03
7515	30402	10.2	44 52	8.2	9.04	295,572,624,	302	200
						627,629	02	00
7516	30404	10.3	44 55	9	9.46	295,572	11	33
7517	30405	10.4	42 8	5.4	5.16	260,264,283,	221	454
						576,580,581,	200	433
						584	0	3
7518	30408	10.7	54 50	7.4	7.28	274,571	00	53
7519	295	10.8	29 51	9.5	9.97	266,567	11	8n
7520	248	10.9	79 46	9.5	9.41	573,574	11	22
7521	297	11.1	60 0	8.5	9.22	274,559	01	40
7522	30417	11.2	29 50	9	9.42	266,567	10	24
7523	30418	11.3	34 43	8	7.93	559,572	10	63
7524	30422	11.6	60 46	2.8	2.90	260,266,576,	131	116
						580,581,584,	121	146
						624	0	6
7525	30425	11.7	54 7	5.7	5.44	260,266,580,	551	144
						581,584,624,	211	246
						627	2	4
7526	30400	12.2	84 2	7.8	8.08	573,574,576	101	111
7527	30446	12.5	29 50	9.8	10.12	266,567	01	66
7528	30442	12.6	59 48	8	8.42	274,559	12	47
7529	30380	12.6	86 29	6.4	5.69	266,283,576,	111	215
						580,581,584,	100	533
						624	1	1
7530	30450	12.8	40 4	8	8.08	562,629	11	11
7531	30457	13.0	29 49	9.2	9.87	266,567	33	44
7532	30448	13.9	79 43	9	8.96	573,574	01	22
7533	30468	14.0	58 1	6.8	6.31	260,266,576,	031	325

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						580,581,584,	210	012
						624	2	2
7534	30477	14.1	44 51	8.5	9.06	295,572,624,	311	133
						627,629	11	33
7535	30497	15.0	35 1	7.0	6.78	559,572	00	22
7536	30500	16.0	72 44	5.7	5.44	260,266,576,	230	215
						580,581,584,	221	242
						624	1	1
7537	30514	16.2	35 1	7.1	7.33	559,572	12	49
7538	30516	16.3	34 59	7.5	7.18	559,572	00	5p
7539	30534	16.9	46 25	5.9	5.81	266,283,576,	322	121
						580,581,584,	222	200
						624	0	2
7540	30520	17.1	75 31	6.5	6.07	260,266,576,	200	122
						580,581,584,	110	111
						624	1	1
7541	30532	17.4	70 56	6.0	5.94	266,283,576,	411	110
						580,581,584,	222	110
						624	0	1
7542	30554	17.9	34 51	9.5	9.68	559,572	11	22
7543	30557	18.3	58 17	5.7	5.40	266,283,576,	120	515
						576,581,584	311	124
7544	30570	18.7	39 38	7.2	7.08	562,572	11	11
7545	527	18.8	34 52	9	9.18	559,572,624,	432	222
						627,629	12	22
7546	30578	19.1	44 55	8.5	8.46	295,572	11	00
7547	542	19.2	34 49	9.2	9.43	559,572	01	41
7548	550	19.5	39 43	8.8	8.83	562,572	10	00
7549	30589	19.6	39 59	9	9.33	562,572	10	31
7550	30594	20.2	65 28	4.8	4.74	266,283,576,	611	373
						580,581,584,	100	383
						624	3	3
7551	30605	20.5	29 35	8	7.95	567,569	21	00
7552	30609	20.7	24 56	8.8	8.80	562,572	11	22
7553	30614	21.2	49 51	7.3	7.56	274,570	21	11
7554	588	21.3	64 47	8	8.42	569,571	00	22
7555	30611	21.3	67 59	5.9	5.69	266,283,576,	100	210
						581,584	11	11
7556	30623	21.5	34 48	9	9.03	559,572	10	00
7557	599	21.8	69 56	8.5	7.84	562,571	01	47
7558	30635	22.4	39 36	7.5	7.43	562,572	10	86
7559	30633	22.4	59 44	8.5	8.82	274,559	01	33
7560	625	22.6	69 47	9	8.94	562,571	12	11
7561	30641	22.8	39 38	5.8	5.46	266,283,576,	200	153
						581,584	21	11
7562	645	23.2	49 56	9.5	9.70	274,570	11	22
7563	30647	23.3	44 0	4.2	4.07	266,283,576,	211	351
						580,581,584,	111	316
						624	1	1
7564	30657	23.8	44 15	4.4	4.26	266,283,576	111	332

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.	S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′								m.	° ′					
7565	30676	24.7	44 36	7.5	7.02	295,572	10	02	7611	30895	35.7	24 45	8.5	8.65	562,572	10	12
7566	30671	24.7	69 37	7.0	7.18	562,571	22	23	7612	30879	35.9	81 54	4.4	4.35	283,311,579,	000	p42
7567	*698*	24.9	44 44	9	9.52	295,572	01	53							591,624,627,	220	620
7568	30679	24.9	49 56	6.8	6.93	274,570,624,	222	p31							629	0	2
						627,629	01	11	7613	30900	36.0	39 59	9	9.03	562,572	01	00
7569	*704*	25.2	49 56	9.5	9.36	274,570	32	11	7614	30911	36.6	34 48	8	8.18	559,624	11	22
7570	*700*	25.2	59 45	9.5	9.57	274,559	33	14	7615	30913	36.7	47 24	2.2	2.09	253,266,283,	303	314
7571	*717*	25.5	29 48	9	9.32	567,569	10	13							311,579,624,	121	p41
7572	30704	25.8	32 51	4.8	4.48	266,283,576	220	511							627,629	13	19
7573	30709	26.2	62 29	5.5	4.80	266,283,576	110	p44	7616	30917	36.8	29 53	6.5	6.24	567,569,579	101	880
7574	*740*	26.3	55 0	9.5	10.18	274,571	11	77	7617	30916	36.9	44 46	6.4	6.26	295,572,579	011	122
7575	30693	27.1	83 20	7.5	8.02	574,576,591	022	020	7618	*1077*	37.1	69 49	9	9.38	562,571	00	42
7576	30701	27.6	83 46	6.9	6.72	573,574,576	201	583	7619	30930	37.7	41 56	5.2	4.83	253,266,311	111	8pp
7577	30752	27.9	30 10	7	7.42	567,569	01	21	7620	30935	37.8	35 1	8	8.42	559,624	10	42
7578	30748	27.9	45 12	6.9	6.96	295,572	00	22	7621	*1118*	38.0	24 54	8.5	9.10	562,572	11	61
7579	30745	28.0	54 48	7.2	7.58	274,571	00	44	7622	30903	38.3	84 55	10	F	573,574,576	FFF	RRR
7580	*813*	28.7	24 50	8.2	8.65	562,572	01	11	7623	30905	38.4	84 57	10	F	573,574,576	FFF	RRR
7581	30769	28.7	35 11	7.0	6.92	559,624	10	13	7624	30908	38.5	84 47	10	F	573,574,576	FFF	RRR
7582	30781	29.2	34 54	9	9.28	559,624	22	55	7625	30959	38.8	25 0	9.5	9.95	562,572	10	55
7583	30779	29.4	58 24	6.2	6.15	266,283,311,	0T2	223	7626	30907	39.0	85 56	10	F	573,574,576	FFF	RRR
						576	0	2	7627	30968	39.5	54 1	5.1	4.87	253,266,283,	022	781
7584	30788	29.8	55 7	7.5	7.78	274,571	22	33							311,579,624,	312	8p3
7585	30787	29.9	64 54	8	7.82	569,571	11	33							627	2	7
7586	30632	30.2	88 24	9.2	9.08	574,591,592	001	1.1	7628	30974	39.8	47 4	5.9	5.33	253,266,311	120	865
7587	30796	30.6	69 48	8.2	8.44	562,571	21	21	7629	30969	39.8	70 3	8	7.84	562,571	01	22
7588	30805	30.7	41 6	6.4	6.12	266,283,311	111	134	7630	30925	39.8	85 24	10.5	9.78	573,574,576	212	321
7589	30810	31.0	32 11	6.1	5.48	266,283,311	330	024	7631	30990	40.4	54 53	9.5	9.48	274,571	11	05
7590	30814	31.2	41 6	6.0	5.65	266,283,311	121	311	7632	30992	40.5	50 12	6.5	6.50	569,570,579	100	033
7591	30819	31.4	45 11	8	8.12	295,572	01	11	7633	30983	40.5	70 0	6.8	6.98	562,571	00	50
7592	*904*	31.7	69 52	9	9.38	562,571	00	44	7634	*1200*	40.8	40 0	9.2	9.63	562,572	12	64
7593	30833	32.1	29 34	8	7.85	567,569	01	24	7635	31002	40.9	44 48	9	9.40	295,572,624,	402	444
7594	30836	32.3	33 59	7.2	7.57	567	A	n							627,629	22	44
7595	*943*	32.5	34 48	9.5	9.72	559,624	12	22	7636	31001	40.9	54 56	8.2	8.38	274,571	22	22
7596	30855	33.2	33 36	5.9	5.48	253,266,311	022	555	7637	30980	41.0	80 39	5.7	5.47	283,311,567,	010	013
7597	30852	33.2	39 40	6.9	7.04	562,572,624,	231	552							579,591,593,	101	531
						627,629	01	50							624	0	3
7598	30816	33.2	84 16	8.2	7.83	573,574,576	112	443	7638	*1207*	41.2	54 50	8.7	8.94	274,571	23	11
7599	*972*	33.4	39 43	9	9.28	562,572	00	21	7639	*1185*	41.4	79 43	9.5	9.44	576,593	01	12
7600	*981*	33.7	64 55	9.5	9.67	569,571	01	57	7640	31018	41.5	39 59	8.2	7.93	562,572	01	33
7601	30865	34.0	50 7	7.5	7.30	274,570	11	22	7641	31016	41.6	55 1	8.2	8.34	274,571	01	01
7602	30875	34.4	57 56	6.1	5.83	253,266,311	130	235	7642	31024	41.7	34 41	6.5	6.54	559,579,624	002	013
7603	*1016*	34.6	29 50	8.5	8.62	567,569	01	12	7643	*1238*	42.2	64 59	8.5	8.62	569,571	00	14
7604	*1001*	34.6	69 49	8.5	8.98	562,571	00	20	7644	31039	42.3	44 47	9.2	9.78	295,572,624,	220	366
7605	*1027*	34.9	39 48	10	9.88	562,572	11	44							627,629	00	66
7606	*1030*	35.0	45 1	9	9.06	295,572,624,	313	161	7645	31044	42.5	51 50	3.5	3.69	253,266,283,	111	511
						627,629	11	13							311,579,624,	302	732
7607	30888	35.1	30 11	8	7.62	567,569	10	44							627	1	3
7608	*1038*	35.3	39 49	9.5	9.43	562,572	21	12	7646	*1258*	42.6	45 2	8.5	8.94	295,572,624,	231	141
7609	30848	35.4	85 28	10	F	573,574,576	FFF	RRR							627,629	11	14
7610	*1044*	35.6	39 52	9	9.08	562,572	00	11	7647	31045	42.6	54 53	9	9.28	274,571	11	31

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7648	*1278*	43.3	34 51	10	9.82	559,624	23	33
7649	31067	43.7	29 43	8.5	8.52	567,569	01	33
7650	*1290*	43.8	49 46	9.2	9.48	569,570	01	35
7651	*1303*	43.9	34 53	9	9.58	559,624	22	41
7652	*1291*	43.9	60 0	9	9.27	274,559	33	33
7653	31023	44.0	85 39	10.2	9.98	573,574,576	010	343
7654	31075	44.1	44 57	8.5	8.12	295,572,624,	213	111
						627,629	11	13
7655	31074	44.2	60 3	7.3	7.47	274,559	11	30
7656	*1309*	44.3	59 57	9	9.37	274,559	33	44
7657	31086	44.9	59 38	7	7.17	274,559	33	02
7658	31092	45.1	59 53	8.5	8.12	274,559	01	14
7659	*1339*	45.3	29 50	9.5	9.52	567,569	10	32
7660	31099	45.3	39 41	5.8	5.38	253,266,311	110	452
7661	31097	45.5	65 2	8.2	8.47	569,571	12	03
7662	31100	45.6	63 43	6.2	5.99	253,266,311	111	000
7663	31105	45.9	30 4	6.4	6.17	567,569,579	110	333
7664	31096	46.1	80 15	8	8.35	576,591,592	120	242
7665	*1346*	46.4	79 58	9	9.19	576,593	11	24
7666	31118	46.6	35 10	8	7.83	559,572	10	33
7667	31120	46.7	39 50	7.8	8.13	562,572	01	14
7668	31123	47.0	33 24	4.6	4.63	253,266,311,	233	661
						579,624,627,	030	062
						629,629	01	21
7669	31125	47.2	29 43	8	7.77	567,569	11	47
7670	31079	47.5	86 54	9	9.22	574,590,591,	23F	233
						592	F	5
7671	31127	47.7	70 36	6.2	6.27	266,283,311	010	310
7672	31137	47.8	39 57	7.2	7.33	562,572	12	27
7673	31138	48.2	69 38	8	7.48	562,571	00	55
7674	31156	49.2	29 51	9	9.42	567,569	12	42
7675	31153	49.2	64 54	8.8	9.37	569,571	01	44
7676	31162	49.5	49 0	7	6.85	253,266,283	112	302
7677	31161	49.5	49 2	6.8	6.52	253,266,283	230	311
7678	31171	49.9	30 9	8	8.57	567,569	11	14
7679	*1443*	49.9	69 59	9	9.08	562,571	11	11
7680	31184	50.4	33 4	4.5	4.08	253,266,311,	232	p14
						576	1	1
7681	31196	51.0	48 30	6.1	5.97	253,266,283	221	201
7682	*1473*	51.0	69 59	8.5	8.78	562,571	22	00
7683	31204	51.8	59 37	6.7	6.72	274,559	23	21
7684	31213	52.1	30 9	1.4	1.27	253,266,283,	223	212
						311,576,579,	310	152
						624,627,629	110	232
7685	31201	52.4	83 14	7.8	7.78	573,574,576	221	020
7686	31195	52.7	85 4	10	9.17	573,574,576	200	333
7687	31197	52.8	85 4	9.8				
7688	31228	53.0	64 43	8	8.22	569,571	00	00
7689	31233	53.2	49 42	9	9.62	569,570	11	66
7690	31129	53.9	88 30	8.8	8.48	574,576,591,	122	503

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
						592	2	5
7691	31247	54.2	30 0	5.9	5.58	253,266,311	022	333
7692	31262	55.0	49 59	7	7.22	569,570	00	22
7693	31263	55.0	53 17	4.0	4.13	253,266,283,	113	121
						311,579,624,	121	311
						627	1	9
7694	*1582*	55.1	49 56	9.5	9.92	569,570	11	44
7695	31273	55.3	51 29	5.9	5.58	253,266,283	110	431
7696	31286	55.9	64 50	7.8	7.62	569,571	00	44
7697	*1603*	56.0	60 0	9	8.97	274,559	33	50
7698	*1624*	56.4	44 49	8.5	9.18	295,572,624,	304	444
						627,629	20	44
7699	31296	56.6	29 47	8.5	9.17	567,569	00	22
7700	*1651*	57.3	34 54	9.5	9.53	559,572	01	25
7701	31281	57.4	85 25	10	F	573,574,576	FFF	RRR
7702	31327	58.0	35 17	5.3	5.05	253,266,311	110	906
7703	31328	58.3	69 22	5.8	5.54	253,266,283	210	424
7704	31337	58.4	42 1	6.0	5.80	253,266,311	000	322
7705	31340	58.8	54 30	5.6	5.17	253,266,283	121	463
7706	*1720*	59.7	54 49	8.5	8.78	274,571	00	03
7707	31364	59.8	24 53	7	7.00	562,572	11	00
7708	31343	59.8	82 56	10	9.41	573,574,576	000	111
7709	31347	59.9	82 57	10.2				
7710	*1730*	0.0	49 46	9.5	9.72	569,570	00	22
7711	*1737*	0.1	24 51	9	9.20	562,572	00	02
7712	31360	0.2	80 1	6.3	6.10	576,590,591,	001	914
						598,600	00	11
7713	31373	0.4	39 58	8	8.03	562,570	01	00
7714	*1744*	0.8	49 46	9.5	9.68	569,570	10	22
7715	31380	1.2	44 4	4.2	4.40	253,266,311,	320	06p
						579,624,627,	122	641
						629	2	2
7716	31383	1.3	39 26	5.7	5.58	253,266,311	112	413
7717	31384	1.4	50 9	6.6	6.42	569,570	00	16
7718	31388	1.5	51 14	6.2	6.06	266,272,283,	153	534
						579,624,627,	112	111
						629	2	5
7719	31387	1.5	60 11	8	8.12	274,559	21	21
7720	31381	1.6	74 8	6.5	6.09	266,272,283	132	112
7721	31402	2.0	34 45	7.8	7.73	559,572	12	81
7722	31401	2.0	54 37	8	8.08	274,571	11	11
7723	31322	2.2	88 6	9.2	8.53	573,574,576	100	533
7724	31376	2.6	85 33	9.5	9.38	573,574,576	100	111
7725	31415	3.0	44 45	8.8	9.22	295,570	00	42
7726	31417	3.8	81 27	7.0	6.49	576,590,591	210	555
7727	*68*	4.2	54 42	9	9.64	274,571	21	16
7728	31430	4.2	59 55	7.2	7.47	274,559	22	07
7729	31413	4.3	84 56	10.2	9.84	573,574,576	220	121
7730	31437	4.4	43 24	6.1	5.89	266,272,311,	350	230
						579,624,627,	211	011

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
							629	*1*	1
7731	31441	4.6	41	8	6.2	6.02	266,272,311	010	0*45*
7732	31446	4.7	34	57	8.8	9.33	559,572	*12*	*35*
7733	31448	4.7	39	52	9.2	9.58	562,570	*11*	*44*
7734	31445	4.7	45	47	3.9	4.06	266,272,311,	03*1*	*166*
							579,624,627,	*111*	*161*
							629	*3*	*1*
7735	*93*	5.0	24	48	8.6	8.95	562,572	*21*	00
7736	31440	5.3	81	11	8.8	9.28	576,590,591	*212*	*135*
7737	31458	5.4	30	4	6.6	6.52	567,569	10	00
7738	31473	6.4	44	32	8	7.30	295,570,624,	R1*1*	p72
							627,629	*1*1	75
7739	31480	7.2	54	44	7.5	7.88	274,571	00	11
7740	31484	7.3	54	50	8.5	8.48	274,571	*22*	30
7741	31488	7.4	44	36	8.2	R	562	R	R
7742	31490	7.5	50	10	6.8	6.38	567,572	*12*	11
7743	31495	7.7	24	39	8	8.30	562,572	00	*11*
7744	31502	7.9	49	41	7.8	8.38	567,572	*1*0	*21*
7745	31494	8.3	81	4	8	8.15	576,590,591	00*2*	300
7746	31514	9.1	49	33	8	8.48	567,572	0*1*	*53*
7747	31524	9.4	39	43	8	8.23	562,570	01	*22*
7748	31523	9.4	41	39	6.1	5.73	266,272,311	010	52*1*
7749	31512	9.6	80	56	8.5	8.88	576,590,591	0*1*0	*214*
7750	31518	9.8	79	59	7.8	7.77	576,590,591	*1*10	247
7751	31522	10.0	80	58	7.5	8.25	576,590,591	001	*2*00
7752	31538	10.4	39	48	9.8	10.48	295,570	FA	7n
7753	31542	10.6	39	49	8	8.20	295,570,624,	*4*11	*2*00
							627,629	30	*22*
7754	31547	10.9	62	33	5.7	5.65	266,272,283,	03*3*	410
							579,624,627,	102	*164*
							629	0	1
7755	31549	11.1	45	2	6.2	5.84	266,272,283,	*241*	120
							311	1	0
7756	31556	11.5	69	55	8.5	9.08	562,571	*11*	*33*
7757	*285*	11.6	29	51	9.5	9.37	567,569	00	*22*
7758	31563	11.6	58	47	4.0	3.98	266,272,283,	*121*	055
							311,579,624,	*312*	002
							627	0	p
7759	31548	11.6	80	1	6.6	6.20	576,590,591,	011	p6p
							598,600	*10*	*22*
7760	31560	11.7	75	4	7.8	7.96	567,570	1*2*	*20*
7761	*291*	11.9	54	49	9.5	9.48	274,571	*33*	*23*
7762	31580	12.7	41	22	5.8	5.48	266,272,311	*121*	433
7763	31530	13.1	88	2	6.0	5.58	272,283,295,	*420*	633
							579,591,592	*322*	444
7764	31591	13.5	33	5	4.4	4.34	266,272,311,	*10*R	0*33*
							579,624,627,	031	7*3*5
							629	1	*3*
7765	31594	13.6	31	6	6.9	6.88	266,272	*11*	*56*
7766	*331*	13.6	39	46	9.5	9.64	295,570	10	*14*

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.		Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	°	′					
7767	31602	13.8	24	50	9	9.20	562,572	*22*	*42*
7768	31606	14.0	39	42	6.9	7.24	295,570	10	63
7769	*363*	14.5	55	1	9.5	9.59	274,571,624,	*5*31	*111*
							627,629	10	*44*
7770	*361*	14.7	69	49	9	8.88	562,571	00	*11*
7771	31630	15.2	50	51	6.2	5.98	266,272,283	*22*0	*11*0
7772	*375*	15.5	74	43	8.8	9.06	567,570	0*1*	*63*
7773	31575	15.9	88	8	10	9.80	573,574,576	000	*111*
7774	31650	16.4	44	45	9.5	9.16	295,570	*1*0	*24*
7775	31660	17.0	24	48	8.5	8.45	562,572	01	*4*4
7776	31663	17.1	49	54	8.8	9.02	567,572	*1*1	*55*
7777	31668	17.5	44	42	8.5	9.22	295,570	00	*24*
7778	31681	17.9	25	10	8	8.00	562,572	*11*	00
7779	31687	18.2	54	22	5.8	5.93	266,272,283	110	211
7780	31697	18.6	52	27	5.9	5.52	266,272,283	*21*0	345
7781	*475*	18.7	34	51	8.5	8.68	559,572	*1*1	*22*
7782	31672	19.2	86	16	7.8	7.60	590,591,592	11*2*	424
7783	31714	19.6	57	24	5.7	5.51	266,272,283,	*3*30	4*3*5
							311	2	3
7784	*512*	20.5	59	50	9.5	9.43	274,567,624	*2*31	11*2*
7785	31737	21.0	53	17	5.7	5.52	266,272,283	*2*12	323
7786	*537*	21.1	34	51	9	9.23	559,572	01	*22*
7787	31738	21.2	60	12	8	7.79	274,567,624,	*4*R2	422
							627,629	21	22
7788	31750	21.5	59	2	5.7	5.54	266,272,283	*2*11	42*3*
7789	31752	21.6	50	43	6.1	6.25	266,272,283	03*1*	*124*
7790	31762	22.2	25	2	8.5	8.65	562,572	01	*42*
7791	*563*	22.2	45	0	9	9.72	295,570	01	*75*
7792	31769	22.8	45	0	8.2	9.16	295,570	00	*24*
7793	31772	23.1	59	59	7.2	7.04	274,567,624,	*1*R1	272
							627,629	12	52
7794	31773	23.3	63	40	5.8	5.62	266,272,283	10*1*	42*2*
7795	*598*	23.4	55	2	9.5	9.84	274,571	01	*33*
7796	31780	23.6	45	3	6.5	6.56	295,570,579	10*2*	26*4*
7797	31781	23.6	54	44	9.5	9.98	274,571	00	*58*
7798	31782	23.7	55	3	6.7	6.54	274,571	10	00
7799	*623*	24.1	39	58	8.5	8.84	295,570	*21*	0*3*
7800	31797	24.8	74	41	8	8.20	567,570	*22*	*4*0
7801	31793	24.9	81	23	7.8	7.39	576,590,591	0*1*0	144
7802	31799	25.0	69	38	8	7.18	562,571	00	63
7803	31801	25.0	69	38	7				
7804	31815	25.4	24	45	7.2	7.60	562,572	00	*11*
7805	31814	25.5	64	56	8.2	7.85	567,571,624	*1*02	202
7806	*652*	25.7	69	54	9.5	9.58	562,571	*11*	*14*
7807	31826	26.0	45	24	6.2	5.83	266,272,311	*1*02	011
7808	31823	26.2	74	45	7.8	8.10	567,570	*11*	*11*
7809	*671*	26.3	24	48	9.5	9.60	562,572	00	*44*
7810	31833	26.4	59	34	7.2	7.87	274,567,627,	*353*	131
							629	1	1
7811	*679*	26.5	45	0	9	9.46	295,570	*11*	*20*

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S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn. Cat.	Magn. S. M. P.	Julian Day.	Resid. Phot.	Resid. Est.
		m.	° ′					
7812	*681*	26.6	44 46	9.5	10.02	295,570	12	35
7813	*690*	26.9	49 46	9.5	9.32	567,572	00	31
7814	31840	26.9	77 57	6.1	5.77	266,272,283	112	221
7815	31859	27.6	38 23	4.8	4.58	266,272,311	101	11p
7816	31906	29.7	43 10	4.5	4.87	266,272,311	111	363
7817	31876	29.7	86 57	7.8	7.87	574,590,591,	201	111
						592	2	1
7818	*772*	30.1	44 48	9.5	9.96	295,570	22	55
7819	31935	31.3	34 57	8.8	9.28	562,572	11	55
7820	31941	31.6	34 54	8.5	8.68	562,572	11	22
7821	31950	32.1	54 45	8.8	9.08	274,571	00	13
7822	*844*	32.4	29 59	9.5	9.52	567,569	10	35
7823	31955	32.5	46 3	4.5	4.92	266,272,311,	401	413
						579,624,627,	011	159
						629	1	4
7824	31964	33.0	64 36	8	7.92	571,624	11	11
7825	*867*	33.1	29 55	9	8.97	567,569	00	00
7826	*864*	33.2	59 48	9	9.56	274,567	22	46
7827	*884*	33.9	69 45	9	8.24	562,571	32	00
7828	*887*	34.0	74 48	9.5	9.70	569,570	11	55
7829	31981	34.1	47 12	7.5	6.23	266,272,311	201	132
7830	31982	34.1	47 12	6.5				
7831	*902*	34.6	69 45	9	9.09	562,570	11	11
7832	*918*	35.2	49 45	9	9.08	569,572	01	11
7833	32003	35.4	32 38	5.5	5.32	266,272,311	311	126
7834	*931*	35.5	34 56	9	9.43	562,572	01	42
7835	*933*	35.5	59 44	9.5	9.56	274,567	00	14
7836	32013	35.9	24 43	7.2	6.45	562,572	01	42
7837	*957*	36.2	34 45	9	8.88	562,572	00	41
7838	*955*	36.4	70 0	8	7.94	562,571	21	33
7839	32028	36.8	30 11	8	7.72	567,569	21	33
7840	*976*	37.0	39 47	8.5	8.44	295,570	01	12
7841	32031	37.5	83 4	7.8	7.65	573,574,576	111	222
7842	32041	37.7	74 47	8	7.86	569,570	01	11
7843	32046	37.8	29 36	8	7.00	567,569	11	25
7844	32064	38.6	71 3	6.4	5.96	266,272,283	120	001
7845	32060	38.6	79 21	6.1	5.55	266,272,283	222	324
7846	32065	38.7	64 58	6.0	5.54	266,272,283	311	522
7847	*1023*	38.8	54 46	8.5	8.48	274,571	11	00
7848	32069	38.8	64 54	7.7	6.92	569,571	11	66
7849	32072	39.0	55 0	7.5	7.38	274,571	00	36
7850	32081	39.5	59 59	9	9.32	274,569	12	33
7851	*1044*	39.6	59 44	9	8.86	274,569	11	11
7852	*1053*	39.7	40 0	9.5	9.68	295,570	22	25
7853	32101	40.7	40 45	6.1	6.28	266,272,311	330	201
7854	32098	41.0	84 25	7.5	7.86	590,591,592	001	114
7855	*1078*	41.2	64 52	9.2	9.22	569,571	11	22
7856	32125	41.7	24 51	8.5	8.10	562,572	00	11
7857	32130	41.9	50 47	5.2	5.35	266,272,283	111	133
7858	32145	42.7	34 52	8.2	8.73	562,572	21	22
7859	32150	43.2	44 51	9.2	9.62	295,570	22	46
7860	32160	43.7	34 57	8.8	8.73	562,572	21	11
7861	*1178*	44.8	24 44	8.8	8.65	562,572	12	11
7862	*1180*	44.9	29 59	9	9.54	567,569,571	543	555
7863	32186	45.0	29 58	7.8	7.74	567,569,571	110	153
7864	*1187*	45.1	49 56	9	9.58	569,572	10	64
7865	32185	45.1	69 39	8	7.34	562,571	01	59
7866	32184	45.2	80 28	8	7.91	576,590,591	001	113
7867	*1198*	45.6	39 58	9	8.98	295,570	11	32
7868	*1199*	45.6	59 48	8.5	8.46	274,569	33	33
7869	32200	46.2	82 35	5.5	5.12	272,283,569,	210	446
						572,579,591,	101	665
						592	3	5
7870	32195	46.2	86 27	7.8	7.91	590,591,592	012	111
7871	32214	46.7	59 46	8	7.56	274,569	00	44
7872	32223	47.8	83 34	7.2	6.75	573,574,576	001	242
7873	32232	47.9	54 56	8	7.58	274,571	00	44
7874	32229	47.9	80 54	8	8.38	576,590,591	120	222
7875	32235	48.0	59 40	8	8.22	274,569	12	20
7876	32239	48.2	24 47	6.3	6.43	562,572,579	021	114
7877	32241	48.4	50 0	8	8.02	569,572	11	00
7878	32243	48.6	29 58	7.5	7.41	567,569,571	221	666
7879	32249	48.9	60 6	7.2	6.96	274,569	11	58
7880	32256	49.4	40 52	6.1	5.95	266,272,311	111	001
7881	32266	50.1	32 27	6.7	6.55	266,272,311	331	343
7882	32265	50.1	32 29	6.0	6.05	266,272,311	310	000
7883	32278	50.5	24 48	9	9.15	562,572	12	22
7884	32281	50.8	24 57	8.2	8.70	562,572	22	11
7885	32286	51.1	83 33	7.5	8.12	573,574,576	230	443
7886	*1352*	51.2	44 45	9	9.36	295,570	00	42
7887	*1363*	51.5	64 50	9.5	9.72	569,571	11	22
7888	*1368*	51.7	24 59	9	9.20	562,572	00	42
7889	*1369*	52.0	74 52	8.5	8.36	569,570	23	21
7890	32307	52.1	63 31	6.2	5.96	266,272,283	222	032
7891	32303	52.1	82 44	6.1	5.61	272,283,569,	412	244
						572,579,591,	212	334
						592	1	4
7892	*1376*	52.2	64 48	9.5	9.52	569,571	22	00
7893	32311	52.3	64 52	5.2	5.12	266,272,283,	540	713
						311,579,618,	411	617
						624	2	3
7894	*1380*	52.3	79 50	9	8.78	576,590	11	20
7895	32315	52.4	45 0	9.2	9.46	295,570	01	53
7896	32318	52.6	49 58	8.8	8.32	569,572	11	11
7897	*1411*	53.3	34 51	8.2	8.43	562,572	21	22
7898	32328	53.4	24 44	8	8.20	562,572	00	40
7899	*1413*	53.4	29 46	9	8.72	569,571	10	32
7900	*1414*	53.5	34 52	9.5	9.73	562,572	10	55
7901	32333	53.7	53 19	5.2	5.12	266,272,283	201	514
7902	32337	54.3	30 3	5.8	5.62	266,272,311,	423	123

23h

S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.		S. M. P.	Design.	R. A. 1900.	S. Dec. 1900.	Magn.		Julian Day.	Resid.	
				Cat.	S. M. P.		Phot.	Est.					Cat.	S. M. P.		Phot.	Est.
		m.	° ′								m.	° ′					
						579,618,624, 627	*1*14 0	*8*20 2	7913	32389	57.2	30 17	5.2	4.93	266,272,311, 600	101 0	566 *1*
7903	*1449*	54.7	64 56	9.5	9.27	569,571	1*2*	*13*	7914	*1533*	57.4	39 46	9	9.38	295,570	*1*1	*24*
7904	32347	54.7	66 8	4.3	4.64	266,272,283	30*2*	*1*n*1*	7915	32396	58.0	24 42	6.7	6.50	562,572,600	01*1*	057
7905	*1466*	55.1	49 55	8.5	8.88	569,572	1*2*	*44*	7916	32397	58.1	25 9	8	8.05	562,572	*4*3	*2*5
7906	32355	55.2	44 51	6.5	6.23	266,272,295	010	10*2*	7917	32410	58.9	80 57	8	7.85	576,590,591	100	222
7907	*1471*	55.2	44 53	9.0					7918	*1577*	59.1	34 59	8.5	8.43	562,572	10	*22*
7908	32365	55.9	49 22	5.8	5.58	266,272,283	1*1*0	223	7919	32414	59.2	29 50	6.3	6.61	569,571,579	*1*20	*424*
7909	32372	56.2	50 54	5.6	5.28	266,272,283	000	343	7920	*1578*	59.2	59 53	9	8.66	274,569	*1*1	*2*1
7910	32376	56.4	77 37	5.4	4.62	266,272,283	000	92p	7921	32415	59.3	29 57	7.4	7.68	569,571	*1*1	3*2*
7911	*1511*	56.5	39 54	8.8	8.74	295,570	10	*2*1	7922	32421	59.6	72 0	5.9	5.56	266,272,283	1*2*0	420
7912	*1524*	56.9	69 50	9	8.68	562,571	*22*	*2*3									

REMARKS.

1. Z. C. 23h 1613.
3. Z. C. 23h 1620.
6. Z. C. 23h 1640.
38. Proper Motion, 2″.01, 123°.
51. The cluster, 47 *Tucanæ*. N. G. C. 104. The finest globular cluster in the sky with the exception of 4542, ω *Centauri*. Not resolved into stars by the Meridian Photometer. Estimated magnitude, 4.0.
57. Proper Motion, 2″.29, 82°.
102. In U. A. *Sculptor* 80, for R. A. 32m read 34m.
103. Proper Motion, 1″.07, 65°.
189. Estimated magnitude, 9.8 and 9.8.
220. U. A. magn. 5.1.
239. U. A. magn. 6.0.
252. R *Sculptoris*, variable. The residuals are derived from the mean magnitude, 5.62. The spectrum of this star is of the fourth type.
282. Combined in U. A. with 283, magn. 5.9.
283. See 282.
290. α *Eridani*. Arabic name Achernar. (Annals, Vol. XIV. p. 313.) U. A. magn. 1.0.
294. The binary star p *Eridani*. Combined in U. A. with 295, magn. 5.6.
295. See 294.
384. Z. C. 1h 1608.
405. Not seen, probably because 404 is near.
441. On J. D. 304 the position indicated of the object observed follows the true position 2m.4, south 3′. Rejected. Residual *9*.
493. Not measured on J. D. 620 since a sufficient number of measures had already been obtained.
529. Combined in U. A. with 530, magn. 6.3.
530. See 529.
539. U. A. magn. 6.5, var.?
574. U. A. magn. 6.2.
584. Combined in U. A. with 585, magn. 2.6.
585. See 584.
636. The spectrum of this star is of the fourth type.
638. U. A. magn. 6.0.
646. J. D. 605. Rejected. Residual *6*. A cloud which probably caused the large negative residual was noted near the pole. The next star, 661, was also rejected.
655. Proper Motion, 1″.47, 64°.
657. Proper Motion, 2″.97, 75°.
658. Proper Motion, 1″.45, 63°.
661. J. D. 605. Rejected owing to clouds over pole See 646.
688. Observed by mistake for 680.
747. A. G. C. 4175 precedes 0m.0, north 6′, magn. 10, and was not observed, although included in the scheme for observation. It was probably too faint to be seen.
764. Combined in U. A. with 765, magn. 4.3.
765. See 764.
817. Z. C. 4h 20.
827. Z. C. 3h 1838.
828. Z. C. 3h 1845.
870. U. A. magn. 6.1.
883. U. A. magn. 6.3.
960. The variable star R *Doradus*. The residuals are derived from the mean magnitude 5.53. U. A. magn. $5\frac{1}{2} - 6\frac{3}{4}$, var.
1036. J. D. 378. Rejected for discordance. Residual *12*. The estimate confirms the unusual brightness on this date. This star shows no evidence of variability on photographic plates taken on September 24, September 29, October 8, 1889, September 19, 1891, and November 18, 1893.
1048. J. D. 377. First photometric setting 35, assumed to be 35.0.

1078. J. D. 381. Rejected for discordance. Residual *11*.

1106. This star shows no evidence of variability on photographic plates taken on October 10, November 4, November 6, November 13, 1889, and September 19, 1890.

1131. The combined light of this star and the two following stars, 1132 and 1133, was measured.

1132. See 1131.

1133. See 1131.

1145. J. D. 278. Rejected. Residual *6*. The observations were stopped by light clouds over the pole, the effect of which would be to make the stars appear too bright, and the residuals negative. The last eight stars measured were H. P. 959, H. P. 960, S. M. P. 1145, 1151, 1164, 1172, 1175, and 1181, all but the first three of which were marked at the time as probably affected by clouds. They gave the residuals 2, 1, *3*, *3*, *6*, *6*, *3*, and *5*. The last six stars have accordingly been rejected, although in the case of 1145, 1151, and 1175 this leaves but one observation of each star. Owing to the rejection of the observations the corresponding residuals are increased and become *6*, *6*, *8*, *8*, *6*, and *6*. The effect of the cloud appears, therefore, to have been to dim σ *Octantis* by about seven tenths of a magnitude.

1151. J. D. 278. Rejected. Residual *6*. See 1145.

1164. J. D. 278. Rejected. Residual *8*. See 1145.

1172. J. D. 278. Rejected. Residual *8*. See 1145.

1175. J. D. 278. Rejected. Residual *6*. See 1145.

1181. J. D. 278. Rejected. Residual *6*. See 1145.

1188. The position of Behrmann's *Columba* 17 and of H. P. 1022 is that of this star, but probably in both cases 1189 was observed.

1189. See 1188.

1291. On J. D. 392 a second observation was supposed to have been made of this star. As it was found to relate to 1345 it has been added to the latter star.

1301. U. A. magn. 6.6, var.

1349. Z. C. 5^h 2285.

1350. Z. C. 5^h 2297.

1352. Z. C. 5^h 2310. J. D. 379. Observation interrupted by clouds.

1353. J. D. 275. Observation interrupted by dawn.

1364. U. A. magn. 6.4.

1451. J. D. 381. A star supposed to be 1450, which precedes $0^m.2$, north 1′, was measured. It has been assumed that 1451 was actually measured, since otherwise the magnitudes would be discordant.

1474. Combined light of A. G. C. 7801, magn. 6.6 and of 7803, magn. 7.0, observed. Resulting magn. 5.57. Combined light in U. A., 5.9.

1480. α *Argus*, or α *Carinæ*. Greek name, Canopus (Annals, Vol. XIV. p. 313). With the exception of α *Canis Majoris* (Sirius), the brightest star in the sky. The sign of the magnitude is negative. It is the only star in this catalogue brighter than the magnitude 0.0.

1493. U. A. magn. 6.1.

1528. U. A. magn. 6.0, dpl. 7¾, 6¼.

1544. U. A. magn. 6.1.

1564. U. A. magn. 5.9.

1577. Combined with 1578, magn. 7.74.

1578. See 1577.

1583. U. A. magn. 5.3.

1614. U. A. magn. 6.3.

1636. J. D. 392. The last stars in this series preceding σ *Octantis* were 1627, 1635, 1636, 1638, 1668, 1670, and 1674. The corresponding residuals were *1*, 1, *6*, *4*, *2*, *1*, and *4*. The last five stars were noted by the observer as probably affected by clouds which soon after covered the pole. The observation of 1636 has accordingly been rejected. The residual is thus changed from *6* to *8*.

1643. κ *Canis Majoris*. The hydrogen line Hβ is bright in the spectrum of this star.

1649. U. A. magn. 5.4.

1729. Z. C. 6^h 3106.

1733. Z. C. 6^h 3128.

1734. Z. C. 6^h 3156.

1735. Z. C. 6^h 3153.

1736. Z. C. 6^h 3162.

1737. Z. C. 6^h 3161.

1739. U. A. magn. 5.9.

1740. Z. C. 6^h 3166.

1745. U. A. magn. 6.0.

1776. Estimated magnitudes, 10.0 and 9.8.

1793. U. A. magn. 5 6.

1803. Combined in U. A. with 1804, magn. 4.

1804. See 1803.

1815. The variable star L_2 *Puppis*. The residuals are derived from the mean magnitude, 4.59. U. A. magn. var. 3.6–6.3.

1823. U. A. magn. 6.2.

1856. The hydrogen line Hβ is bright in the spectrum of this star.

1881. 1890 follows $1^m.1$, south 3′, and is fainter. On J. D. 393 and 407 an attempt was made to observe 1890. The residuals were large and negative, indicating that a brighter star was observed. It is assumed that the object observed was 1881. The position confirms this view, but the stars are so near that this means of distinguishing them is uncertain.

1890. See 1881.

1924. Estimated magnitudes, 9.8 and 9.8.

1927. Estimated magnitudes, 10.0 and 10.0.

1929. Estimated magnitudes, 9.7 and 9.6.

1935. Combined in U. A. with 1936, magn. 6.6.

1936. See 1935.

1960. This star appears to be decidedly fainter than the magnitude 8.5 given in the Cordoba Zones. In the Cordoba Durchmusterung it is —25° 4651, magn. 9.9. On photographs taken on December 9, 1889, and April 23, 1892, it is about half a magnitude fainter than —24° 5537, magn. 9.5.

1968. J. D. 385, 707, and 710 estimated magnitudes 9.8, 9.7, and 9.8.

1987. Estimated magnitudes, 9.6 and 9.7.

1989. Estimated magnitudes, 9.8 and 9.6.

1991. Estimated magnitudes, 9.7 and 9.8.

2051. J. D. 467. Rejected. Residual 9. The collimation and declination readings indicate that a star in the same declination and $3^m.4$ preceding 2051 was observed.

2059. U. A. magn. 5.7.

2065. U. A. magn. 6.2.

2078. J. D. 385. Rejected for discordance. Residual *8*.

2089. The variable star S *Puppis*. The residuals are derived from the mean magnitude 7.18.

2124. U. A. magn. 5.7.
2158. J. D. 390. Rejected for discordance. Residual *10*.
2173. Estimated magnitudes 10.0 and 10.0 or fainter.
2193. J. D. 381. Rejected. Residual *8*. Individual readings discordant. See Table X.
2206. Combined in U. A. with 2207, magn. 6.2.
2207. See 2206.
2246. Z. C. 7^h 4531.
2247. Z. C. 7^h 4532.
2249. Z. C. 7^h 4543.
2250. Z. C. 7^h 4565.
2252. Z. C. 7^h 4575.
2254. Z. C. 7^h 4586.
2277. U. A. magn. 5.7.
2303. U. A. magn. 6.2.
2305. γ *Velorum*. This is the brightest star whose spectrum is of the fifth type.
2314. U. A. magn. 4.5.
2321. U. A. magn. 5.3.
2328. J. D. 467. Rejected. Residual 11. The position of the object observed appears to coincide with that of a tenth magnitude star which precedes 2328, $2^m.7$, north $1'$.
2336. The hydrogen line Hβ is bright in the spectrum of this star.
2339. Estimated magnitudes, 10.0 and 9.8.
2383. U. A. magn. 5.7.
2389. U. A. magn. 6.2.
2491. U. A. magn. 5.5, dpl. $7\frac{3}{4}$, $6\frac{1}{4}$. The position in the A. G. C. depends upon observations on one night in 1876 and on four nights in 1879. The resulting magnitude is given as $6\frac{1}{4}$. No observation in 1876 is given in the Cordoba Annals, Vol. XI., either on page 81 or page 221, and the magnitude was not estimated either night in 1879.
2532. Estimated magnitudes, 9.8 and 9.8.
2536. U. A. magn. 5.6.
2556. Estimated magnitudes, 9.8 and 9.7. 2555 near.
2563. Estimated magnitudes, 9.8 and 9.8.
2575. U. A. magn. 6.0, dpl. $6\frac{1}{4}$, 8.
2577. U. A. magn. 6.1, dpl. 6, $9\frac{1}{2}$.
2595. U. A. magn. 5.9.
2648. Estimated magnitudes, 9.8 and 9.8.
2674. On J. D. 389 the stars 2635, 2642, 2648, 2674, 2681, and 2702 were observed successively, and give the residuals 3, 3, F, 5, 3, and 1. On J. D. 709 the residuals are *3*, *2*, F, *4*, *4*, and *2*. Systematic differences in the series are thus indicated, and not variability of the stars.
2681. See 2674.
2717. Combined in U. A. with A. G. C. 12224, magn. 5 4.
2728. Estimated magnitudes, 9.8 and 9.7.
2757. Z. C. 8^h 4795.
2758. Z. C. 8^h 4803.
2760. Z. C. 8^h 4836. On J. D. 389 positive residuals, and on J. D. 709, negative residuals predominate for stars in this vicinity, as, for instance, 2821 and 2824.
2821. See 2760.
2824. See 2760.
2832. Estimated magnitudes, 9.8 and 9.6.
2896. U. A. magn. 5.7.
2904. J. D. 824. Rejected. Residual 14. The collimation and declination readings indicate that a star preceding 2^m 9, north $10'$, was observed. The estimated magnitude, however, agrees with that obtained on other nights.
2948. Estimated magnitudes, 9.8 and 9.8.
2964. Estimated magnitudes, 9.7 and 9.8.
2975. Combined in U. A. with 2976, magn. 6.1. Both stars combined with 2983, with resulting magnitude 5.6.
2976. See 2975.
2983. See 2975.
3004. The variable star R *Carinæ*. The residuals are derived from the mean magnitude 5.46.
3011. U. A. magn. 5.5.
3013. On J. D. 829 and 830 estimated magnitudes 10.0 and 10.2.
3084. The variable star l *Carinæ*. The residuals are derived from the mean magnitude, 3.87.
3094. Estimated magnitudes, 10.0 and 9.8.
3095. U. A. magn. 3.3.
3124. U. A. magn. 6.2.
3133. Estimated magnitudes, 9.8 and 9.8.
3140. U. A. magn. 6.1, dpl. 8, $6\frac{1}{4}$.
3157. Estimated magnitudes, 9.8 and 9.8.
3170. Estimated magnitudes, 10.0 and 9.8.
3198. Z. C. 9^h 4556.
3199. Z. C. 9^h 4586.
3200. Z. C. 9^h 4584.
3201. Z. C. 9^h 4595.
3229. The variable star R *Antliæ*. The residuals are derived from the mean magnitude, 7.50.
3240. The spectrum of this star is of the fourth type.
3260. Observed by mistake for S *Carinæ*, A. G. C. 13882.
3277. U. A. magn. $6\frac{3}{4}$.
3305. Estimated magnitudes, 10.2, 10.2, and 10.2.
3307. Estimated magnitudes, 10.0, 9.8, and 9.8.
3352. There is no star in the Cordoba Durchmusterung having this position.
3357. Estimated magnitudes, 9.8 and 9.8.
3371. Estimated magnitudes, 9.7 and 9.5.
3394. U. A. magn. 5.6.
3397. Combined in U. A. with 3398, magn. 5.4, dpl. $6\frac{3}{4}$, $6\frac{1}{4}$.
3398. See 3397.
3406. The hydrogen line Hβ is bright in the spectrum of this star.
3409. U. A. magn. 5.6.
3423. The spectrum of this star is of the fourth type.
3429. Cluster. N. G. C. 3324. Too scattered for measurement. U. A. magn. 5.7.
3445. J. D. 824. Residual of measures 8, rejected. Residual of estimate, 1. The next star observed was 3450. The sky was then found to be cloudy in this declination.
3450. See 3445. J. D. 824. Residual of measures, 14, rejected. Residual of estimate, 4.
3452. U. A. magn. 5.2.
3465. The spectrum of this star is of the fifth type.
3468. The spectrum of this star is of the fifth type.
3474. In U. A. magn. 6.5, var.?
3479. The spectrum of this star is of the fifth type.
3485. The variable star η *Carinæ*. The residuals are derived from the mean magnitude, 6.32. The hydrogen lines Hβ, Hγ, and Hδ, are bright in the spectrum of this star. Especial care was taken in identification.
3570. T *Carinæ*, var. Residuals taken from mean magn. 6.03.
3576. The spectrum of this star is of the fifth type.
3602. Estimated magnitudes, 9.8 and 9.5.

3637. Z. C. 10^h 4268.
3639. J. D. 777. Residual *10*. This observation and that of the two following stars 7763 and 7712 observed at lower culmination, were rejected since, as noted by the observer, they were affected by a long narrow cloud crossing the pole.
3641. Z. C. 10^h 4293.
3643. Z. C. 10^h 4309.
3644. Z. C. 10^h 4333.
3645. Z. C. 10^h 4334.
3646. Z. C. 10^h 4336.
3650. J. D. 846. Retained. Residual *6*. Z. C. 11^h 71, magn. 8, foll. $0^m.8$, south 5′, may have been observed by mistake for this star.
3659. U. A. magn. 6½.
3660. The spectrum of this star is of the fifth type.
3663. U. A. magn. 5.5.
3690. Estimated magnitudes, 9.7 and 9.7.
3692. The spectrum of this star is of the fifth type.
3707. Estimated magnitudes, 9.5 and 9.5.
3782. Estimated magnitudes, 9.7 and 9.7.
3788. U. A. magn. 5.7.
3792. J. D. 502. Rejected for discordance. Residual 8.
3822. U. A. magn. 5.4.
3868. Proper Motion, 1″.18, 316°.
3919. Estimated magnitudes, 9.7 and 9.7.
3933. U. A. magn 5.7.
3960. Estimated magnitudes, 9.8 and 9.7.
3985. Estimated magnitudes, 9.7, 9.8, and 9.7.
4041. J. D. 855. Rejected. Residual *14*. Perhaps an unnoticed cloud over σ *Octantis* affected this observation. The stars 4033, 4071, 4041, 4068 and 4085 were observed in succession and gave the residuals *4*, *7*, *12*, *4*, and *2*. The observation of 4071 has also been rejected, making the corresponding residual *9*.
4042. Estimated magnitudes, 9.8 and 10.0.
4045. Estimated magnitudes, 9.7 and 9.8.
4071. J. D. 855. Rejected. Residual *9*. See 4041.
4073. Z. C. 11^h 4013.
4074. Z. C. 11^h 4029.
4075. Z. C. 11^h 4043.
4078. Z. C. 11^h 4061.
4093. δ *Centauri*. The hydrogen line $H\beta$ is bright in the spectrum of this star.
4096. U. A. magn. 6.2.
4127. U. A. magn. 5.8, dpl. 6¼, 7½. The A. G. C. magn. 6½ is that of the north following companion.
4208. α *Crucis*. Combined with 4209. U. A. magn. 1.3, dpl. 1½, 1¾.
4209. See 4208.
4220. Estimated magnitudes, 10.2, 9.8, and 9.8.
4242. J. D. 162. Rejected for discordance. Residual 8.
4286. J. D. 536. Rejected for discordance. Residual *10*.
4295. The variable star R *Muscæ*. The residuals are derived from the mean magnitude, 6.30.
4297. The proximity of 4324, magn. 1.5, has probably affected the visual magnitude of this star.
4337. J. D. 536. Rejected. Residual *13*. The clouds near the southern horizon, noted on page 96, seem to have extended to the pole, making σ *Octantis* appear faint and the observed magnitudes of several stars consequently too bright. The stars 4332, 4336, 4337, 4344, 4350, 4401, 4406, 4409, 4415, 4447, 4482, 4490, 4518, and 4523 were observed in succession, and gave the residuals *2*, *2*, *11*, *11*, *10*, *9*, *12*, *5*, *5*, *6*, *9*, *4*, *2*, and *2*. All but the first two and the last two observations have accordingly been rejected, so that the residuals now become *2*, *2*, *13*, *14*, *13*, *11*, *15*, *7*, *7*, *7*, *11*, *5*, *2*, and *2*, respectively.
4344. J. D. 536. Rejected. Residual *14*. See 4337.
4350. J. D. 536. Rejected. Residual *13*. See 4337.
4351. J. D. 526. Estimated magnitude, 10.0.
4357. This star and 4358 were omitted in the observing list sent to Peru, but are probably too near 4362 to be accurately measured.
4358. See 4357.
4362. The cluster κ *Crucis*, N. G. C. 4755. The combined magnitude in the U. A. is 5 6.
4387. J. D. 502. Rejected. Residual *5*. The clouds near the southern horizon, noted on page 96, seem to have extended to the pole, making σ *Octantis* appear faint and the observed magnitudes of several stars consequently too bright. The stars 4379, 4380, 4387, 4397, 4399, 4403, and 4407 were observed in succession, and gave the residuals 0, 0, *5*, *6*, *8*, *2*, and 1. All but the first two and last two stars have accordingly been rejected, so that the residuals now become 0, 0, *5*, *7*, *10*, *2*, and 1, respectively.
4397. J. D. 502. Rejected. Residual *7*. See 4387.
4399. J. D. 502. Rejected. Residual *10*. See 4387.
4401. J. D. 536. Rejected. Residual *11*. See 4337.
4406. J. D. 536. Rejected. Residual *15*. See 4337.
4409. J. D. 536. Rejected. Residual *7*. See 4337.
4415. J. D. 536. Rejected. Residual *7*. See 4337.
4420. Z. C. 12^h 3467.
4423. Z. C. 12^h 3474.
4424. Z. C. 12^h 3485.
4432. θ *Muscæ*. The spectrum of this star is of the fifth type. U. A. magn. 5.9.
4447. J. D. 536. Rejected. Residual *7*. See 4337.
4461. U. A. magn. 5 3.
4482. J. D. 536. Rejected. Residual *11*. See 4337.
4484. The spectrum of this star is of the fifth type.
4490. J. D. 536. Rejected. Residual *5*. See 4337.
4521. U. A. magn. 5.2.
4542. The cluster ω *Centauri*, N. G. C. 5139. The finest globular cluster in the sky. Too diffuse for measurement with the meridian photometer. The position given in the N. G. C. is 10′ north of the correct position.
4575. On J. D. 525 and 553 estimated magnitudes 9.8 and 9 7.
4622. U. A. magn. 5.7.
4671. J. D. 782. Rejected. Residual 19. Stopped by clouds which affected this and the following star 4689.
4676. μ *Centauri*. The hydrogen line $H\beta$ is bright in the spectrum of this star.
4689. J. D. 782. Rejected. Residual 7. See 4671.
4690. U. A. magn. 4.7, dpl. 5, 6⅔.
4701. U. A. magn. 5.2, dpl. 5½, 7½.
4749. θ *Apodis*, variable, according to U. A., pages 134 and 243, magn. 5½–6½.
4753. β *Centauri*.
4773. Z. C. 13^h 3564.
4777. Z. C. 13^h 3627.
4779. Z. C. 13^h 3678.

4780. Z. C. 13^h 3660.
4781. Z. C. 13^h 3692.
4783. Z. C. 13^h 3681.
4784. Z. C. 13^h 3673.
4787. Z. C. 13^h 3687.
4802. J. D. 183. Rejected for discordance. Residual 8. Perhaps Z. C. 14^h 69, magn. 8, which precedes $1^m.5$, north 5′, was observed by mistake for this star.
4826. On J. D. 517, 522, 545, 552, and 553, the object observed was Z. C. 14^h 675. R. A. = 14^h $12^m.3$, Dec. = —59° 17′ (1900) magn. 8. The resulting magnitude was 8.05 and the residuals 0, 0, 1, 1, 1. The estimated magnitudes were 6.8, 7.0, 6.8, 6.5, and 6.6. Other stars in this vicinity, as 4813, 4820, 4834, 4842, and 4848, show a similar but less marked difference between the measured and estimated magnitudes.
4828. This star was erroneously supposed to be identical with 4837, and was therefore removed from the observing list.
4836. Estimated magnitudes, 9.8 and 9.7.
4858. Combined with A. G. C. 19407, magn. 7¾. U. A. magn. 5.6, dpl. 6c, 7¾. Stone 7827. J. D. 150. Retained. Residual *6*. Recorded as Stone 7819, declination 44°, and changed by recorder to Stone 7827, declination 57° 54′.
4941. *η Centauri.* The hydrogen line Hβ is bright in the spectrum of this star.
4946. J. D. 182. Rejected for discordance. Residual *15*.
4949. U. A. magn. 6.0.
4960. Combined with 4961. U. A. magn. 0.7, dpl. 1, 3½. The binary star *α Centauri.* Proper Motion, 3″.67, 320°. The difference in brightness of the two components, according to Gill, is 1.25 magn. Their magnitudes would therefore be 0.50 and 1.75.
4961. See 4960.
4998. J. D. 561. Estimated magnitude, 9.8.
4999. J. D. 148. Observation retained, but readings discordant.
5015. Magnitude 9 in A. G. C.; also given as magn. 9 in Cordoba Annals, VI., p. 202, but no magnitude is given on page 82. Twice observed, magn. 7, in the Z. C. Assumed to be an error of 9 for 7 in the A. G. C.
5019. J. D. 173. There is an unexplained error in this measurement. The four readings give the magnitudes 10.2, 10.2, 8.4, and 9.6, with a mean residual 18. Assuming the third reading to be 50°.8 instead of 40°.8 the corresponding magnitude becomes 9.8. There is no evidence of clouds or variability of the star, since the estimated brightness is about equal to that on other nights. The position appears to be correct, and adjacent stars, 5020 and 5068, were observed before and after.
5040. U. A. magn. 6.5.
5042. Variable according to the U. A. Magn. 5½–6¼.
5066. U. A. magn. 6 1.
5081. J. D. 150. Rejected for discordance. Residual 11.
5134. Z. C. 14^h 3736.
5137. Z. C. 14^h 3760.
5139. Z. C. 14^h 3793.
5160. The spectrum of this star is of the fourth type.
5172. J. D. 531. Rejected for discordance. Residual 8.
5202. The variable star R *Trianguli Australis.* The residuals are derived from the mean magnitude, 6 76.
5220. J. D. 180. Rejected. Residual 10. The observations of the last two stars measured in this series, 5220 and 5225, were probably affected by a heavy cloud coming from the east and covering the northern part of the meridian.
5225. J. D. 180. Rejected. Residual 10. See 5220.
5231. U. A. magn. 3.7.
5250. J. D. 560. Rejected. Residual 9. Perhaps due to a passing cloud, as the residuals, 4 and 4, of the preceding and following stars, 5174 and 5203, are also positive.
5273. The spectrum of this object is that of a gaseous nebula.
5312. U. A. magn. 5.1.
5313. U. A. magn. 5.9. J. D. 152. Rejected. Residual 9. The position of the object observed appears to be that of Z. C. 15^h 1332, magn. 7½, but the estimated magnitude is 4.8.
5358. J. D. 201. Rejected for discordance. Residual *13*.
5403. U. A. magn. 6.1, dpl. 6¼, 9½.
5463. J. D. 174. Rejected for discordance. Residual *8*. The estimate confirms the unusual brightness on this date. This star shows no evidence of variability on photographic plates taken on July 23, 1889, May 29, 1891, and July 25, 1893.
5469. U. A. magn. 3.7.
5486. U. A. magn. 5.4.
5489. J. D. 155. Retained. Residual *6*. Perhaps due to a thin cloud passing over *σ Octantis*, as the residuals *4* and *5* of the preceding and following stars, 5486 and 5496, are also negative.
5494. J. D. 173. Rejected for discordance. Residual *9*.
5500. J. D. 220. Stopped by clouds for twenty minutes after observing this star.
5515. Z. C. 15^h 4094.
5517. Z. C. 15^h 4084.
5518. Z. C. 15^h 4165.
5604. U. A. magn. 6.9 var.?
5617. J. D. 182. Rejected for discordance. Residual 11.
5629. U. A. magn. 5.7.
5651. J. D. 175. Rejected for discordance. Residual 9.
5658. U. A. magn. 6.3.
5703. J. D. 221. Rejected for discordance. Residual 10. The estimate confirms the unusual faintness on this date. This star shows no evidence of variability on photographic plates taken on July 13, 1889, May 21 and May 29, 1890.
5728. U. A. magn. 5.6.
5740. No observations were obtained of this star.
5760. J. D. 560. The clouds mentioned on page 96 appear to have affected the measures of several stars in this series. As the large residuals are negative, the light of *σ Octantis* was apparently diminished by clouds. This is confirmed by the fact that the estimated magnitudes are not affected. At the end of the series the remark occurs "Clear except below pole. Evening has been changeable, and clouds in south, making [the brightness of the stars near the] pole uncertain." The stars 5811, 5826, 5760, 5781, 5862, 5866, 5893, 5973, 5947, 6011, 6142, 6013, 6110, 6036, 6060, 6134, 6209, 6211, and 6273, were observed in succession and gave the residuals 2, *1*, *6*, *6*, *8*, *8*, *2*, 4, 1, *1*, *5*, 2, *3*, *11*, *9*, *10*, *8*, *2*, and 3. The measures of stars 5760, 5781, 5862, 5866, 6036, 6060, 6134, and 6209 have therefore been rejected, making their residuals *8*, *8*, *10*, *10*, *16*, *11*, *12*, and *10*.

5781. J. D. 560. Rejected. Residual *8*. See 5760.
5793. The spectrum of this star is of the fifth type.
5798. The spectrum of this star is of the fifth type.
5812. The spectrum of this star is of the fifth type.
5821. The spectrum of this star is of the fifth type.
5823. The variable star RS *Scorpii*.
5862. J. D. 560. Rejected. Residual *10*. See 5760.
5866. J. D. 560. Rejected. Residual *10*. See 5760.
5881. J. D. 227. Retained. Z. C. 16^h 3970, magn. 8, foll. $1^m.3$, north 3′, and was perhaps observed by mistake for this star, as the place and magnitude represent it a little better.
5886. The spectrum of this star is of the fifth type.
5891. The spectrum of this star is of the fifth type.
5906. Z. C. 16^h 4188.
5907. Z. C. 16^h 4227.
5908. Z. C. 16^h 4261.
5911. Z. C. 16^h 4191
5961. In U. A. *Scorpius* 138, for R.A. 11^s read 1^s.
5979. U. A. magn. 6.1.
5984. The spectrum of this star is of the fifth type.
5989. J. D. 183. Rejected for discordance. Residual *8*.
6003. J. D. 228. Rejected for discordance. Residual *13*. Perhaps due to an unnoticed cloud over σ *Octantis*, as the next star observed, 6006, also gave a large negative residual. In neither case are the estimates affected. See 6006.
6006. J. D. 228. Rejected for discordance. Residual *8*. See 6003.
6036. J. D. 560. Rejected. Residual *16*. See 5760.
6040. Combined with A. G. C. 23588, $7\frac{3}{4}$, and 23592, $7\frac{3}{4}$. In U. A. magn. 5.7, which is combined light of $7\frac{3}{4}$ and 6. The latter dpl. $6\frac{1}{4}$, $7\frac{3}{4}$.
6060. J. D. 560. Rejected. Residual *11*. See 5760.
6134. J. D. 560. Rejected. Residual *12*. See 5760.
6142. J. D. 231. Rejected for discordance. Residual 12.
6199. U. A. magn. 6.1.
6209. J. D. 560. Rejected. Residual *10*. See 5760.
6233. J. D. 531. Rejected for discordance. Residual *12*. This star is in the cluster N. G. C. 6475, several components of which were observed in succession, and therefore an error in identification is improbable. The estimate confirms the unusual brightness on this date. This star shows no evidence of variability on photographic plates taken on May 9, June 10, June 12, October 1, 1890, and May 1, 1893. The next star observed, 6239, was also discordant, but was measured fainter than usual.
6239. J. D. 531. Rejected for discordance. Residual 8. See 6233. The estimate confirms the unusual faintness on this date. This star shows no evidence of variability on photographic plates taken on May 9, June 10, June 12, October 1, 1890, and May 1, 1893.
6284. J. D. 218. Rejected for discordance. Residual 9.
6291. Combined with 6292. U. A. magn. 5.4, dpl. $5\frac{3}{4}$, 8.
6292. See 6291.
6313. The spectrum of this star is of the fifth type.
6346. Z. C. 17^h 3974.
6348. Z. C. 17^h 3979.
6349. Z. C. 17^h 3996.
6350. Z. C. 17^h 4012.
6352. Z. C. 17^h 4023.
6353. Z. C. 17^h 4041.
6354. Z. C. 17^h 4046.
6356. Z. C. 17^h 4066.
6357. Z. C. 17^h 4051.
6358. Z. C. 17^h 4062.
6359. Z. C. 17^h 4054.
6360. Z. C. 17^h 4067.
6362. Z. C. 17^h 4006.
6364. B. D. —19° 4854, magn. 9.6. The spectrum of this star is of the fifth type.
6370. B. D. —21° 4864, magn. 7.8. The spectrum of this star is of the fifth type.
6373. U. A. magn. 5.9, dpl. $7\frac{3}{4}$, $6\frac{1}{4}$.
6399. U. A. magn. 5.9.
6456. J. D. 228. Rejected for discordance. Residual *9*.
6525. Combined with 6526. U. A. magn. 5.4.
6526. See 6525.
6566. U. A. magn. 5.3.
6616. Z. C. 18^h 2328. J. D. 217. Apparently this star was observed by mistake for 6618.
6637. U. A. magn. 6.7.
6640. The variable star κ *Pavonis*. U. A. magn. var. 4.0–5.6. The residuals are derived from the mean magnitude 4.38. J. D. 228. Rejected for discordance. Residual *10*. Probably due to cloud over σ *Octantis* as adjacent stars give negative residuals.
6661. U. A. magn. 5.5.
6674. Combined with 6675. U. A. magn. 6.2.
6675. See 6674.
6686. The binary star ζ *Sagittarii*.
6705. The binary star γ *Coronæ Australis*.
6706. σ *Octantis*. In all, 543 sets of observations of four settings each were made of this star on 217 nights. The mean of all the residuals as shown on page 98 is —.03. Applying this to the assumed magnitude 5.5 the corrected magnitude becomes 5.47.
6709. Z. C. 18^h 3118.
6710. Z. C. 18^h 3094.
6711. Z. C. 18^h 3129.
6712. Z. C. 18^h 3132.
6715. Z. C. 18^h 3138.
6720. Z. C. 18^h 3130.
6723. The cluster N. G. C. 6752. U. A. magn. 5.8, neb. Too diffuse for measurement. On J. D. 552, 553, 563, and 584 the magnitude was estimated 6.5, 6.5, 7.5 and 6.5, respectively.
6755. The stars 6767, 6795, 6826, 6831, 6842, 6848, 6852, 6860, 6865, 6867, 6879, 6880, 6883, 6889, 6902, 6905, 6909, 6921, 6925, 6930, 6934, 6937, 6944, 6951, 6956, 6968, 6971, 6972, 6974, 6986, 6990, 6993, 7002, 7004, 7010, 7021, 7022, 7024, 7037, 7063, and 7086 were selected by Dr. Gill for observations of the asteroid (12) Victoria, and have accordingly been observed photometrically.
6795. See 6755.
6797. Combined with 6798. U. A. magn. 3.8, dpl. 4, $6\frac{3}{4}$.
6798. See 6797.
6822. J. D. 260. Clouds which affected the observations of later stars may have affected this also. See 6870.
6826. This star is B. D. —6° 5151, magn. 7.7. See 6755.
6831. This star is B. D. —6° 5158, magn. 8.3. See 6755.

6842. This star is B. D. —5° 4985, magn. 8.5. See 6755.
6844. J. D. 223. Apparently the double image prism was not reversed in making this observation, as the readings are 92.1, 171.6, 77.2, 194.0.
6848. This star is B. D. —5° 4989, magn. 8.4. See 6755.
6850. U. A. magn. 6.6.
6852. This star is B. D. —5° 4992, magn. 8.2. See 6755.
6860. This star is B. D. —5° 5006, magn. 7.6. See 6755.
6865. This star is B. D. —4° 4843, magn. 8.5. See 6755.
6867. This star is B. D. —4° 4846, magn. 7.8. See 6755.
6870. J. D. 260. Rejected. Residual *9*. As stated on pages 95 and 99, the observations contained in this series were affected by clouds. The stars 6813, 6822, 6864, 6870, 6873, and 6886 were observed in succession and gave the residuals 3, 5, *2*, *7*, *3*, and *8*. The last three observations were accordingly rejected and their residuals become *9*, *4*, and *12*. After 6886, σ *Octantis* was observed and the remark entered "stopped by clouds near and over pole."
6873. J. D. 260. Rejected. Residual *4*. See 6870.
6879. This star is B. D. —5° 5021, magn. 7.8. See 6755. On J. D. 499, B. D. —5° 5020, magn. 8.3, which precedes $0^m.2$, north 2′, was observed by mistake, with resulting magnitude 8.9.
6880. This star is B. D. —4° 4855, magn. 7.5. See 6755.
6883. This star is B. D. —3° 4649, magn. 8.0. See 6755.
6886. J. D. 260. Rejected. Residual *12*. See 6870.
6889. See 6755.
6899. J. D. 534. Residual 4, retained. Perhaps affected by clouds, as the observation of the two stars next observed, 6903 and 6906, were rejected by the observer for this reason. Observations were then stopped by clouds over pole from 19^h 30^m to 20^h 8^m. See page 96.
6902. See 6755.
6903. J. D. 534. Residual *1*, rejected by the observer, owing to clouds. See 6899.
6905. This star is B. D. —4° 4877, magn. 7.5. See 6755.
6906. J. D. 534. Residual *4*, rejected by the observer, owing to clouds. See 6899.
6909. This star is B. D. —4° 4883, magn. 7.7. See 6755.
6919. U. A. magn. 5.7.
6921. This star is B. D. —4° 4903, magn. 8.3. See 6755.
6925. This star is B. D. —4° 4916, magn. 7.8. See 6755.
6930. This star is B. D. —5° 5060, magn. 7.8. See 6755.
6934. This star is B. D. —4° 4926, magn. 7.8. See 6755.
6937. This star is B. D. —4° 4936, magn. 8.0. See 6755.
6944. See 6755.
6951. This star is B. D. —4° 4960, magn. 8.0. See 6755.
6956. This star is B. D. —5° 5099, magn. 8.0. See 6755.
6957. Proper Motion, 1″.63, 132°.
6968. This star is B. D. —5° 5120, magn. 8.2. See 6755.
6971. This star is B. D. —5° 5124, magn. 8.5. See 6755.
6972. This star is B. D. —6° 5320, magn. 8.2. See 6755.
6974. This star is B. D. —4° 4984, magn. 8.2. See 6755.
6986. A. G. C. 27395 and 27396 designate the same star.
6989. This star is B. D. —4° 4992, magn. 7.8. See 6755.
6990. This star is B. D. —6° 5339, magn. 8.2. See 6755.
6993. See 6755.
7000. J. D. 565. Rejected. Residual 8. The recorded position renders it probable that this observation relates to a star of the tenth magnitude preceding 7000 about 2^m and in the same declination. Also that the star observed in this series, and supposed to be 7013, was really 7000.
7002. This star is B. D. —8° 5205, magn. 8.1. See 6755.
7004. This star is B. D. —5° 5144, magn. 8.2. See 6755.
7006. Proper Motion, 1″.62, 157°.
7010. See 6755.
7011. Z. C. 19^h 2359.
7012. Z. C. 19^h 2379.
7013. Z. C. 19^h 2365. J. D. 565. The observation here assigned to this star perhaps belongs to 7000. See 7000.
7014. Z. C. 19^h 2386.
7016. Z. C. 19^h 2390
7018. Z. C. 19^h 2402.
7021. See 6755.
7022. This star is B. D. —7° 5169, magn. 8.2. See 6755.
7023. Z. C. 19^h 2412.
7024. This star is B. D. —8° 5237, magn. 7.3. See 6755.
7035. Proper Motion, 1″.65, 166°. U. A. magn. 5.7.
7037. See 6755.
7063. See 6755.
7065. J. D. 245. Rejected for discordance. Residual *8*. There is a slight tendency to negative residuals in this part of the series.
7086. See 6755.
7115. J. D. 513. Rejected for discordance. Residual *8*.
7117. Estimated magnitudes, 9.8 and 9.8.
7124. U. A. magn. 6.2.
7154. J. D. 245, 586, and 587. Estimated magnitudes, 10.0, 10.0, and 10.0.
7170. Combined light of A. G. C. 28519 and 28520, magnitudes 6.5 and 6.5, is here measured. U. A. magn. 5.9, dpl. 6.5, 6.5.
7171. U. A. magn. 5.1.
7217. J. D. 245. Probably seen, but fainter than 10.0. J. D. 586 and 587. Estimated magnitudes 10.0 and 10.0.
7226. Apparently the combined light of A. G. C. 28791, magn. 6.8, and 28797, magn. 7 was observed.
7242. Z. C. 20^h 1866.
7248. No star appears in this position in the Catalogue of the Cordoba Durchmusterung, although —25° 15231, magn. 8.8 is in the same right ascension and 30′ south. Stars are indicated in each of these positions in the Atlas, but only in the northern position on photographs taken on August 5, 1889, May 28, 1890, July 25, and August 1, 1893.
7249. Z. C. 20^h 1873.
7258. J. D. 262. Rejected for discordance. Residual *8*.
7293. U. A. magn. 4.6, dpl. $7\frac{1}{4}$, $4\frac{3}{4}$.
7297. The spectrum of this star is of the fourth type.
7305. The spectrum of this star is of the fourth type.
7310. A. G. C. 29235 is apparently identical with A. G. C. 29257, which follows 60^s and is in the same declination. The following star, only, appears in photographs of this region.
7318. See 7310.
7331. U. A. magn. 5.9.
7365. J. D. 573, 574, and 586. Estimated magnitudes, 10.0, 10.0, and 10.0.
7384. J. D. 513. Rejected for discordance. Residual *9*.
7386. J. D. 260. Rejected; cloud over σ *Octantis*. Residual *4*.
7435. J. D. 274. Rejected for discordance. Residual *10*.
7446. J. D. 295. Rejected for discordance. Residual *11*.

7463. Proper Motion, 4″.60, 122°.
7476. Z. C. 21h 1843.
7479. Z. C. 21h 1894.
7510. J. D. 573. Not seen. J. D. 574 and 591. Estimated magnitudes, 10.2 and 10.2.
7536. Proper Motion, 1″.42, 120°.
7540. U. A. magn. 6.2.
7572. U. A. magn. 4.4.
7609. Estimated magnitudes, 9.7, 9.8, and 9.7.
7622. Estimated magnitudes, 9.7, 9.7, and 9.7.
7623. Estimated magnitudes, 9.8, 9.8, and 9.8.
7624. Estimated magnitudes, 9.8, 9.8, and 9.8.
7626. Estimated magnitudes, 9.8, 9.8, and 9.7.
7670. J. D. 574. Measure supposed by observer to be affected by clouds over σ *Octantis.*
7676. Combined with 7677. U. A. magn. 6.5, components 7, 6¾.
7677. See 7676.
7680. U. A. magn. 4.4.
7701. Estimated magnitudes, 10.0, 10.0, and 10.2.
7710. Z. C. 22h 1730.
7711. Z. C. 22h 1737.
7714. Z. C. 22h 1744.
7718. U. A. magn. 5.9.
7738. J. D. 295. Rejected for discordance. Residual 14.
7741. On J. D. 562, the object observed was recorded A 31488 by mistake for A 31448. The observation has accordingly been added to 7733.
7764. J. D. 311. Rejected for discordance. Residual 10.
7779. U. A. magn. 6.
7787. J. D. 567. Rejected. Residual 9. The stars 7808, 7784, 7787, 7793, 7810, and 7826 were observed in succession and gave the residuals 1, 3, 7, 12, 5, and 2. The measures of stars 7787 and 7793 have therefore been rejected, making their residuals 9 and 15.
7793. J. D. 567. Rejected, owing to clouds. Residual 15. See 7787.
7816. U. A. magn. 4½, var.? Combined in U. A. with A. G. C. 31899, magn. 7¼, with resulting magnitude 4.4.
7817. J. D. 574. Measure supposed by observer to be affected by clouds over σ *Octantis.*
7825. J. D. 567. The measures of this and of the six following stars in this series, 7839, 7843, 7862, 7863, 7878, and 7805 were supposed by the observer to be affected by clouds. This apparently was not the case since the corresponding residuals are 0, 2, *1*, *5*, 1, *2*, and *1*.
7829. Combined with 7830. U. A. magn. 6.3.
7830. See 7829.
7880. U. A. magn. 6.2.
7893. U. A. magn. 5.3.

The results of the measurements of stars at lower culmination are given in Table VIII. The number of the star taken from the first column of Table VII. is given in the first column, the mean photometric magnitude to the nearest tenth of a unit is given in the second column, and is derived from the sixth column of Table VII. The section is given in the third column. As in Table III., I and III denote the observations made near Chosica during the years 1889 and 1890, respectively, II, the observations made at Pampa Central, and IV, those made at Arequipa. The corresponding excess of the length of path of the light of the star in traversing the atmosphere of the Earth, over that of a star in the zenith, is given in the fourth column. These values are the same as those given in the fourth column of Table I. The Julian Day is given in the fifth column, an additional line being employed when there are more than six. The residuals found by subtracting the magnitude given in the second column, from the observed magnitude after applying the correction for atmospheric absorption are given in the sixth column. These residuals will not always be the same as those given in the fifth column of Table I., since in the latter case the magnitude used is that given in the second column of Table II. Two of the residuals greater than 9 are changed from the values given on pages 86 and 87; S. M. P. 57, J. D. 857, the residual 26 becomes 25, and S. M. P. 2529, J. D. 245, 20 becomes 19. S. M. P. 7389, J. D. 417, the residual 3 becomes 2. The residual of S. M. P. 7612 on J. D. 409 should be 16, and this observation should have been rejected in deriving the absorption given on page 92. The absorption

.20 thus derived should have been used instead of .29, and the average deviation should be .10 instead of .36. The observation of S. M. P. 1269 on J. D. 586 gave a residual of 9, and has been rejected. The other remarks relating to this table will be found on page 86, following Table I.

TABLE VIII.

STARS OBSERVED AT LOWER CULMINATION.

S. M. P. No.	S. M. P. Magn.	Sec.	Path.	Julian Day.	Resid.	S. M. P. No.	S. M. P. Magn.	Sec.	Path.	Julian Day.	Resid.
10	7.4	I.	5.2	167	2	663	5.5	IV.	9.9	854,855	23
18	5.2	III.	9.0	472,502,514,517	1282	753	8.1	I.	6.4	158	1
"	"	IV.	4.7	827,850,855,857	2226	805	7.8	I.	7.0	162,174,197	211
28	5.8	I.	5.9	147,155	61	810	9.0	I.	6.0	158	1
57	2.9	IV.	9.7	838,846,850,854,855,	43133	831	6.4	I.	5.9	158,192,197	222
				857	p	911	5.6	I.	13.8	202,204,207,208,210,	18252
69	8.1	I.	7.8	150	2					217	5
105	8.0	I.	5.7	148	5	"	"	I.	"	222	1
119	7.7	I.	5.6	147,148,172	211	"	"	III.	13.8	501,525,526,536,537,	40200
122	6.8	I.	5.4	147,148,167,172	3010					539,543,544,563,564,	23861
142	5.0	IV.	14.9	832,834,836,837,838,	14335					565	6
				845	3	913	8.4	I.	7.6	171,183	22
145	8.2	I.	5.3	155,155,167,172	0410	935	5.8	I.	10.8	202,204,207,208,210,	04111
154	8.0	I.	7.1	160,175	02					217	2
192	8.2	I.	7.7	160,175	01	"	"	III.	10.8	501,525,526,536,537,	14124
200	7.4	I.	7.3	160,175	24					544,563,564,565,566	52022
305	5.9	III.	8.0	522,552	20	936	7.1	I.	6.7	162,174,197	231
"	"	IV.	4.3	782,823,825,829,830,	30302	941	7.1	I.	7.0	162,174	23
				831,837	10	955	6.8	I.	8.6	171,183,192	131
314	5.6	I.	6.1	180	4	1020	7.4	I.	7.8	171,183,192	303
"	"	III.	6.1	502,517,522,535,543	91120	1101	5.9	I.	9.4	201,202,204,207,210,	04703
"	"	IV.	3.6	844	2					221,222,223,225,228,	53125
333	6.0	III.	13.2	543,553	14					237	3
"	"	IV.	6.2	782,831,844,846,858	15312	"	"	III.	9.4	513,533,537,540,542,	60211
339	7.5	I.	10.6	152	0					553,556,561,582,584	32511
377	7.0	I.	10.4	152	0	"	"	IV.	4.9	859	4
385	8.1	I.	5.9	180,193	11	1147	6.5	I.	11.1	185	1
390	8.4	I.	9.0	152,182	13	1150	6.7	I.	7.5	196	1
396	7.2	I.	6.2	180,193	22	1194	7.2	I.	12.3	185	0
402	7.9	I.	8.7	182,186	13	1250	6.1	IV.	8.2	858,859	01
423	7.9	I.	9.0	182,186	61	1269	5.6	I.	13.6	201,206,213,218,221	51111
479	7.8	I.	8.2	186	4	"	"	III.	13.6	534,535,540,542,582,	14512
507	7.8	I.	5.4	193	2					585,586	1R
563	7.3	I.	6.0	154,173,179	335	"	"	IV.	13.6	858	n
595	8.4	I.	5.9	154,173,179	321	1278	7.2	I.	11.1	185	0
610	8.6	I.	6.3	154,173,179	241	1296	6.2	I.	6.6	178,196,201,203,206,	31111

S. M. P. No.	S. M. P. Magn.	Sec	Path.	Julian Day.	Resid.
				208,213,218,221,223,	10024
				225,227,228,231,235,	22121
				237,244	01
1296	6.2	III.	6.6	531,533,534,535,536,	11021
				542,543,544,580,585,	21411
				586,588	21
1389	6.8	I.	5.6	178,196	32
1658	5.6	I.	13.2	203,206,213,218,220,	42223
				227,236,241,253	2134
"	"	III.	13.2	497,536,539,552,553,	32111
				561,564,582,584,587,	71302
				588	1
1702	7.4	I.	12.7	203,220	40
1918	6.3	III.	5.0	596	1
2529	5.6	I.	13.6	225,235,236,241,245	3611p
"	"	III.	13.6	497,499,534,562,563,	10112
				564,565,566,571,582,	12012
				585,624	20
2835	5.5	I.	6.2	241,244,245,253,262,	11723
				274	3
"	"	III.	6.2	499,513,569,574,587,	22311
				588,627	50
2989	5.3	III.	14.2	534,573,574	33p
3055	5.2	III.	13.8	572,586,627	126
3212	5.6	I.	11.1	311	5
"	"	III.	11.1	562,580,581,584,629	22122
3639	6.2	III.	7.5	559,567,569,570,576,	10002
				579,581,590,593,597,	42001
				598,600,627,629	1101
4054	5.9	III.	6.4	599	p
4341	5.4	I.	6.9	252,274,283,295	1411
"	"	III.	6.9	562,569,570,571,572,	11111
				573,591,592,600,602,	25121
				605,618,619,620	2011
4565	5.7	I.	6.2	252,272,277,286,295,	32131
				312	0
"	"	III.	6.2	576,579,591,621	1012
4806	5.0	III.	13.8	576,579,591,593,598,	20361
				618,619	22
4837	4.1	I.	8.5	277,283	62
"	"	III.	8.5	593,599	11
4995	6.5	I.	4.6	283	0
"	"	III.	4.6	590,592	31
5032	5.6	III.	9.1	592	6
5047	5.5	III.	9.6	597,602,605,620,623	23423
5063	5.8	I.	7.1	304	6

S. M. P. No.	S. M. P. Magn.	Sec.	Path.	Julian Day.	Resid.
5063	5.8	III.	7.1	590,623	42
5258	5.7	I.	7.4	272,286	24
"	"	II.	2.3	377,381	31
"	"	III.	7.4	597,598,600,602,612	31112
5481	5.7	II.	8.2	389	5
5549	4.7	II.	3.7	389	5
5658	6.0	I.	5.5	272,277,286	320
"	"	II.	2.0	377,382,388	611
"	"	III.	5.5	618,619,620,623	2121
5690	4.2	II.	4.1	395	1
5972	5.6	II.	11.8	390,391,396,397,404	62813
6322	5.2	I.	4.6	282,304	13
"	"	II.	1.8	375,381,382,383,386	02001
6330	5.6	II.	4.8	399,403,406,409	3171
6345	6.0	II.	6.4	399,403,407,409,410	23464
6422	5.5	II.	5.3	398,410,418	210
6486	5.8	II.	6.1	393	1
6498	6.3	IV.	5.3	710,711	11
6557	4.0	II.	9.0	393,412,413,414,418	16122
6582	6.2	II.	7.0	413,414	32
6914	6.3	IV.	5.5	709,713,825	214
6916	5.5	II.	7.4	390,397,405	102
6957	4.0	II.	6.9	393,396,405	261
7071	5.8	II.	2.8	386,395	32
"	"	IV.	5.7	704,705,707,709,714,	81062
				777,823,824	304
7090	5.7	II.	2.8	386,390	11
"	"	IV.	5.4	704,705,707,713,721,	p4482
				777,823,824,825,829,	05443
				831,832,834	532
7123	6.1	II.	4.5	416	1
"	"	IV.	14.1	834	7
7124	6.4	II.	4.9	395	1
"	"	IV.	12.3	834	2
7213	5.3	II.	4.1	407	0
"	"	IV.	10.4	832	4
7236	5.9	II.	6.5	407	2
7324	5.4	II.	11.8	395,396	83
7366	3.7	II.	3.9	391,395,405,417	1331
"	"	IV.	9.7	833,836,837,838,844	91123
7386	5.4	II.	2.5	417	n
"	"	III.	7.4	467	2
"	"	IV.	4.5	705,707,709,710,711,	11112
				826,827,830,833,836,	30322
				837,838	21
7389	6.1	II.	9.0	391,417	3R

S. M. P. No.	S. M. P. Magn.	Sec.	Path.	Julian Day.	Resid.	S. M. P. No.	S. M. P. Magn.	Sec.	Path.	Julian Day.	Resid.
7452	5.9	II.	4.4	412	0	7637	5.5	III.	13.3	467	2
7503	5.6	II.	3.8	398,403,404,412,416	31053	"	"	IV.	6.2	830,845,857	211
"	"	IV.	9.4	850	0	7671	6.3	II.	10.5	418	3
7505	5.2	II.	2.9	399,410,416	530	7712	6.1	IV.	6.6	777	n
"	"	III.	12.5	460,467	63	7763	5.6	II.	1.8	388	1
"	"	IV.	5.9	711,713,714,822,844, 846,850,854	00411 113	"	"	III.	4.4	472,526	51
						"	"	IV.	2.8	777	R
7529	5.7	III.	5.2	460	1	7841	7.6	I.	8.6	151,157	20
"	"	IV.	3.2	822	5	7869	5.1	III.	9.4	459,502,522	521
7536	5.4	II.	7.3	397,403,404,406,413	30124	"	"	IV.	4.8	776,823,858	517
7540	6.1	II.	2.1	413	3	7872	6.8	I.	7.9	150,151,157	012
"	"	IV.	14.7	854,855	71	7885	8.1	I.	7.9	150,151,157	121
7541	5.9	II.	9.9	398,406	58	7891	5.6	III.	9.1	459,472,517,522	0401
7612	4.4	II.	2.7	409,418	p6	"	"	IV.	4.8	776	1
"	"	IV.	5.2	827,829,845,855,857	01102	7910	4.6	IV.	10.1	858	3
7637	5.5	II.	3.0	409	4						

CHAPTER V.

LARGE RESIDUALS.

THE numerical values of the residuals exceeding 9, and contained in the last column of Table VII., are given in Table IX. The number of the star, the Julian Day, and the photometric magnitude to the nearest tenth of a unit, are given in the first three columns of Table IX. and are taken from the first, seventh, and sixth columns of Table VII., respectively. In the case of double stars the number of the first only is given, and is placed in Italics. The value of the residual, expressed in tenths of a magnitude, is given in the fourth column, negative residuals being indicated by Italics. The fifth column gives the residual found by subtracting from the estimated magnitude the mean of the other estimates. It was found from the residuals in the last column of Table VII., and from those in the fourth column of Table IX. A small residual in the fifth column denotes that the estimate is confirmed by similar estimates on other nights.

TABLE IX.

DISCORDANT ESTIMATES.

No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.
38	620	4.3	11	12	550	282	4.2	12	8	889	377	5.7	11	9	1324	389	9.2	*10*	*8*
59	312	2.4	*11*	*11*	591	282	5.0	10	6	894	397	3.9	11	11	1392	406	6.8	12	5
"	620	"	11	14	689	283	7.5	*11*	*6*	899	378	6.6	12	6	1416	398	4.8	10	4
60	579	4.0	*10*	*7*	722	283	4.5	10	6	"	389	"	12	6	1453	399	3.8	10	9
64	312	4.8	10	9	733	381	9.2	*10*	0	905	382	9.6	*11*	*5*	1465	406	6.6	12	6
79	312	4.3	13	8	"	619	"	*10*	0	931	277	4.6	11	11	1480	377	−1.0	15	7
164	598	9.8	*10*	*2*	738	283	4.4	11	15	961	389	5.4	11	6	"	397	"	10	1
187	618	3.4	*14*	*10*	750	623	6.0	*10*	*8*	972	282	5.2	*10*	*12*	"	398	"	10	1
232	599	8.1	*11*	*8*	791	277	7.4	11	10	1036	378	8.0	*10*	*9*	"	399	"	15	7
290	252	0.5	15	10	797	383	9.5	*10*	*3*	1047	385	6.0	10	6	"	711	"	20	12
305	592	5.9	11	11	809	282	4.3	13	3	1165	277	6.2	10	3	1490	386	7.0	10	5
334	286	4.1	13	10	"	286	"	11	0	1199	282	3.7	11	9	1493	407	6.0	12	10
351	272	4.6	10	4	821	272	4.4	11	6	1217	398	2.7	13	11	1519	406	7.1	12	5
"	286	"	10	4	850	272	4.8	10	2	"	399	"	11	9	1569	711	3.2	13	9
396	591	7.2	13	10	868	403	3.4	11	8	1282	391	6.4	11	3	1654	399	4.4	11	3
438	283	3.7	10	10	874	272	4.4	12	2	1284	272	3.1	*11*	*11*	"	403	"	10	2
473	282	4.3	13	12	"	286	"	12	2	1288	282	4.3	13	12	1684	386	6.2	10	7

No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.
1685	399	4.9	10	14	2343	410	7.0	12	4	3233	777	10.6	*11*	0	3897	829	6.7	11	8
1688	386	6.8	10	6	2356	391	6.8	10	0	3240	838	6.9	11	2	3918	844	5.0	*10*	*8*
1699	385	7.0	10	0	"	410	"	10	0	3254	388	6.0	12	10	3937	846	7.3	12	3
"	390	"	10	0	2415	405	4.8	11	3	3256	388	6.2	13	10	3978	514	4.7	10	5
1742	399	5.2	*10*	*14*	2468	405	4.2	11	13	3273	825	6.7	11	3	4013	834	10.2	*10*	*3*
1754	385	6.5	10	0	2470	391	6.0	12	2	3275	824	7.3	12	3	4030	830	6.5	13	13
"	417	"	10	0	"	410	"	12	2	3301	829	6.8	10	0	4059	525	4.5	12	10
1770	414	10.0	*10*	*6*	"	824	"	10	0	"	836	"	10	0	4070	827	5.9	11	2
1811	412	6.5	13	8	"	825	"	10	0	3308	516	4.5	10	0	4076	831	6.4	11	3
1827	391	7.0	10	5	2523	418	7.2	11	8	"	517	"	12	3	*4079*	831	5.9	13	7
1838	417	7.5	13	10	2577	399	5.4	11	5	3317	460	4.4	10	2	4090	832	6.4	18	14
1845	403	2.5	10	8	2590	399	4.4	10	0	3340	777	7.0	10	5	4094	502	6.2	10	0
"	404	"	10	8	"	405	"	12	3	3385	522	5.2	10	4	"	526	"	10	0
1855	382	4.5	11	10	2600	397	5.0	11	1	3408	516	4.8	10	2	4111	776	10.2	10	3
"	707	"	10	9	"	399	"	10	0	3411	467	10.0	*10*	0	4147	517	4.2	13	12
1858	393	7.3	12	5	"	404	"	10	0	"	777	"	*10*	0	4153	517	4.2	14	15
1910	707	6.0	10	7	2604	412	6.9	11	*5*	3428	517	4.6	13	5	4154	834	10.1	*11*	*5*
1943	403	4.9	10	4	"	414	"	16	5	3430	467	10.0	*10*	0	4165	831	6.4	16	10
1990	382	7.0	10	*2*	2614	405	4.0	12	8	"	777	"	*10*	0	4182	514	6.3	12	5
"	412	"	12	2	"	713	"	10	6	3438	824	7.0	10	0	*4208*	854	1.0	10	8
1996	403	4.9	10	2	2623	397	2.0	10	4	"	830	"	10	0	4231	158	9.5	*10*	*3*
2004	386	6.4	11	*3*	"	721	"	15	10	3452	516	4.7	11	3	4247	844	4.0	10	7
"	410	"	14	3	"	826	"	15	10	3453	467	10.1	*11*	*5*	4270	844	2.9	11	10
2005	382	4.7	11	0	2629	398	4.0	15	9	3455	825	6.6	14	*5*	4289	162	4.7	11	7
"	412	"	11	0	"	405	"	12	5	"	833	"	19	5	4297	459	5.0	10	4
"	707	"	11	0	2694	412	7.7	11	3	3470	467	10.0	*10*	0	4301	162	4.6	14	4
2064	417	6.5	10	5	2707	405	4.7	12	6	"	777	"	*10*	0	"	459	"	10	*2*
2082	713	3.8	10	8	2770	412	9.8	*10*	*5*	3474	844	5.5	10	5	4310	167	4.7	11	2
2102	403	4.7	11	7	2787	399	4.8	11	5	3477	514	4.4	13	1	4312	167	3.3	12	10
2104	383	7.7	11	8	2836	412	6.5	10	7	"	516	"	14	2	4317	167	4.9	10	4
2105	391	6.1	11	2	2842	418	7.1	14	10	"	517	"	11	*3*	4319	844	6.6	12	3
2120	385	5.8	10	4	2844	403	1.7	10	5	3481	838	6.9	11	12	4325	147	7.2	*12*	*10*
2142	403	4.8	10	12	2849	403	4.9	11	1	3484	467	10.2	*12*	*5*	4337	536	9.8	*10*	*4*
2184	398	5.1	10	4	"	404	"	11	1	3495	846	2.8	12	10	4339	502	6.0	15	15
2201	403	5.2	10	3	2857	397	4.2	13	6	3556	460	3.8	12	10	4354	167	4.4	10	5
2223	389	6.5	13	8	2876	777	9.6	*11*	*3*	3557	850	9.8	*13*	*5*	4362	502	6.1	11	7
2238	467	9.5	*10*	*4*	2877	777	9.6	*11*	*5*	3590	837	6.8	10	3	4365	167	4.8	11	3
2259	385	6.0	10	5	2911	403	2.6	11	9	3630	822	6.7	11	6	4402	147	3.6	*16*	*19*
2265	414	6.9	11	2	3004	834	5.5	*10*	*3*	3678	502	4.0	15	13	4412	167	5.0	10	6
2277	405	4.8	10	2	3053	399	4.6	10	7	3716	502	4.7	11	3	4423	502	10.3	*11*	*3*
2288	410	6.2	10	3	*3110*	416	5.3	12	9	3728	838	10.0	*10*	*5*	4439	158	9.5	*10*	*3*
2303	396	4.9	13	7	3121	403	4.4	12	3	3730	838	6.6	12	8	4443	537	9.5	*10*	*3*
"	399	"	11	4	3219	777	10.0	*10*	*3*	3784	472	6.7	11	3	4447	174	10.0	*10*	*2*
2305	399	1.9	19	13	3229	844	7.5	*10*	*1*	3816	834	6.8	12	5	"	834	"	*10*	*2*
2314	405	4.4	11	9	"	846	"	*10*	*1*	3853	514	3.6	*11*	*12*	4461	162	4.8	10	8
2321	396	4.8	10	2	"	854	"	*10*	*1*	3871	514	4.8	11	7	4488	157	9.5	13	16
"	404	"	10	2	3233	467	10.6	*11*	0	3875	823	6.9	11	10	4507	167	3.0	*10*	*9*

No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.
4507	517	3.0	*12*	*11*	4811	855	10.1	*11*	*5*	5152	182	5.6	10	3	5435	157	6.0	10	6
4514	502	6.6	14	12	4819	172	10.1	*10*	*4*	5157	535	6.3	12	10	*5450*	154	5.1	*11*	*7*
4515	148	4.6	10	3	4827	171	10.0	*10*	*5*	5158	175	7.1	14	7	5464	167	4.9	13	11
"	167	"	10	3	4837	148	4.1	11	5	5160	167	5.3	10	2	5486	152	4.8	10	6
"	502	"	12	6	"	858	"	11	5	5163	151	3.5	*10*	*11*	5489	152	4.7	12	8
4521	151	4.4	15	3	4846	157	6.1	14	14	5180	160	6.4	14	11	"	167	"	10	6
"	167	"	12	*3*	4848	150	4.4	13	4	5188	151	4.8	10	2	5510	167	4.8	12	8
4522	148	4.9	11	2	"	155	"	12	3	5193	151	4.0	16	8	5512	155	4.4	12	8
"	167	"	10	0	4853	175	4.8	10	12	"	167	"	15	6	5525	179	9.5	*10*	*3*
4539	514	7.2	10	11	4854	155	4.2	*19*	*28*	5194	167	3.0	13	11	5549	167	4.7	10	2
4556	178	6.8	12	10	"	197	"	11	17	5207	151	4.2	11	4	5615	535	8.8	*10*	*7*
4565	525	5.7	13	11	4862	172	10.0	*10*	*6*	5208	172	4.4	14	4	5653	553	6.4	11	6
4594	776	5.9	11	2	4877	531	5.7	13	9	"	174	"	24	19	5685	206	6.4	11	3
4610	517	2.6	14	11	4890	174	10.0	*10*	*5*	5214	180	5.7	13	10	5702	227	9.0	*10*	*8*
4623	540	6.9	11	2	4895	172	9.1	*11*	*6*	5220	180	3.4	11	12	5703	221	4.1	14	12
4630	179	6.2	16	0	"	857	"	*11*	*6*	5223	180	6.1	14	*1*	5764	227	6.4	11	5
"	543	"	16	0	4921	155	4.6	10	4	"	186	"	15	1	5787	221	2.3	12	11
4641	148	4.2	11	11	"	196	"	12	6	5226	155	5.0	10	2	5809	154	5.0	10	6
4646	150	4.6	12	6	*4934*	158	9.5	*12*	3	"	193	"	10	2	5815	154	3.5	13	7
"	545	"	11	5	"	174	"	*15*	*3*	5229	148	4.4	13	1	"	221	"	10	3
4653	179	5.6	16	13	4950	147	4.0	13	5	"	155	"	11	*2*	"	222	"	10	3
4659	179	9.5	10	17	*4960*	147	0.2	11	7	"	193	"	13	1	5820	542	7.2	10	10
4665	525	5.8	10	4	4962	158	9.0	*10*	*10*	5231	196	3.6	12	10	5831	542	7.0	10	5
4666	174	9.6	*11*	*5*	4975	553	2.5	10	10	"	517	"	10	8	5837	225	3.0	10	8
4667	173	6.4	16	14	4976	147	3.8	12	7	5233	172	10.2	*12*	*3*	5855	178	6.5	11	6
4672	150	3.5	11	10	"	152	"	10	4	5237	193	4.7	10	4	5924	223	4.9	10	3
"	553	"	10	9	4978	148	4.2	11	11	5251	148	4.6	11	3	5941	228	7.8	10	3
4673	182	9.7	*12*	*5*	4987	151	3.8	16	9	5258	158	5.7	15	12	5967	236	7.2	11	3
4675	151	4.3	12	10	"	171	"	10	1	5267	501	6.8	10	8	6018	230	7.5	10	10
"	516	"	10	7	*5000*	160	5.2	13	9	5282	155	4.9	10	2	6033	584	7.2	10	2
4690	150	4.4	12	3	5010	160	5.7	13	11	"	196	"	10	2	"	585	"	10	2
"	151	"	10	0	5014	171	6.8	10	3	5305	148	4.1	12	6	6047	230	10.0	*10*	*2*
4704	173	5.7	11	7	5015	160	6.8	12	5	5310	148	3.0	*10*	*11*	6048	236	4.3	13	9
4715	147	2.8	*10*	*10*	5017	158	10.3	*10*	*2*	5312	196	4.8	10	6	"	539	"	14	10
"	162	"	*10*	*10*	5022	160	9.6	*11*	*3*	5313	152	5.8	*10*	*12*	6055	230	10.2	*10*	*1*
"	196	"	12	16	5034	148	4.4	11	2	5324	155	4.0	14	2	6056	223	3.8	12	10
4717	553	7.1	11	2	"	196	"	12	4	"	162	"	16	4	6057	231	10.2	*10*	*3*
4724	148	4.8	13	3	5042	844	5.4	11	6	5337	162	4.4	12	5	6063	201	2.8	10	9
"	162	"	13	3	5046	180	10.1	*11*	*5*	5356	162	4.8	10	4	6076	244	6.8	10	*1*
4731	148	4.0	10	6	5079	172	10.0	*10*	*2*	5362	531	6.7	11	3	"	556	"	12	2
"	162	"	10	6	5104	167	5.2	10	3	5391	179	6.5	11	6	"	561	"	10	*1*
4732	162	4.0	10	8	5117	160	3.2	18	16	5406	208	6.4	11	10	6082	193	1.8	10	3
4748	162	4.5	11	6	5119	152	3.8	13	4	5414	179	6.3	15	13	"	222	"	10	3
4764	174	10.0	*10*	*3*	"	167	"	16	8	5416	167	3.1	*11*	*10*	"	580	"	17	10
4772	150	4.6	12	4	5129	208	5.9	11	6	5422	154	7.8	*13*	*13*	6093	201	4.5	14	7
4775	155	2.2	11	10	5132	160	6.7	11	3	5427	157	4.7	13	7	6099	197	4.2	10	1
"	556	"	13	12	5140	535	7.4	11	5	"	197	"	11	5	"	201	"	14	7

No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.	No.	J. D.	Magn.	R.	M.
6104	553	2.0	10	6	6428	208	3.0	12	9	6831	582	8.7	*10*	*6*	7320	262	4.2	11	8
"	580	"	10	6	6442	223	4.2	12	10	6845	241	6.7	11	8	7366	260	3.7	11	8
6110	206	7.7	11	8	6471	553	1.9	11	8	6848	499	9.1	*11*	*5*	7403	627	4.4	10	9
6127	531	10.0	*10*	*3*	"	580	"	11	8	6852	499	9.0	*10*	*4*	7432	624	3.2	10	10
6154	192	2.6	10	8	6472	208	7.1	*11*	*7*	6864	566	8.0	10	8	7448	260	4.5	10	6
6155	192	3.5	10	7	6480	208	7.1	*11*	*5*	6871	230	4.4	13	5	7481	581	1.9	11	10
6168	531	6.6	12	8	6491	197	4.0	10	6	"	230	"	12	4	7486	264	4.6	10	3
6183	204	7.3	12	10	6513	221	5.3	*13*	*12*	6893	235	7.4	11	5	"	581	"	11	5
6231	535	6.4	13	7	6523	221	4.4	11	2	6908	563	6.6	11	2	7487	580	5.0	*10*	*14*
6237	536	6.3	12	0	"	223	"	10	0	6925	499	8.3	*11*	*1*	7519	567	10.0	*10*	*2*
"	543	"	12	0	"	227	"	12	3	"	582	"	*13*	*3*	7538	572	7.2	10	5
6238	536	5.7	13	0	6537	235	6.8	14	2	6971	587	9.2	*10*	*3*	7568	274	6.9	11	9
"	543	"	13	0	"	563	"	12	*2*	6975	223	4.7	*11*	*15*	7573	266	4.8	10	10
6239	531	7.3	12	8	6547	236	6.2	15	11	6990	587	9.0	*10*	*4*	7594	567	7.6	*14*	*14*
6241	536	6.6	11	*1*	6557	225	4.0	10	8	7074	230	2.0	10	7	7612	283	4.4	12	11
"	543	"	12	1	6597	235	6.6	10	1	"	580	"	10	7	7615	311	2.1	17	15
6246	536	6.2	15	2	6621	227	7.8	10	2	"	588	"	*10*	*15*	7619	266	4.8	10	0
"	543	"	13	*2*	"	228	"	10	2	7080	559	10.2	*10*	*3*	"	311	"	11	2
6247	536	6.5	12	*1*	6683	221	4.8	10	6	7100	562	10.6	*11*	0	7627	579	4.9	11	6
"	543	"	13	1	6716	225	4.4	10	6	"	567	"	*11*	0	7680	253	4.1	15	14
6263	543	6.8	10	1	6721	223	7.5	*10*	*2*	7137	585	5.3	*11*	*12*	7715	311	4.4	11	9
6276	154	4.7	12	5	"	227	"	*10*	*2*	*7244*	586	7.5	11	1	7738	295	7.3	10	5
"	192	"	11	3	6726	231	6.8	12	5	"	587	"	10	0	7752	570	10.5	*10*	*3*
6328	236	7.5	10	*3*	6728	565	6.4	11	5	"	588	"	10	0	7758	627	4.0	12	12
"	539	"	13	3	6729	563	7.2	16	13	7265	262	7.2	*10*	*7*	7759	576	6.2	10	7
6338	193	3.8	10	9	6762	236	6.8	12	14	7284	586	6.5	10	6	"	591	"	10	7
"	201	"	10	9	6805	227	4.1	12	14	7286	588	4.8	10	4	7815	311	4.6	10	10
6374	193	4.5	10	3	6806	563	6.9	11	2	"	627	"	10	4	7904	272	4.6	*13*	*12*
6401	206	7.5	10	5	6812	231	5.1	13	9	7320	260	4.2	10	7	7910	283	4.6	10	4
6419	556	9.5	*10*	*5*															

It seldom happens, when the measures are accordant, that the original readings are wanted. For this reason, and owing to the space they would occupy, they have not in general been given in the present volume. When, however, a measure is discordant, any additional information which may explain the cause of the discordance is useful. Accordingly, in Table X. the original photometric readings are given for all of the measures in Table VII. in which the residuals exceed half a magnitude. To these are added all the measures of those stars which were observed twice only, with results differing by 6 or more, that is, when either residual exceeds 3. The individual readings are also given in some other cases, especially when the observation is marked R or T in Table VII. The S. M. P. number is given in the first column of Table X., the Julian Day in the second, the mean photometric magnitude to the nearest tenth of a unit in the third, and the corresponding residual in the fourth, these quantities being derived from the first, seventh, sixth, and eighth columns of Table VII., respectively. In the case of double stars, the number of the first star only is given, and it is placed in Italics. When the letter R appears in Table VII. the residual of the rejected measure taken from the remarks beginning on page 201 has been substituted. The four readings of the photometer circle are given in the fifth column. The residual found by subtracting from the estimated brightness the mean of the estimates made on other nights is given in the sixth column. It is derived from the residuals in the last column of Table VII. and the fourth column of Table IX. If this difference agrees with the residual in the fourth column, it indicates that the star really appeared unusually bright or faint, as, for instance, if the star was variable, or its light was affected by a passing cloud. If the large residual was not confirmed by the estimate, it might be due to an error in one or more of the readings, or to a cloud over σ *Octantis*, either of which would affect the measure, but not the estimate. The seventh column contains the residuals of the measures of the preceding and following stars observed on the same night, in order to show whether clouds or some other cause of systematic error affected the stars observed at about that time. When the observation of either of these stars was prevented by clouds the letter C is substituted for the residual. The final column gives the conclusion arrived at regarding the cause of the discordance. The letter a denotes that no explanation was found for the discordance, and that the observation was retained, as the residual was not very large. Residuals of 6 or less are usually retained. The letter b denotes that the residual was retained, but that the star was either known or suspected to be variable. The letter c denotes that the observation was rejected for discordance, and that there is no evidence of error due to erroneous position, discordant readings, or the presence of clouds. The letter d denotes that the presence of clouds was noted at about the time of the observations. The letter e denotes that from the observations of the declination circle and collimation scale, it is probable that some other star was observed. The letter f denotes that the individual readings are discordant. The observations marked c are of course the most interesting, as they are perhaps due to variability of the star. This is the more probable in cases like 1036, 5463, 5703, and 6239, in which the abnormal brightness or faintness is confirmed by the estimate.

TABLE X.

LARGE PHOTOMETRIC RESIDUALS.

No.	J. D.	Magn.	Res.	A.	B.	C.	D.	E.	P.	F.	L.	No.	J. D.	Magn.	Res.	A.	B.	C.	D.	E.	P.	F.	L.
59	312	2.4	T	19.5	347.2	281.8	80.4	11	2	T	f	2035	409	9.4	6	31.0	47.9	125.3	138.7	1	1	0	a
64	312	4.8	T	310.0	118.8	238.4	323.3	9	T	2	f	2051	467	9.7	9	352.3	16.4	83.6	108.6	R	0	2	e
196	618	4.1	6	92.7	236.4	190.6	317.3	1	2	1	a	2073	385	6.9	6	50.8	123.2	141.6	208.7	5	0	1	a
441	304	9.7	9	297.1	336.4	27.1	63.9	2	3	2	e	2078	385	9.5	8	249.0	279.8	344.0	5.8	2	1	2	c
561	282	5.3	T	175.0	250.0	253.1	16.0	1	0	1	f	2096											
568	277	9.1	3	216.6	243.4	301.0	340.8	0	2	1	a	2097	383	7.6	6	160.0	197.9	249.0	283.9	2	0	3	a
“	600	“	4	240.3	266.1	326.8	359.3	0	3	2	a	2158	390	6.8	10	139.2	215.3	218.8	318.0	1	1	2	c
603	277	9.4	3	307.4	332.0	29.4	64.7	0	2	2	a	“	409	“	6	88.7	165.4	183.7	255.7	4	1	1	a
“	602	“	4	243.6	265.0	327.0	357.4	0	1	1	a	2193	381	9.3	T	162.0	180.8	242.6	279.0	3	0	4	f
646	605	8.4	6	315.8	5.6	44.6	104.0	0	1	C	d	2273	381	8.7	6	336.0	2.1	59.0	101.1	6	0	1	a
780	382	9.4	6	164.0	174.9	250.0	270.3	3	2	1	a	2328	467	9.6	11	174.6	196.6	265.9	284.6	2	1	4	e
961	377	5.4	6	257.0	9.8	356.0	100.0	2	0	0	a	2388	381	9.6	6	340.0	0.9	67.0	92.0	3	2	0	a
1036	378	8.0	12	320.8	15.9	51.0	110.4	9	2	2	c	“	777	“	6	226.1	249.8	313.3	343.9	1	2	2	a
1037	395	7.9	T	161.2	190.3	246.7	266.1	1	2	2	f	2462	389	9.6	4	80.0	93.6	167.1	183.8	0	1	2	a
1078	381	7.9	11	51.1	114.1	148.0	198.0	2	0	2	c	“	709	“	5	138.3	154.9	225.0	247.3	0	2	2	a
1106	278	9.9	6	125.8	155.0	220.7	242.0	3	1	3	a	2496	472	9.2	T	342.4	22.6	77.3	162.6	1	0	1	f
“	389	“	6	78.3	92.8	172.9	182.7	5	0	2	a	2555	389	9.6	4	257.7	272.0	348.5	4.8	0	1	F	a
1145	278	9.6	6	221.0	244.7	306.0	341.0	2	1	6	d	“	709	“	5	137.3	154.3	226.1	248.3	0	1	F	a
1151	278	8.0	6	294.7	346.4	21.6	85.0	3	6	8	d	2602	397	3.7	T	186.4	5.7	151.0	240.2	1	1	6	f
1155	272	5.9	6	23.2	99.8	106.7	193.6	1	1	0	a	2623	397	2.0	6	274.4	63.9	359.8	158.6	4	T	4	a
1164	278	10.0	8	38.0	62.0	123.1	158.9	0	6	8	d	2626	398	6.9	6	57.3	104.8	145.2	192.6	0	2	2	a
1172	278	9.6	8	123.7	156.9	214.0	247.9	3	8	6	d	2674	389	8.6	5	255.7	278.7	346.2	8.4	2	F	3	a
1175	278	8.4	6	211.0	253.0	293.6	350.4	5	8	6	d	“	709	“	4	134.2	158.6	220.7	254.7	2	F	4	a
1181	278	9.3	6	305.5	334.8	30.0	70.7	1	6	C	d	2681	389	9.2	3	349.1	3.6	75.0	97.6	0	5	1	a
1266	383	7.6	3	244.0	282.0	334.6	21.0	0	0	0	a	“	709	“	4	223.6	247.6	316.6	337.4	0	4	2	a
“	390	“	4	334.2	17.2	57.1	111.4	0	1	0	a	2760	389	10.0	3	258.6	271.2	349.1	2.7	2	1	0	a
1289	386	7.4	4	157.0	191.0	245.0	291.0	2	1	A	a	“	709	“	4	139.2	154.0	228.9	245.6	2	1	1	a
“	392	“	3	240.0	293.6	331.6	19.7	2	2	3	a	2821	389	9.8	3	258.2	273.0	349.4	2.9	3	1	1	a
1353	275	5.8	T	3.9	98.6	....	....	1	0	.	f	“	709	“	4	138.6	155.7	227.1	244.1	3	0	4	a
1417	381	9.8	6	161.1	179.8	252.1	273.9	1	2	1	a	2824	389	9.8	4	78.4	91.0	169.6	185.0	0	1	1	a
1420	383	8.6	3	350.2	7.1	68.4	106.0	0	0	3	a	“	709	“	4	226.1	247.3	318.3	332.2	0	4	2	a
“	406	“	4	4.4	27.2	86.2	124.9	0	1	2	a	2904	824	7.8	14	314.0	348.8	43.3	78.2	1	1	0	e
1636	392	9.8	8	346.8	5.1	73.7	99.9	0	1	4	d	3037	388	8.9	3	341.4	6.9	71.0	98.4	0	2	2	a
1675	385	10.1	6	168.0	183.0	256.0	277.0	1	1	1	a	“	721	“	4	45.6	66.7	138.7	161.6	0	3	2	a
1697	409	8.3	6	108.2	147.8	197.7	241.0	1	0	2	a	3228	388	9.1	3	256.4	278.4	341.6	9.0	0	1	1	a
1812	386	8.6	4	343.0	8.0	70.8	93.4	3	0	1	a	“	721	“	4	47.7	66.6	134.7	155.0	0	1	1	a
“	410	“	3	205.4	232.2	293.2	329.0	3	1	0	a	3335	836	9.5	6	244.3	262.7	326.6	358.0	1	1	1	a
1815	407	var.	6	73.0	183.6	170.7	266.2	6	0	0	b	3445	824	9.4	8	138.1	164.1	231.0	254.1	R	2	14	d
“	711	“	7	170.1	307.0	266.9	31.6	4	2	2	b	3450	824	8.8	14	228.0	250.8	317.1	343.1	R	8	C	d
“	713	“	8	263.9	30.0	347.6	127.6	1	1	0	b	3639	777	6.2	10	86.0	210.1	177.3	310.8	0	0	C	d
1831	412	8.3	6	208.5	236.6	282.6	334.8	5	0	1	a	3650	846	8.9	6	314.6	10.7	44.1	98.6	3	1	1	a
1845	304	2.5	6	161.0	315.0	247.8	47.1	6	2	1	a	3660	831	7.8	6	215.9	288.8	301.1	28.1	2	2	0	a
1892	383	9.0	6	162.6	192.3	246.0	284.4	2	3	1	a	3742	825	7.8	6	281.4	22.0	30.0	93.0	0	0	0	a
“	412	“	6	121.6	137.2	205.0	224.0	3	2	1	a	3776	827	8.0	4	112.0	196.0	217.7	275.1	0	0	0	a

No.	J. D.	Magn.	Res.	A.	B.	C.	D.	E.	P.	F.	L.
3776	834	8.0	3	132.3	188.9	229.3	282.2	0	1	1	a
3792	502	5.6	8	225.8	327.6	307.9	59.3	1	3	2	c
4041	855	8.1	14	21.3	112.9	102.2	210.3	1	9	4	d
4068	472	8.7	T	79.6	110.3	162.7	27.0	1	2	2	f
4071	855	7.9	9	299.3	23.2	30.0	119.8	1	4	14	d
4085	158	8.6	6	310.1	341.4	39.3	69.9	9	1	0	a
4242	162	1.6	8	153.6	317.3	248.1	43.6	3	0	0	c
4286	536	6.0	10	298.9	68.3	30.2	159.1	2	1	3	c
4324	167	1.5	T	341.7	48.5	315.2	135.4	5	1	2	f
4337	536	9.8	13	74.4	115.0	161.0	212.7	4	2	14	d
4344	536	7.8	14	140.3	234.2	226.2	325.2	1	13	13	d
4350	536	8.6	13	247.3	306.9	326.0	49.4	1	14	11	d
4387	502	9.4	5	161.9	215.1	256.5	297.7	0	0	7	d
4397	502	8.3	7	244.4	306.6	322.7	54.1	1	5	10	d
4399	502	7.1	10	307.3	63.4	37.3	152.3	7	7	2	d
4401	536	9.2	11	340.0	32.4	71.4	125.9	2	13	15	d
4406	536	7.6	15	47.3	148.1	135.0	238.6	2	11	7	d
4409	536	9.5	7	168.3	206.0	256.0	297.3	1	15	7	d
4415	155	9.0	6	231.0	251.8	306.0	353.8	.	3	1	a
"	536	"	7	255.1	299.0	344.0	40.0	2	7	7	d
4447	536	10.0	7	352.2	23.6	80.4	114.3	1	7	11	d
4482	536	7.7	11	58.3	138.0	133.3	232.0	2	7	5	d
4490	536	8.8	5	165.7	211.3	251.1	302.7	1	11	2	d
4494	776	7.6	6	283.8	16.0	22.3	92.3	1	1	2	a
4671	782	7.2	19	215.4	259.0	306.0	346.6	.	1	7	d
4689	782	9.1	7	313.6	344.1	44.9	76.0	3	19	c	d
4749	196	var.	7	199.1	282.1	289.1	11.3	0	5	4	b
4775	556	2.2	T	195.0	359.8	284.2	104.0	12	0	2	f
4802	183	8.1	8	246.0	275.3	327.8	9.2	0	1	0	e
4816	855	7.2	6	41.0	102.3	120.7	203.1	5	4	1	a
4830	531	9.7	6	85.9	104.8	175.2	200.9	2	0	1	a
4858	150	5.0	6	261.7	35.7	351.3	120.3	8	0	7	a
4901 4902	855	7.8	6	312.9	7.6	39.3	102.0	2	1	0	a
4923	158	9.9	T	327.2	336.0	44.5	66.0	2	0	0	f
4946	182	9.3	15	146.3	201.3	235.0	282.3	2	5	3	c
4982	855	9.7	6	51.4	89.3	136.3	183.7	3	1	3	a
5019	173	7.7	T	321.6	338.9	40.8	71.2	1	1	2	f
5034	167	4.4	T	257.5	35.1	115.1	177.0	2	0	0	f
5042	150	5.4	7	12.2	99.5	105.0	190.4	1	6	11	b
5081	150	2.7	11	159.0	297.0	251.8	39.5	2	2	1	c
5172	531	9.5	8	354.2	17.7	84.2	108.3	2	0	2	c
5174	540	8.1	6	65.6	130.6	149.6	222.6	1	2	2	a
5220	180	3.4	10	276.7	55.7	17.8	144.3	12	0	10	d
5225	180	8.6	10	70.8	87.4	152.3	183.3	2	10	c	d
"	186	"	6	240.4	275.6	317.5	17.6	2	1	0	a
5231	148	3.6	T	161.0	309.5	41.1	224.4	1	2	0	f

No.	J. D.	Magn.	Res.	A.	B.	C.	D.	E.	P.	F.	L.
5250	560	7.6	9	78.0	119.9	160.0	215.4	0	4	4	d
5264	155	5.6	6	272.8	23.8	0.5	110.7	2	2	4	a
5313	152	5.8	9	18.8	90.9	197.9	278.3	12	2	2	e
5349	175	8.6	4	318.6	350.6	48.5	82.5	2	1	4	a
"	206	"	3	232.1	272.7	317.9	4.6	2	2	3	a
5355	175	9.4	4	54.5	77.1	143.4	168.0	3	4	2	a
"	206	"	3	322.8	356.0	56.6	84.0	3	3	2	a
5358	201	8.1	13	133.4	188.9	208.8	288.0	2	2	2	c
5384	192	8.6	6	319.5	349.5	51.6	77.9	1	3	0	a
"	560	"	6	161.2	216.5	247.3	309.2	3	3	4	a
5393	186	6.4	6	115.6	223.2	217.5	311.2	4	2	4	a
5420	186	9.3	4	248.7	272.0	328.3	8.0	2	6	1	a
"	501	"	4	84.1	110.8	167.2	206.8	2	2	1	a
5463	174	9.7	8	226.9	256.0	313.5	348.0	7	1	2	c
5465	172	8.5	4	306.0	349.6	32.8	82.3	0	2	1	a
"	213	"	5	45.6	71.1	124.5	168.9	0	1	0	a
5468	172	7.2	4	109.5	192.4	201.0	270.6	5	1	1	a
"	213	"	4	207.5	267.5	298.0	3.9	5	0	1	a
5489	155	4.7	6	257.4	30.6	350.0	117.2	2	4	5	d
5494	173	8.2	9	127.1	176.9	216.2	285.0	4	0	2	c
5550	182	6.0	T	46.6	124.3	111.0	120.4	2	2	1	f
5617	182	7.9	11	333.4	7.5	67.5	95.9	1	0	3	c
5651	175	9.8	9	239.8	253.7	325.4	342.6	0	0	4	c
5652	175	9.8	4	326.5	348.5	58.4	75.0	2	R	1	a
"	206	"	3	58.5	81.2	142.3	171.1	2	1	1	a
5674	185	9.8	T	153.5	164.0	238.7	279.7	2	2	0	f
5703	221	4.1	10	343.5	112.2	79.4	193.9	12	0	0	c
5760	560	10.0	6	260.2	294.5	344.0	23.4	0	1	6	d
5770	175	7.9	4	229.8	267.9	310.5	2.4	5	1	2	a
"	206	"	3	46.0	93.1	128.8	195.0	5	0	1	a
5781	560	9.4	8	345.7	29.9	73.5	122.6	2	6	8	d
5787	171	2.3	T	338.0	136.5	227.0	46.1	3	4	3	f
5839	179	5.6	6	198.3	319.8	288.7	47.1	8	2	1	a
5860	565	5.6	6	20.1	113.5	95.4	207.8	2	0	3	a
5862	560	8.9	8	68.4	126.2	155.3	216.8	4	6	8	d
5866	560	9.6	8	160.0	209.4	255.3	298.0	1	8	2	d
5881	227	8.5	6	256.4	308.3	343.0	34.7	2	2	0	e
5924	221	4.9	6	156.9	298.2	250.3	24.0	2	2	0	a
5926	561	9.4	6	177.2	199.8	263.8	288.2	3	0	2	a
5931	228	8.2	6	194.3	236.9	276.4	330.3	2	1	2	a
5937	204	7.9	T	322.7	355.5	54.5	....	6	1	3	f
5989	183	6.0	8	288.1	56.9	32.1	138.9	.	3	2	c
6003	228	6.6	13	343.5	81.8	340.0	92.0	2	3	8	d
6006	228	9.5	8	21.1	48.5	109.0	144.3	1	13	5	d
6036	203	9.1	6	235.0	264.9	318.8	0.3	1	1	3	a
"	560	"	11	142.6	225.6	249.3	307.2	2	3	9	d
6047	230	10.0	4	113.0	131.2	205.0	221.8	2	3	0	a

No.	J. D.	Magn.	Res.	A.	B.	C.	D.	E.	P.	F.	L.
6047	241	10.0	*3*	190.9	211.0	274.1	301.1	2	*3*	*1*	a
6060	560	8.2	*11*	243.6	308.2	320.0	56.0	2	*11*	*10*	d
6110	207	7.7	T	244.4	274.0	313.1	6.1	*4*	1	1	f
6134	560	8.6	*12*	326.8	48.0	67.3	127.7	*1*	*9*	*8*	d
6142	231	7.8	12	279.0	310.8	8.8	43.0	4	1	*6*	c
6150	231	8.8	*6*	5.1	48.8	89.9	140.4	*3*	10	4	a
6192	535	7.8	*6*	62.1	131.3	148.9	226.7	2	*3*	*3*	a
6198	531	7.6	4	66.3	127.6	153.7	220.8	2	1	3	a
"	535	"	*3*	142.4	232.0	250.6	306.6	*2*	*6*	*2*	a
6209	560	9.8	*10*	75.6	115.3	166.6	209.0	1	*10*	*2*	d
6221	531	8.8	6	343.6	26.6	73.9	104.6	2	2	2	a
6233	531	8.8	*12*	143.4	227.3	247.3	309.6	*3*	*5*	7	c
6239	531	7.3	8	244.2	304.1	328.0	32.3	8	*9*	3	c
6273	203	9.9	*6*	326.0	352.1	57.7	85.6	*4*	*1*	0	a
6284	218	8.6	9	285.4	345.2	21.0	68.8	3	*1*	*3*	c
6300	236	8.0	6	93.1	124.3	181.5	219.4	3	0	0	a
6456	228	8.9	*9*	280.4	324.1	11.2	50.8	*1*	*3*	*3*	c
6521	228	9.0	*3*	287.8	316.8	16.3	48.3	0	*3*	*2*	a
"	534	"	4	83.2	112.9	166.6	207.7	0	3	2	a
6640	228	var.	*10*	319.8	101.0	49.6	194.0	*4*	*4*	*6*	b
6686	228	2.7	*6*	42.1	201.0	131.2	292.1	5	*4*	*2*	a
6692	564	9.7	6	356.8	17.4	83.0	108.1	0	1	2	a
6704	231	7.4	6	270.8	313.9	352.0	55.6	0	0	2	a
"	513	"	*6*	324.7	57.6	57.4	132.9	0	*1*	*2*	a
6785	544	8.0	6	346.6	27.5	76.3	115.1	0	*2*	*4*	a
6789	513	8.6	*6*	255.3	300.7	334.4	38.6	*1*	*4*	*2*	a
6822	260	8.5	5	307.2	335.0	35.2	72.6	5	3	*2*	a
"	566	"	*4*	44.3	85.6	125.2	190.0	*5*	3	*2*	a
6870	260	9.9	*9*	124.5	157.9	214.0	244.4	1	2	3	d
6873	260	9.5	*4*	217.1	245.8	305.1	338.5	*1*	R	R	d
6886	260	6.2	*12*	258.8	17.4	349.8	115.8	6	*3*	1	d
6899	230	9.0	*3*	195.1	225.0	281.0	323.7	*1*	0	2	a
"	534	"	4	263.3	294.2	348.0	26.8	1	1	R	d
6903	534	9.4	*1*	351.6	22.2	75.9	117.1	3	4	R	d
6906	534	8.6	*4*	76.4	123.4	151.0	220.7	2	R	C	d
6907	231	8.8	*4*	177.8	217.6	273.1	315.1	2	0	0	a
"	565	"	4	48.8	76.6	132.8	173.2	*2*	*3*	*4*	a
7000	565	8.9	8	318.9	347.8	52.5	76.9	5	2	2	e
7011	244	9.6	6	117.0	134.6	208.9	226.2	0	0	0	a
7015	236	7.7	*3*	259.5	320.6	354.0	49.8	*3*	*1*	*1*	a
"	564	"	4	155.8	216.0	249.3	304.8	3	1	0	a
7065	245	9.1	*8*	217.5	243.3	299.0	342.1	2	*3*	*2*	c
7072	253	5.7	6	277.8	2.9	10.2	96.7	0	1	0	a
7081	236	8.8	*4*	4.5	35.8	88.2	132.6	*3*	0	0	a
"	567	"	4	226.3	260.5	315.6	352.7	3	0	1	a
7099	241	8.4	*6*	86.0	141.2	176.2	228.2	2	*1*	*1*	a
7110	245	9.4	*6*	305.6	335.6	39.6	67.1	0	*2*	*1*	a
7115	513	8.6	*8*	333.7	38.8	65.5	122.3	1	*2*	*1*	c
7156	244	8.6	*6*	285.8	330.9	14.0	57.7	2	*1*	*3*	a
7186	244	8.7	*4*	17.4	54.9	109.4	152.0	*5*	N	0	a
"	559	"	3	259.2	295.0	346.8	25.4	5	N	0	a
7205	245	8.5	*6*	114.0	163.6	215.2	247.2	*1*	*2*	*3*	a
7210	513	8.3	*6*	151.1	218.3	247.3	306.2	2	*2*	0	a
7258	262	5.0	*8*	74.0	214.9	165.4	292.2	1	*3*	*4*	c
7343	253	6.2	*6*	93.1	195.5	182.1	285.1	1	*3*	*5*	a
7384	513	8.4	*9*	68.0	127.6	149.9	225.4	4	*2*	*4*	c
7386	260	5.4	*4*	7.9	104.3	83.2	202.0	1	*3*	2	d
7423	244	8.7	*4*	291.8	326.6	15.2	60.1	0	1	*3*	a
"	559	"	3	171.0	202.5	256.4	297.1	0	*1*	3	a
7435	274	9.6	*10*	48.2	76.9	131.0	175.9	0	0	0	c
7446	295	9.7	*11*	211.0	245.3	295.2	339.2	*2*	0	*2*	c
7550	266	4.7	6	266.0	26.3	358.4	110.1	1	1	*1*	a
7583	283	6.2	T	18.7	267.9	270.6	3.4	0	*1*	3	f
7738	295	7.3	14	119.0	154.0	207.8	248.3	5	0	*1*	c
7764	311	4.3	10	218.1	350.0	303.7	90.2	3	*1*	2	c
7787	567	7.8	9	315.7	355.5	43.4	86.6	0	3	15	d
7793	567	7.0	15	42.4	80.6	128.4	181.6	4	9	5	d
7916	562	8.0	4	162.4	207.5	252.9	303.4	7	0	0	a
"	572	"	*3*	217.5	277.4	297.8	2.6	7	1	*1*	a

The discordant measures of the standard stars taken from the Harvard Photometry and contained in Table I. are given in Table XI. The arrangement is the same as that of Table X. The H. P. number of the star is given in the first column. As in Table I. the order is that of the Julian Day, which is given in the second column. The magnitude in the third column is derived from the thirteenth column of Table XXVII., Volume XIV. H. P. 2818 equals S. M. P. 5787, and has been omitted in Table XI., since its observation on J. D. 171 has already been discussed in Table X.

TABLE XI.

DISCORDANT H. P. STARS.

H. P.	J. D.	Magn.	R.	A.	B.	C.	D.	E.	P.	F.	L.	H. P.	J. D.	Magn.	R.	A.	B.	C.	D.	E.	P.	F.	L.
2063	147	3.1	T	42.5	224.5	157.5	311.0	. .	5	2	f	1920	"	6.2	8	131.0	220.4	215.0	308.4	6	1	2	c
1954	151	5.5	8	173.2	297.6	266.0	25.9	1	0	2	c	1473	389	5.7	7	31.2	138.3	119.7	223.1	2	2	1	a
2011	"	5.8	8	86.0	200.9	178.9	295.3	1	5	1	c	740	393	3.3	10	19.6	149.8	113.4	235.7	7	2	0	c
2261	152	5.8	9	293.8	3.0	6.5	102.8	0	1	4	c	804	405	5.8	11	166.8	226.1	257.6	315.6	2	2	2	c
2408	162	4.6	17	97.0	188.5	195.0	280.6	14	1	1	c	1782	406	5.0	7	150.1	270.0	239.3	356.5	2	1	5	a
2449	"	4.6	T	114.0	172.1	80.7	211.1	1	1	1	f	1783	"	6.0	7	72.6	164.6	161.1	255.0	1	1	1	a
2873	174	6.2	7	32.0	101.9	124.4	183.6	0	1	1	a	1184	412	5.7	9	254.5	5.0	346.3	91.9	2	4	3	c
2254	179	6.7	8	111.1	214.8	210.8	304.4	7	2	5	a	1779	"	6.5	8	287.8	327.7	12.1	64.2	3	2	0	c
2423	"	5.0	7	205.0	311.8	288.3	33.8	0	1	3	a	2378	502	3.5	9	194.3	359.7	282.6	90.7	3	7	3	c
2879	182	3.2	7	0.5	158.7	92.0	250.7	7	3	3	a	2356	"	4.7	7	113.3	259.3	205.1	348.2	. .	9	9	a
2959	183	3.9	7	101.0	234.5	197.4	330.3	1	0	0	a	2933	513	4.3	12	111.3	263.0	198.6	1.1	2	4	5	d
2963	"	5.7	7	111.0	236.0	198.8	327.9	1	3	1	c	2878	"	3.3	18	113.9	255.7	227.6	333.8	. .	6	5	c
2429	186	5.9	10	287.0	49.5	18.0	142.5	5	4	4	c	2490	514	5.7	8	30.4	160.3	115.8	257.8	9	2	1	c
2567	203	6.2	11	103.9	224.7	194.3	300.8	3	4	12	c	2164	516	5.6	9	300.4	71.4	31.0	164.2	0	2	1	a
2568	"	6.3	12	192.0	306.6	278.7	32.3	5	11	0	c	2525	531	5.9	21	327.3	34.8	63.3	126.6	1	2	7	d
2891	208	5.5	12	271.0	44.8	9.8	136.9	0	1	13	c	2524	"	6.2	7	48.6	145.0	141.0	230.8	4	21	0	d
2976	228	3.5	8	318.6	114.8	48.3	200.7	0	4	11	d	3724	534	5.5	8	135.8	239.8	224.1	327.3	4	2	1	c
2975	"	5.8	11	65.2	184.1	153.8	273.8	0	8	16	d	2429	535	5.9	9	216.5	338.2	297.6	72.3	6	2	5	c
2977	"	5.7	16	143.3	280.8	239.4	7.0	0	11	2	d	2181	536	5.0	10	26.6	168.5	292.3	82.3	7	0	4	c
3721	244	5.1	10	61.9	196.9	150.0	286.5	4	5	4	c	2515	560	3.6	14	213.3	340.1	295.6	75.5	9	2	4	d
3420	245	5.0	8	279.0	5.0	10.0	104.2	10	1	0	a	3134	"	4.0	9	287.9	85.1	16.4	177.7	0	3	3	d
3885	"	5.8	7	173.8	288.9	267.5	7.0	3	4	1	a	3561	564	5.4	14	54.3	143.8	141.0	230.0	6	2	1	c
3896	"	5.2	11	188.6	274.9	286.6	352.0	4	1	3	c	4063	576	5.6	T	207.6	184.0	185.3	302.9	3	3	0	f
4211	272	6.3	7	274.9	18.8	4.7	113.2	3	1	3	a	512	592	3.8	T	357.0	149.0	241.0	58.0	0	3	. .	f
261	"	5.2	9	351.0	125.4	77.4	214.3	1	1	2	c	1845	721	5.8	7	184.0	282.6	277.0	15.3	2	1	13	d
693	277	5.6	7	80.4	202.0	168.7	288.9	2	5	1	a	1857	"	5.1	13	85.6	206.8	168.6	300.7	3	7	13	d
1147	"	5.7	8	188.0	276.4	281.1	357.2	2	3	1	a	1882	"	5.3	13	173.2	298.6	268.5	23.4	2	13	1	d
938	282	5.8	7	262.0	8.0	350.0	103.1	0	1	2	a	2235	776	6.8	8	90.0	207.2	182.6	285.9	8	1	5	c
978	304	1.9	T	156.1	321.0	247.1	66.7	4	0	2	f	1519	777	5.9	18	116.1	175.0	198.8	270.6	. .	6	1	d
979	"	1.9	T	248.0	49.1	337.1	155.0	1	0	2	f	1772	822	6.1	7	277.6	18.3	10.6	101.0	1	3	3	a
1340	"	4.1	10	178.0	299.9	266.1	34.8	9	7	4	c	1640	825	5.7	7	265.4	39.8	356.8	131.0	1	1	1	a
1270	"	4.9	7	105.0	190.9	189.7	277.0	1	1	10	a	1664	826	6.5	8	185.0	301.1	272.6	32.6	3	2	1	d
273	312	5.7	11	112.3	238.3	209.8	326.4	5	2	2	c	1839	855	6.5	7	212.6	294.1	292.1	23.1	0	3	2	a
547	382	5.6	9	47.2	109.2	133.0	211.1	5	3	1	e	2696	857	4.2	15	204.5	307.6	280.6	36.7	. .	0	2	d
633	388	5.7	11	327.1	22.8	56.1	110.0	5	3	0	c	2906	859	5.8	9	272.6	47.3	2.8	135.9	6	0	5	c

The discordant measures of stars observed at lower culmination are contained in Table XII. in nearly the same form as Table X. All observations giving a residual exceeding 6 in Table VIII. are here discussed. The magnitudes and residuals given in the third and fourth columns are not in all cases the same as those given in Table I. for reasons stated on page 208. The length of path is given in the sixth column instead of the residual derived from the estimated magnitude, since an estimate was rarely made for these stars. The low altitude of the stars, in thirteen of the cases being less than 5°, accounts for a large part of the discordances.

TABLE XII.

DISCORDANT L. C. STARS.

No. Cat.	J. D.	Magn.	Res.	A.	B.	C.	D.	Path.	P.	F.	L.
18	514	5.2	8	71.9	124.9	156.2	216.1	9.0	1	*1*	a
57	857	2.9	25	287.4	37.2	24.3	115.1	9.7	6	*1*	d
314	502	5.6	*9*	229.4	328.7	312.6	58.3	6.1	1	*7*	a
911	204	5.6	*8*	130.0	189.4	218.0	278.0	13.8	*4*	*7*	d
"	544	"	*8*	168.8	215.6	255.8	300.3	13.8	*1*	*5*	d
1101	204	5.9	*7*	215.6	286.3	304.0	15.3	9.4	*8*	*1*	d
1658	561	5.6	7	85.3	111.6	171.1	201.6	13.2	*1*	0	a
2529	245	5.6	19	114.9	169.9	211.8	255.8	13.6	*3*	0	d
2835	245	5.5	7	8.2	88.9	101.0	185.0	6.2	*3*	*4*	a
2989	574	5.3	18	140.1	163.4	236.0	256.1	14.2	*1*	1	c
4054	599	5.9	11	146.1	183.0	231.3	276.6	6.4	0	3	d
5972	396	5.6	*8*	331.1	16.8	64.6	108.7	11.8	2	*2*	a
6330	406	5.6	7	170.7	222.3	261.8	310.5	4.8	4	2	a
7071	704	5.8	8	24.1	70.3	113.6	161.6	5.7	15	0	d
7090	704	5.7	15	299.5	336.1	28.6	68.4	5.4	4	8	d
"	713	"	8	40.1	77.7	131.0	169.2	5.4	*5*	*2*	a
7324	395	5.4	8	160.6	195.1	247.1	283.6	11.8	*3*	0	a
7366	833	3.7	9	278.1	50.3	12.8	134.3	9.7	1	1	a
7386	417	5.4	*14*	81.1	192.2	161.3	280.7	2.5	R	2	d
7540	854	6.1	7	237.1	267.2	318.6	3.6	14.7	3	0	a
7541	406	5.9	8	14.6	47.1	103.8	135.2	9.9	*5*	2	a
7612	409	4.4	16	66.1	186.1	165.0	270.2	2.7	*4*	*2*	e
7712	777	6.1	*15*	271.6	29.3	353.4	115.0	6.6	*8*	2	d
7763	777	5.6	*8*	175.7	298.7	262.6	42.0	2.8	R	*15*	d
7869	858	5.1	7	116.2	206.0	203.0	300.0	4.8	*3*	*3*	a

In Volume XIV., Table LXXI., and Volume XXIII., Table XXII., a special discussion is made of those observations in which the setting or reading of the photometer circle appears to be in error. Similar cases are indicated by the letter T in Tables I. and VII. of this volume, but a further discussion than that given in Tables X. and XI. has not been thought necessary.

Of the 344 residuals contained in Tables X., XI., and XII., 165, or nearly one half, are only moderately discordant, and have been retained in deducing the mean magnitude. Of the remainder, 35 relate to known or suspected variables; 63 were probably due to clouds; 15 were probably due to an error in identification; and 21 were due to an error in setting or reading the photometer circle. The remaining 45 large residuals have each been examined, and were probably not due to either of the above sources of error. Unnoticed clouds may have been present or the stars themselves may be variable. Of the southern stars observed at upper culmination there are only 30 cases out of 21,202 sets in which discrepancies of this kind occur, and in which the observations differ from the mean by more than six tenths of a magnitude.

CHAPTER VI.

SOUTHERN HARVARD PHOTOMETRY.

THE Catalogue known as the Harvard Photometry contains the places and magnitudes of all stars north of declination —30°, which are regarded as of the sixth magnitude or brighter by various specified authorities. This work is extended to the south pole by the catalogue of stars contained in Table XIII. The method of selecting the stars is described on page 51. The general form of the catalogue is nearly that of the Harvard Photometry.

The explanation of the successive columns is given below, the heading in each case being prefixed.

S. M. P. A number for reference taken from the first column of Table VII.

Constellation. The constellation here given is taken from the Argentine General Catalogue. A list of the stars placed by Stone in other constellations is given in Table XIV.

Let. The letter designating the star, in general accordance with the nomenclature of Bayer and Lacaille, is also taken from the Argentine General Catalogue.

U. A. The number of the star in the constellation according to the Uranometria Argentina.

L. C. The number designating the star in the Catalogue of 9766 stars in the Southern Hemisphere, for the beginning of the year 1750, from the observations of the Abbé de Lacaille. (London, 1847.)

B. A. C. The number designating the star in the Catalogue of the British Association. (London, 1845.)

Stone. The number designating the star in the Catalogue of 12,441 stars, by E. J. Stone. (London, 1881.)

A. G. C. The number designating the star in the Argentine General Catalogue.

R. A. 1900. The approximate right ascension of the star for 1900.0.

S. Dec. 1900. The approximate south declination of the star for 1900.0 in degrees and minutes of arc.

B. The magnitude according to Behrmann's Atlas des südlichen gestirnten Himmels. (Leipzig, 1874.)

H. The magnitude according to Houzeau's Uranométria Générale. (Bruxelles, 1878.) The intermediate magnitudes 2.3, 3.4, 4.5, etc., given by Houzeau, are expressed as 2.5, 3.5, 4.5, etc. When a star was observed on more than one day, the mean magnitude is inserted.

A. G. C. The magnitude according to the Argentine General Catalogue.

No. The number of observations of the star with the meridian photometer.

Magn. The magnitudes as determined by the meridian photometer, taken from the sixth column of Table VII.

Est. The means of the estimated magnitudes. As stated on page 106, these estimates are on the scale of the Cordoba Catalogues, with which they agree closely. They must therefore be reduced to the photometric scale before they can be compared with the magnitude in the preceding column.

TABLE XIII.

SOUTHERN HARVARD PHOTOMETRY.

A CATALOGUE OF THE PHOTOMETRIC MAGNITUDES OF 1428 SOUTHERN STARS, WITH THEIR APPROXIMATE POSITIONS FOR 1900.

S. M. P.	Constellation.	Let	U. A	L. C.	B. A. C.	Stone.	A. G. C.	R. A 1900.		S. Dec. 1900.		B.	H.	A. G. C.	No.	Magn.	Est.
								h.	m	°	′						
2	Phœnix . .	—	36	9716	8369	12433	32435	0	0.3	57	31	6	5.5	6.7	3	7.20	6.8
5	Phœnix . .	—	37	9721	—	1	32446		1.1	49	38	6	—	5.7	3	5.60	5.9
8	Sculptor . .	—	50	9735	2	15	30		3.0	34	6	6	6	5.7	7	5.57	5.8
14	Phœnix . .	ϵ	39	9742	11	27	57		4.4	46	18	4·5	4	3.8	6	3.85	3.9
18	Octans . . .	γ^3	1	9756	19	37	78		5.5	82	47	6	5.5	5.6	8	5.25	5.8
21	Sculptor . .	θ	53	9760	24	45	95		6.7	35	42	6	5	5.4	3	5.06	5.4
28	Octans . . .	—	2	23	40	72	147		9.5	85	33	6	6.5	6.4	5	5.78	6.1
30	Sculptor . .	—	58	22	43	79	167		11.1	32	0	6	6	5.9	7	5.48	5.6
35	Phœnix . .	—	43	38	61	99	218		13.8	43	48	4·5	—	6.6	4	6.34	6.0
38	Tucana . .	ζ	49	40	64	107	233		14.9	65	29	5·4	4	4.1	6	4.28	4.4
40	Tucana . .	π	50	53	70	114	253		16.0	70	11	5·6	6	5.7	3	5.25	5.7
51	Tucana . .	ξ	51	80	85	141	322		19.6	72	39	cum.	—	4.5	1	cum.	R
57	Hydrus . .	β	5	74	88	146	336		20.5	77	49	3·4	3.5	2.7	6	2.89	3.0
59	Phœnix . .	α	48	87	94	155	355		21.3	42	51	2·3	2.5	2.4	7	2.45	2.3
60	Phœnix . .	κ	46	89	93	153	351		21.3	44	14	4·5	4.5	3.9	7	3.95	3.6
64	Sculptor . .	η	71	94	103	163	377		22.9	33	34	5·6	5.5	5.2	5	4.81	5.1
68	Phœnix . .	—	49	99	104	168	390		23.5	40	28	6	6.5	5.9	3	5.16	5.5
75	Phœnix . .	—	53	110	119	183	427		25.6	48	46	6·5	6.5	5.7	3	5.47	5.9
76	Phœnix . .	λ^1	54	115	124	187	443		26.6	49	22	5	6	4.6	3	4.80	5.1
78	Tucana . .	β^1	52	119	127	190	451		27.0	63	31	4		4.3	3	4.50	4.9
79	Tucana . .	β^2	53	120	128	191	452		27.0	63	31		3	4.7	3	4.33	5.1
84	Tucana . .	—	54	123	134	194	467		28.1	63	35	6	.	5.5	3	5.07	5.3
86	Sculptor . .	—	77	125	135	197	476		28.7	30	7	6	6	5.8	7	5.58	5.6
88	Tucana . .	θ	55	139	140	205	491		29.2	71	49	6	4.5	6.4	3	5.99	6.0
89	Phœnix . .	—	58	137	143	211	501		29.7	52	56	6·5	6	5.7	3	5.44	6.0
91	Phœnix . .	λ^2	59	143	150	219	519		30.9	48	33	5·6	6.5	5.6	3	5.45	5.9
92	Phœnix . .	—	60	144	151	218	518		30.9	55	23	6	6.5	6.2	3	5.79	6.0
103	Tucana . .	—	60	172	176	253	617		35.7	60	1	6	—	6.0	3	5.71	6.0
106	Phœnix . .	μ	64	177	183	258	626		36.6	46	38	5	5.5	4.7	3	4.61	4.5
109	Phœnix . .	ξ	66	180	188	262	633		37.2	57	3	6	6	5.9	7	5.81	5.8
112	Sculptor . .	λ^1	83	183	192	271	645		37.9	39	1	6·5	R	6.0	3	6.12	5.8
115	Tucana . .	—	61	186	193	274	652		38.2	60	49	—	—	6.1	3	5.78	6.0
116	Tucana . .	ρ	62	188	195	275	653		38.2	66	1	R	6	5.7	3	5.42	5.8
118	Phœnix . .	η	68	190	199	280	662		38.8	58	1	5·6	4	4.5	3	4.49	4.2
120	Sculptor . .	λ^2	84	192	202	283	666		39.4	38	59	6·5	R	5.8	3	5.76	5.9
128	Phœnix . .	—	72	207	212	305	702		41.1	48	6	6·5	—	6.2	3	5.71	5.9
140	Phœnix . .	—	73	226	231	323	745		44.3	47	15	6·5	—	6.6	3	6.11	6.2
142	Hydrus . .	λ	8	235	236	330	762		45.1	75	28	6·5	6	5.6	7	4.95	5.4
144	Phœnix . .	—	74	231	234	331	759		45.4	43	57	5·6	—	6.7	3	6.31	6.6
146	Phœnix . .	ρ	75	233	238	335	769		46.1	51	32	5·4	6	5.6	3	5.00	5.8
148	Phœnix . .	—	76	236	—	338	780		47.2	44	15	5·6	—	6.9	3	6.64	6.6
153	Tucana . .	—	69	253	251	354	825		49.4	63	25	6	—	6.0	3	5.57	6.0
159	Tucana . .	λ^2	70	262	266	366	860		51.2	70	4	6·5	6	5.5	3	5.37	5.8
163	Sculptor . .	α	92	266	272	378	902		53.8	29	54	4·5	4.5	4.2	7	4.46	4.4
172	Sculptor . .	ξ	94	277	—	392	943		56.7	39	28	6·5	—	5.6	3	5.39	5.9
175	Sculptor . .	σ	96	282	289	399	953		57.7	32	6	5·6	5.5	5.6	3	5.56	5.8
176	Phœnix . .	—	80	288	292	402	959		57.8	57	33	6	—	6.3	3	5.86	6.0
178	Phœnix . .	—	81	289	294	407	965		58.3	46	56	6	6.5	5 9	3	5.18	5 8
187	Phœnix . .	β	85	308	317	430	1024	1	1.6	47	15	3·4	4	3.3	7	3.39	2.8
190	Phœnix . .	υ	88	312	331	443	1052		3.2	42	1	6·5	5.5	5 4	3	5 15	5 8

S. M. P.	Constellation.	Let.	U. A.	L. C.	B. A. C.	Stone.	A. G. C.	R. A. 1900.		S. Dec. 1900.		B.	H.	A. G. C.	No.	Magn.	Est.
								h.	m.	°	′						
191	Tucana . .	ι	76	316	333	445	1057	1	3.4	62	19	6·5	5	5.6	3	5.23	5.6
196	Phœnix . .	ζ	89	318	340	450	1069		4.2	55	47	4·5	4	4.2	7	4.07	3.9
208	Sculptor . .	—	101	327	366	465	1132		8.2	35	44	6·5	6	6.9	3	6.82	6.8
209	Sculptor . .	—	102	328	367	466	1133		8.2	38	23	6·5	6	6.1	3	5.86	5.9
216	Phœnix . .	ν	93	337	380	483	1174		10.6	46	4	5·6	6	5.3	7	4.92	5.4
220	Tucana . .	κ	78	356	392	496	1210		12.3	69	24	5	5	5.5	3	4.90	5.1
222	Tucana . .	—	80	361	398	502	1231		13.6	66	55	6·5	6	6.5	3	6.19	6.1
239	Sculptor . .	—	109	384	421	540	1323		18.9	31	28	6	6.5	6.1	3	5.52	5.9
243	Phœnix . .	—	103	392	426	551	1345		20.2	42	1	6·5	6	5.8	3	5.31	5.7
249	Hydrus . .	—	9	409	436	563	1373		21.7	64	53	6	5	6.3	3	5.76	5.9
257	Phœnix . .	γ	106	419	447	580	1411		24.0	43	50	3·4	4	3.4	6	3.32	3.5
262	Phœnix . .	δ	109	440	461	600	1462		27.0	49	35	4·5	4.5	4.0	6	3.92	3.8
263	Sculptor . .	—	118	437	—	599	1461		27.1	30	48	6	6	6.0	3	5.62	6.0
268	Sculptor . .	—	119	447	466	615	1493		28.4	37	22	6·5	6	5.8	3	5.32	5.8
280	Hydrus . .	—	12	468	483	635	1551		31.5	58	39	6·5	—	6.0	3	6.08	6.0
282	Sculptor . .	—	121	462	489	632	1546		31.6	30	25	5·6	6	7.5	3	5.69	5.8
283	Sculptor . .	τ					1547		31.6	30	25			6.5			
286	Hydrus . .	—	14	505	512	645	1586		32.9	79	0	6	6	6.3	3	5.99	6.1
287	Hydrus . .	—	13	479	497	644	1580		33.1	58	47	6	—	6.2	3	6.01	6.1
289	Sculptor . .	—	122	476	503	647	1590		34.0	37	2	6	6	6.2	3	5.89	5.9
290	Eridanus . .	α	2	484	507	650	1594		34.0	57	44	1	1	1	8	0.51	1.1
294	Eridanus . .	p	3	495	521	667	1633		36.0	56	42	5·6	6	6.2	3	5.26	5.6
295	Eridanus . .		4			668	1634		36.0	56	42			6.2			
296	Sculptor . .	π	128	500	527	675	1660		37.6	32	49	5·6	5.5	5.6	3	5.16	5.7
297	Sculptor . .	—	129	501	528	676	1661		37.6	37	20	6·5	6.5	5.9	3	5.72	6.0
298	Hydrus . .	—	15	507	531	681	1677		38.4	61	17	6·5	6.5	6.0	3	5.48	5.9
299	Eridanus . .	q^1	5	506	532	683	1681		38.7	54	14	5·6	6	5.9	3	5.52	5.9
305	Octans . . .	—	3	576	557	700	1738		40.5	83	29	6	6.5	6.2	7	5.88	6.1
307	Hydrus . .	τ^1	17	551	554	701	1736		41.3	79	39	6	6	6.5	3	6.06	6.1
310	Phœnix . .	—	120	520	548	702	1733		42.2	51	19	6	6	5.8	3	5.40	5.9
311	Eridanus . .	q^2	6	523	550	703	1737		42.3	54	1	5·6	5.5	5.4	3	5.07	5.8
314	Octans . . .	—	4	634	584	725	1800		43.1	85	16	6	—	6.1	7	5.64	6.0
327	Phœnix . .	—	124	547	571	738	1816		47.1	50	42	6	6.5	6.1	3	5.90	5.9
333	Hydrus . .	τ^2	18	606	591	755	1869		48.7	80	41	6	6	6.1	7	6.05	6.1
334	Phœnix . .	ψ	126	559	582	754	1864		49.6	46	48	5	5	4.8	3	4.11	4.7
337	Phœnix . .	φ	127	565	585	756	1871		50.2	43	0	5·6	5.5	5.5	3	4.95	5.8
343	Eridanus . .	χ	7	575	596	765	1905		52.0	52	7	4·5	4	3.9	6	3.62	4.0
345	Hydrus . .	η^2	21	594	603	774	1924		52.4	68	9	5·4	5	4.9	3	4.65	5.3
350	Eridanus . .	—	10	588	606	778	1932		53.1	52	16	6	—	6.2	3	5.97	6.1
351	Phœnix . .	—	128	585	604	777	1931		53.2	47	53	5·6	5.5	5.1	3	4.65	5.3
355	Phœnix . .	—	129	599	621	793	1973		55.5	42	31	6·5	6	5.9	3	5.35	5.8
356	Hydrus . .	α	24	605	623	795	1981		55.6	62	4	3·4	3	2.9	6	2.96	3.3
367	Fornax . .	π	12	602	627	801	1998		56.8	30	29	6·5	6	5.5	3	5.19	5.9
369	Phœnix . .	χ	130	610	634	806	2016		57.7	45	12	5·6	5.2	5.6	3	4.91	5.6
406	Phœnix . .	—	132	647	670	857	2174	2	5.2	43	59	6	6	6.1	3	5.78	5.9
421	Fornax . .	μ	19	666	688	880	2237		8.5	31	12	5·6	5.5	5.4	3	5.22	5.7
429	Phœnix . .	—	135	682	699	891	2274		10.5	41	38	6	6.5	6.1	3	5.85	5.9
435	Hydrus . .	π^1	35	701	716	908	2331		12.1	68	19	6·5	R	5.9	7	5.38	5.5
438	Eridanus . .	φ	14	693	717	913	2339		12.9	51	58	4·3	4	3.5	7	3.74	3.9
439	Hydrus . .	π^2	36	706	724	916	2352		13.4	68	13	6·5	R	5.9	3	5.41	5.8

S. M. P.	Constellation.	Let.	U. A.	L. C.	B. A. C	Stone.	A. G. C.	R. A. 1900.	S. Dec. 1900.	B.	H.	A. G. C.	No.	Magn	Est.
								h. m.	° ′						
445	Horologium .	—	1	717	734	936	2412	2 16.7	56 24	6·5	—	6.1	3	5.39	6.1
457	Eridanus . .	—	15	729	748	954	2475	19.4	51 33	6	—	6.2	7	5.93	6.0
461	Hydrus . .	δ	38	747	756	960	2498	19.9	69 7	4	4	4.1	6	4.24	4.5
469	Horologium .	λ	3	752	762	971	2541	22.1	60 45	5·6	5	5.8	3	5.35	5.9
470	Hydrus . .	κ	39	774	767	975	2552	22.2	74 6	6	6	6.2	3	5.97	5.9
473	Eridanus . .	κ	16	753	763	978	2556	23.3	48 9	4·5	4	4.2	6	4.28	4.6
475	Fornax . .	φ	28	749	765	981	2565	23.8	34 15	5	5	5.2	3	5.16	5.6
477	Fornax . .	—	29	751	768	984	2576	24.3	31 33	6·5	—	6.4	3	5.92	6.1
482	Fornax . .	λ^1	33	781	788	1022	2681	28.9	35 5	6·5	6.5	6.0	3	5.66	5.9
487	Horologium .	—	8	812	805	1040	2745	31.1	63 1	6	5.5	6.9	3	6.64	6.2
489	Fornax . .	ι^1	35	798	803	1042	2752	31.9	30 28	6·5	5.5	5.7	3	5.69	5.8
493	Fornax . .	λ^2	36	805	809	1050	2775	32.8	35 0	6·5	6	5.9	5	5.74	5.8
497	Hydrus . .	μ	42	883	833	1071	2824	33.8	79 33	6·5	5.5	5.6	3	5.27	5.7
498	Fornax . .	ι^2	37	811	812	1056	2797	34.0	30 37	6·5	6	5.7	3	5.62	5.8
500	Horologium .	η	11	821	820	1058	2802	34.1	52 58	5·6	5	5.6	3	5.11	5.5
509	Eridanus . .	s	18	827	828	1081	2838	36.0	43 20	5	4.5	5.0	3	4.72	5.0
516	Eridanus . .	ι	19	831	832	1086	2851	36.7	40 17	5·4	4	4.2	6	3.92	4.2
521	Horologium .	ζ	14	847	839	1093	2866	37.6	54 59	5·6	5.5	5.5	3	5.23	5.6
522	Fornax . .	—	40	841	840	1099	2872	38.1	38 49	6·5	—	6.1	3	5.69	6.0
523	Hydrus . .	ε	44	871	849	1105	2887	38.1	68 42	4	4.8	4.2	7	4.17	4.3
526	Horologium .	ι	17	859	851	1112	2898	39.1	51 14	5·6	5.5	5.6	3	5.31	5.7
529	Eridanus . .	—	21	852	853	1116	2905	39.5	40 58	6·5	6	6.8	3	6.16	6.1
530	Eridanus . .	—					2906	39.5	40 58			7			
534	Fornax . .	—	44	855	855	1122	2919	40.1	32 57	6·5	6.5	6.4	3	6.09	6.0
537	Horologium .	—	18	874	862	1126	2935	41.0	53 0	5·6	6	6.2	3	6.14	6.1
539	Horologium .	—	19	893	869	1138	2965	41.7	67 8	6·5	6.5	6.5	3	6.19	6.1
543	Horologium .	—	20	896	876	1149	2992	43.3	64 8	6·5	4.5	6.1	3	5.58	6.0
548	Hydrus . .	ζ	47	907	882	1152	3003	44.0	68 3	5·4	5.8	5.2	3	4.79	5.2
550	Fornax . .	β	49	888	879	1154	3009	44.9	32 50	5·4	4.5	4.5	3	4.16	4.8
556	Fornax . .	η^2	52	897	886	1162	3030	46.2	36 16	6·5	5	6.1	3	5.69	5.9
559	Fornax . .	η^3	53	899	890	1165	3039	46.6	36 5	6·5		5.4	3	5.29	5.6
561	Horologium .	ν	21	—	895	—	3054	46.8	63 14	5	—	5.7	4	5.28	5.8
562	Eridanus . .	—	31	902	893	1166	3045	47.0	40 21	6·5	—	6.5	3	6.32	6.1
567	Fornax . .	ψ	55	915	902	1185	3103	49.7	38 51	6·5	6	6.0	3	5.79	5.9
574	Horologium .	—	24	930	—	1202	3141	50.9	51 17	—	—	6.3	3	5.93	6.0
575	Hydrus . .	ν	50	972	928	1211	3171	51.1	75 29	5·4	5	5.1	3	4.66	5.5
579	Horologium .	—	27	957	927	1220	3189	52.5	64 51	6	R	6.9	3	6.40	6.5
582	Horologium .	—	28	956	931	1223	3198	52.8	64 25	—	4	7.0	3	6.52	6.7
583	Fornax . .	—	62	945	930	1227	3209	53.7	38 36	6·5	—	6.2	3	6.49	6.2
584	Eridanus . .	θ	48	950	937	1230	3223	54.5	40 42	3·4	3	3	6	3.13	3.1
585	Eridanus . .	—	49			1231	3224	54.5	40 42			5.2			
588	Fornax . .	—	66	953	944	1239	3245	55.5	32 54	6	6.5	6.2	3	6.39	6.0
591	Horologium .	β	32	—	956	1256	3279	56.9	64 28	5	—	5.2	3	4.98	5.6
598	Eridanus . .	—	58	974	961	1263	3312	59.6	47 22	6·5	6	6.3	3	5.67	5.7
605	Horologium .	μ	33	989	972	1272	3352	3 1.3	60 7	5	5.5	5.3	3	5.06	5.2
608	Hydrus . .	θ	51	1001	982	1286	3375	2.0	72 17	5	5.5	5.8	3	5.36	5.7
627	Horologium .	—	34	1006	996	1309	3454	7.2	49 6	6·5	—	6.4	3	5.99	5.9
631	Eridanus . .	—	71	1016	1004	1328	3487	8.9	44 47	6·5	6	6.2	3	5.87	5.8
633	Fornax . .	—	75	1014	1003	1330	3490	9.1	36 19	6	—	6.1	3	6.15	6.2
636	Horologium .	—	38	1040	1014	1339	3514	10.0	57 41	6	6	6.3	3	5.71	6.0

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637	Fornax . .	—	79	1020	1015	1344	3522	3 10.8	35 55	—	—	6.7	3	6.82	6.3
638	Hydrus . .	—	55	1105	1038	1359	3568	10.9	79 22	6·5	5.5	6.2	3	5.65	5.9
649	Horologium .	—	40	1058	1033	1374	3598	14.2	48 7	6·5	—	6.2	3	5.84	5.9
655	Reticulum .	ζ^1	3	1074	1048	1385	3626	15.6	62 57	R	R	6.0	3	5.47	5.7
657	Eridanus . .	e	82	1060	1044	1384	3623	15.9	43 27	5	4	4.4	3	4.27	4.5
658	Reticulum .	ζ^2	4	1077	1051	1389	3634	16.0	62 53	R	R	5.7	3	5.13	5.5
660	Reticulum .	—	5	1092	1056	1397	3651	16.9	67 17	6	6.5	6.2	3	6.06	6.3
663	Hydrus . .	ι	56	1131	1070	1412	3704	18.4	77 46	6·5	5	5.9	3	5.53	5.8
677	Fornax . .	χ^1	89	1101	1074	1428	3744	22.1	36 17	6	6	6.2	3	6.22	6.1
683	Fornax . .	χ^2	91	1108	1082	1440	3778	23.7	36 2	6	6.5	5.6	3	5.42	5.8
687	Hydrus . .	—	59	1139	1094	1454	3830	25.1	69 41	6	—	6.1	3	5.89	6.0
689	Eridanus . .	—	—	1122	—	1456	3831	26.0	42 49	6·5	—	7.2	3	7.47	6.8
691	Eridanus . .	—	99	1116	1088	1460	3840	26.5	42 59	—	—	6.1	3	5.87	6.0
694	Horologium .	—	44	1130	1098	1464	3864	27.4	47 43	6·5	6	6.1	3	5.94	5.9
696	Reticulum .	κ	6	1143	1103	1468	3879	27.6	63 18	5·4	5.2	5.0	3	4.80	5.3
702	Horologium .	—	45	1144	1106	1474	3912	29.6	50 43	6·5	6	5.9	3	5.59	5.9
705	Reticulum .	—	7	1164	1113	1479	3932	29.8	66 50	6	6	6.1	3	5.72	6.0
722	Eridanus . .	y	110	1161	1125	1508	4006	33.5	40 36	5	4.5	4.8	3	4.48	5.1
723	Mensa . . .	—	1	—	—	1521	4040	33.6	78 41	—	—	6.1	3	5.63	5.9
734	Fornax . .	—	103	1191	1150	1547	4101	38.3	32 15	4·5	5	4.9	3	4.92	5.4
738	Eridanus . .	h	124	1198	1159	1557	4121	39.1	37 38	5·6	4	4.8	3	4.42	4.5
742	Mensa . . .	—	3	1296	1198	1580	4181	40.3	78 39	6·5	—	6.6	3	6.00	6.1
749	Horologium .	—	51	1232	1184	1587	4187	42.2	47 40	6·5	6	6.1	3	5.60	5.7
755	Reticulum .	β	14	1253	1197	1599	4211	42.9	65 7	4·5	4.0	3.9	5	3.76	3.8
761	Fornax . .	ρ	109	1234	1194	1601	4219	43.9	30 28	5·4	5.5	5.6	3	5.55	5.9
764	Eridanus . .	f	135	—	—	1611	4241	44.9	37 55	—	4	5.5	3	4.52	4.6
765	Eridanus . .		136	1244	1199	1612	4242	44.9	37 55	5		4.8			
766	Eridanus . .	g	138	1248	1201	1616	4256	45.7	36 30	5	4	4.1	5	4.12	4.0
779	Hydrus . .	γ	62	1322	1230	1656	4353	48.8	74 33	3·4	3.5	3.2	5	3.12	3.2
783	Eridanus . .	i	151	1275	1220	1655	4346	49.9	35 2	5·6	5	5.3	3	5.12	5.6
786	Horologium .	—	55	1287	1225	1661	4363	50.5	47 12	6·5	—	6.4	3	5.77	6.0
787	Eridanus . .	—	153	1286	1227	1666	4368	50.9	40 40	6·5	6	6.2	3	5.55	5.9
789	Dorado . .	—	1	1304	1233	1680	4395	52.0	52 59	6	6.5	6.6	3	6.29	6.3
801	Reticulum .	—	16	1327	1248	1692	4444	54.8	63 46	6	5.8	6.6	3	5.98	6.1
807	Eridanus . .	—	163	1316	1250	1698	4468	56.7	30 47	6	5	5.9	4	5.94	5.9
809	Reticulum .	δ	18	1338	1259	1704	4487	57.2	61 41	5·4	5	4.7	3	4.31	5.4
821	Reticulum .	γ	22	1357	1270	1731	4545	59.5	62 27	5·4	5	4.7	3	4.41	5.1
823	Reticulum .	ι	23	1355	1271	1732	4550	59.7	61 22	5·6	5.8	5.1	4	4.79	5.3
842	Horologium .	—	62	1376	1288	1767	4649	4 5.5	46 8	—	5.2	6.7	3	6.22	6.2
850	Horologium .	δ	63	1382	1299	1780	4686	7.4	42 15	6·5	5	5.3	3	4.78	5.6
858	Horologium .	α	66	1398	1315	1802	4757	10.7	42 32	5	3.5	3.8	7	3.79	4.0
868	Reticulum .	α	25	1423	1336	1818	4812	13.1	62 43	3·4	3.8	3.3	6	3.35	3.8
869	Dorado . .	γ	3	1417	1331	1817	4811	13.4	51 44	5	4.5	4.4	3	4.31	5.0
870	Reticulum .	—	26	1425	—	1820	4820	13.5	62 26	6	—	6.0	3	5.34	5.9
872	Eridanus . .	X	204	1411	1333	1822	4821	14.1	34 2	3·4	3.5	3.3	7	3.76	3.8
874	Reticulum .	ϵ	27	1428	1344	1828	4840	14.7	59 32	5·4	4.8	4.6	3	4.39	5.5
876	Reticulum .	—	28	1430	1345	1830	4845	14.9	61 11	6·5	—	6.7	3	6.35	6.1
878	Horologium .	—	68	1424	1348	1840	4859	16.1	44 30	6·5	—	5.8	3	5.05	5.6
881	Dorado . .	—	4	1429	1354	1842	4868	16.2	53 6	6·5	6.5	6.3	3	5.94	6.0
883	Reticulum .	—	29	1443	1358	1848	4880	16.6	63 30	5·6	6.2	6.8	5	6.12	6.0

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894	Eridanus . .	d	219	1441	1372	1866	4940	4 20.2	34 14	4	4.5	4.0	6	3.94	4.1
898	Reticulum .	η	30	1473	1383	1876	4962	20.8	63 37	5	6.2	5.8	3	5.18	5.5
909	Cælum . . .	—	3	1479	1396	1905	5017	24.1	47 10	6	5.5	6.5	3	6.22	6.2
911	Mensa . . .	δ	6	1579	1426	1929	5090	24.7	80 27	6·5	—	5.8	8	5.62	5.9
917	Cælum . . .	—	5	1498	1405	1926	5066	26.3	46 44	6	—	6.5	3	6.32	6.3
919	Reticulum .	—	32	1523	1412	1934	5081	26.6	62 45	6·5	6.5	6.1	3	5.84	6.0
925	Cælum . . .	δ	7	1512	1413	1947	5106	27.8	45 10	5·6	4.5	5.0	3	5.28	5.3
931	Eridanus . .	υ^1	243	1513	1422	1959	5137	29.6	29 58	4	4.5	4.7	5	4.57	4.8
935	Mensa . . .	ν	8	1639	1454	1985	5219	29.8	81 49	6	6.5	5.7	7	5.81	5.9
942	Eridanus . .	υ^2	251	1529	1433	1981	5187	31.7	30 46	4·3	4	3.7	6	3.78	4.0
943	Dorado . .	α	8	1539	1438	1983	5198	31.8	55 15	4·3	3	3.1	6	3.53	3.5
947	Reticulum .	—	34	1551	—	1989	5223	32.6	63 2	6·5	—	6.2	4	6.00	6.1
948	Eridanus . .	—	253	1533	1439	1987	5215	33.0	30 55	6·5	—	6.3	3	6.43	6.2
960	Dorado . .	R	9	1567	—	2010	5276	35.6	62 16	5·6	—	var.	4	var.	var.
964	Cælum . . .	α	9	1556	1458	2017	5295	37.3	42 3	5	4.5	4.6	3	4.55	4.3
972	Cælum . . .	β	10	1559	1464	2028	5313	38.5	37 20	5·4	5	5.1	3	5.16	5.0
976	Cælum . . .	—	12	1564	1467	2041	5328	39.3	30 57	6·5	—	6.2	3	5.56	5.7
981	Pictor . . .	λ	4	1585	1473	2050	5350	40.2	50 40	5·6	5	5.5	3	5.28	5.5
989	Dorado . .	κ	12	1614	1489	2075	5418	42.9	59 55	5·6	5	5.6	3	5.41	5.5
993	Cælum . . .	ζ	16	1601	1488	2081	5431	44.0	30 12	6	—	6.7	3	6.25	6.5
995	Mensa . . .	μ	14	1654	1502	2087	5456	44.0	71 7	5	6.5	5.6	3	5.75	5.7
1012	Cælum . . .	—	18	1626	1506	2114	5510	47.0	41 29	6	5	6.3	3	5.92	6.0
1015	Cælum . . .	—	19	1628	1511	2120	5524	47.8	35 4	6·5	6	6.2	3	5.89	5.8
1017	Pictor . . .	ι	7	1650	1521	2130	5555	48.7	53 38	5·6	5	5.8	3	5.63	5.8
1022	Cælum . . .	—	22	1658	1533	2148	5610	51.5	39 48	6	—	6.5	2	5.75	5.0
1046	Mensa . . .	η	16	1752	1587	2210	5787	58.1	75 6	6	6.5	6.0	3	5.23	5.5
1047	Cælum . . .	—	25	1700	1561	2201	5764	58.2	39 52	6	—	6.4	3	5.99	6.6
1057	Pictor . . .	η^1	10	1717	1569	2216	5798	5 0.2	49 18	5·6	5.5	5.5	3	5.44	5.7
1060	Cælum . . .	γ	28	1712	1573	2221	5807	0.8	35 37	5·6	R	4.7	4	4.59	5.1
1066	Pictor . . .	η^2	11	1728	1589	2232	5850	2.3	49 43	5·6	5.5	5.3	3	4.91	5.6
1071	Dorado . .	ζ	20	1744	1600	2249	5893	3.8	57 37	5	4.5	4.8	3	4.70	5.0
1072	Mensa . . .	β	17	1778	1606	2253	5919	4.0	71 27	5·6	5.5	5.7	3	5.25	5.4
1085	Dorado . .	—	21	1772	1621	2272	5971	6.8	63 31	6·5	6.5	5.7	3	5.24	5.6
1093	Columba . .	—	3	1747	1615	2277	5972	7.7	30 21	—	5	7.0	7	7.15	6.8
1101	Mensa . . .	ξ	21	1921	1675	2330	6105	10.2	82 36	6	6.5	5.8	10	5.91	5.9
1104	Columba . .	—	6	1773	1633	2304	6038	11.0	36 5	6	6	6.1	3	5.79	5.5
1116	Columba . .	o	11	1793	1650	2335	6098	13.9	34 59	5	5	5.1	3	4.96	5.3
1117	Dorado . .	θ	22	1828	1659	2341	6119	13.9	67 18	5	5	5.1	3	4.75	5.4
1127	Pictor . . .	ζ	16	1825	1672	2357	6167	16.9	50 42	6·5	5.5	5.8	3	5.61	5.9
1141	Columba . .	—	15	1834	1693	2390	6246	20.1	39 46	6·5	6.5	6.2	3	5.69	5.6
1149	Pictor . . .	θ	19	1863	1712	2417	6313	22.5	52 25	6·5	6	6.5	3	6.28	6.2
1155	Columba . .	—	18	1862	1719	2431	6348	23.9	41 2	6·5	6.5	6.1	9	5.94	6.0
1160	Columba . .	—	20	1868	1724	2441	6372	24.9	37 19	5·6	6.5	5.9	3	5.66	5.9
1162	Dorado . .	λ	23	1885	1729	2446	6387	24.9	59 0	5·6	5	5.6	3	5.02	5.4
1165	Columba . .	—	21	1867	—	2445	6385	25.3	30 12	—	—	6.9	2	6.24	7.0
1174	Pictor . . .	—	20	1888	1740	2461	6423	27.4	47 9	6·5	—	5.7	3	5.55	5.7
1176	Columba . .	ε	22	1883	1739	2462	6427	27.7	35 33	4	4	4.1	3	3.86	3.4
1182	Pictor . . .	—	21	1896	1750	2471	6454	28.7	46 0	6	5.5	6.5	3	5.85	6.0
1186	Columba . .	—	24	1895	1756	2479	6465	29.4	38 35	5·6	6	5.8	3	5.33	5.7
1195	Columba . .	—	28	1902	1771	2500	6515	31.6	33 9	R	—	6.0	3	5.69	5.9

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1198	Dorado . .	—	28	1949	1790	2514	6553	5 32.4	64 18	5·6	5.5	5.9	3	5.34	5.6
1199	Dorado . .	β	29	1948	1791	2516	6561	32.7	62 33	4	4	3.9	6	3.70	4.0
1212	Columba . .	—	37	1941	1798	2544	6623	35.5	40 46	6·5	6	5.7	3	5.93	6.0
1214	Mensa . . .	γ	25	2027	1819	2558	6674	35.8	76 25	6·5	6	5.6	3	4.97	5.7
1217	Columba . .	α	38	1938	1802	2547	6633	36.0	34 8	2·3	3	2.5	7	2.74	3.0
1218	Columba . .	—	39	1936	1803	2550	6637	36.1	32 41	6·5	6	5.9	3	5.39	5.5
1223	Mensa . . .	—	26	2016	—	2569	6694	37.3	73 48	6	—	6.1	3	5.52	6.0
1231	Columba . .	—	41	1962	1812	2568	6690	38.4	30 35	6·5	—	6.4	3	6.19	6.0
1232	Columba . .	—	42	1964	1814	2570	6693	38.7	34 43	6·5	6.5	5.7	3	5.39	5.7
1250	Mensa . . .	ι	28	2097	1870	2609	6827	41.8	78 52	6	6	5.9	7	6.14	6.1
1253	Columba . .	μ	45	1982	1841	2597	6780	42.3	32 20	5·6	5	5.4	3	5.36	5.5
1257	Pictor . . .	—	30	2003	1855	2612	6817	43.7	46 38	6·5	5.5	5.8	3	5.12	5.8
1264	Dorado . .	δ	33	2045	1868	2629	6852	44.6	65 46	5·4	5	4.5	3	4.49	4.8
1268	Pictor . . .	β	32	2021	1861	2628	6848	44.9	51 6	5	4.5	3.9	6	3.92	4.4
1269	Mensa . . .	π	29	2138	1898	2653	6907	45.1	80 34	6	6	5.8	8	5.61	5.9
1284	Columba . .	β	53	2029	1878	2652	6896	47.5	35 49	3	3	2.9	6	3.06	2.9
1288	Pictor . . .	γ	35	2053	1884	2661	6915	48.0	56 12	5	4.5	4.7	3	4.29	4.8
1293	Pictor . . .	—	37	2052	1890	2668	6925	48.7	52 8	5·6	5.5	5.6	3	4.75	5.4
1294	Columba . .	—	55	2041	1889	2671	6931	49.2	37 40	6·5	6	6.2	3	5.59	5.9
1295	Columba . .	λ	57	2044	1891	2673	6937	49.5	33 50	5·4	5.5	5.2	5	5.00	5.6
1296	Mensa . . .	—	31	2296	1960	2724	7097	49.6	84 50	6	6.5	6.1	7	6.25	6.1
1297	Dorado . .	ϵ	34	2093	1905	2686	6972	50.0	66 56	5	5.5	5.1	3	4.98	5.4
1301	Pictor . . .	—	38	2080	1903	2691	6979	50.6	57 11	6·5	—	6.6	9	5.94	6.0
1305	Columba . .	—	60	2067	1904	2698	6996	51.6	39 59	6	6	5.8	3	5.49	5.9
1310	Columba . .	ξ	61	2069	1906	2700	7011	52.1	37 8	5·6	5.5	5.4	3	4.93	5.4
1313	Columba . .	σ	63	2070	1910	2706	7021	52.5	31 24	6	5.5	5.6	5	5.54	5.8
1315	Pictor . . .	—	42	2087	1917	2712	7034	52.7	52 40	5·6	—	5.8	3	5.25	5.6
1319	Dorado . .	—	36	2106	1926	2717	7066	53.4	63 8	5	5.8	4.9	3	4.41	4.4
1322	Columba . .	γ	65	2084	1922	2718	7064	54.0	35 18	5·4	4.5	4.5	3	4.49	4.9
1329	Columba . .	η	66	2099	1933	2735	7120	56.1	42 49	4·5	4	4.0	6	4.00	4.0
1332	Mensa . . .	κ	32	2210	1969	2758	7209	57.0	79 23	6	—	5.5	3	5.53	5.9
1336	Columba . .	—	67	2108	1941	2747	7159	57.6	33 55	6	—	5.9	3	5.39	5.7
1342	Pictor . . .	—	45	2123	1948	2754	7184	58.5	51 13	5·6	6	6.2	3	5.81	5.9
1353	Columba . .	—	72	2124	—	2772	7234	6 0.6	32 10	6	5	5.8	4	5.82	6.0
1361	Puppis . . .	—	1	2137	1964	2783	7266	1.6	45 2	5	5.5	5.8	3	6.42	6.2
1364	Puppis . . .	—	2	2141	1968	2789	7279	1.8	45 5			6.5	3	5.82	6.1
1366	Columba . .	—	73	2132	—	2788	7274	1.9	35 30	6	—	6.2	3	6.10	6.0
1374	Columba . .	—	76	2142	1976	2802	7321	3.5	34 18	6	—	6.1	3	6.16	6.0
1378	Columba . .	θ	79	2153	1982	2814	7343	4.1	37 14	5	5	5.3	3	5.36	5.7
1382	Columba . .	π^2	80	2164	1988	2820	7359	4.8	42 8	5·6	R	5.8	3	5.53	5.7
1387	Dorado . .	η^1	38	2203	2003	2837	7413	6.0	66 1	6·5	6	6.0	3	5.84	5.8
1388	Pictor . . .	—	47	—	2000	2836	7410	6.1	62 8	—	—	5.7	5	4.97	5.1
1391	Columba . .	—	82	2182	1998	2840	7416	6.9	40 20	6	6.5	6.0	3	5.53	5.6
1396	Puppis . . .	—	9	2191	2006	2850	7444	7.8	45 15	6	—	6.5	2	6.20	6.9
1400	Pictor . . .	δ	48	2201	2013	2857	7467	8.4	54 56	5·6	4.5	5.2	3	4.84	5.4
1404	Dorado . .	ν	39	2227	2025	2869	7513	9.3	68 49	5·4	5	5.2	3	5.21	5.5
1416	Dorado . .	η^2	40	2230	2031	2878	7557	11.1	65 34	5·6	6	5.5	3	4.81	5.5
1429	Columba . .	κ	84	2213	2034	2892	7586	13.0	35 6	5·4	4.5	4.8	3	4.50	5.2
1430	Mensa . . .	α	33	2283	2053	2903	7639	13.2	74 43	5	5.5	5.3	3	5.20	5.2
1431	Columba . .	—	86	2217	2036	2896	7606	13.6	37 42	6·5	6.5	5.8	3	5.67	5.8

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								h. m.	° ′						
1432	Columba . .	—	87	2218	2037	2897	7609	6 13.8	37 12	6·5	—	6.4	3	6.07	6.0
1434	Pictor . . .	—	50	2242	2048	2911	7655	14.9	59 9	6·5	—	6.5	3	6.51	6.1
1444	Canis Major .	ζ	18	2229	2051	2924	7681	16.5	30 2	3	3	3.2	6	3.25	2.9
1445	Columba . .	—	90	2234	2056	2930	7697	17.0	34 6	5	—	6.0	3	5.57	6.0
1453	Columba . .	δ	91	2244	2066	2945	7731	18.4	33 23	4·5	4	3.9	7	3.84	4.1
1474	Columba . .	—	93	2265	2079	2971	7801	20.6	36 40	6·5	6.5	6.6	3	5.57	5.6
			94		—	2973	7803	20.7	36 39			7.0			
1476	Pictor . . .	ν	52	2292	2093	2982	7827	21.1	56 19	6·5	6.5	6.0	3	5.77	5.7
1480	Carina . . .	α	7	2291	2096	2992	7843	21.8	52 39	1	1	0.4	12	−0.96	R
1482	Columba . .	—	97	2274	—	2991	7839	21.9	35 1	—	—	6.8	3	6.20	6.2
1488	Pictor . . .	—	54	2303	2104	2996	7859	22.3	58 30	6·5	—	6.7	3	6.65	6.5
1493	Pictor . . .	—	56	2311	2108	3006	7880	23.0	60 14	6·5	6.5	6.2	5	6.04	6.4
1494	Puppis . . .	G	15	2297	2106	3004	7874	23.1	48 7	6·5	5	5.9	3	5.98	6.0
1496	Dorado . .	π^1	41	2340	2119	3015	7911	23.6	69 56	5·6	6	6.1	3	5.60	5.9
1499	Canis Major .	λ	35	2295	2109	3014	7904	24.4	32 31	5·4	5	4.7	3	4.60	5.5
1503	Canis Major .	—	36	2300	2112	3020	7914	24.9	32 18	6·5	—	6.5	3	6.00	5.9
1508	Pictor . . .	—	59	2328	2124	3025	7940	25.5	57 56	6·5	—	6.3	4	5.77	6.0
1516	Dorado . .	π^2	42	2368	2145	3034	7985	26.3	69 38	5·6	5.5	5.9	3	5.44	5.8
1520	Puppis . . .	—	—	—	—	3042	7990	27.3	50 10	—	—	8.5	3	5.34	5.8
1521	Puppis . . .	—	16	2333	2137	3044	7991	27.3	50 10	5·6	5	5.5			
1526	Pictor . . .	—	61	2343	2146	3050	8007	27.7	56 47	6·5	6.5	6.9	3	5.25	5.5
1528	Canis Major .	—	47	2330	2147	3057	8017	28.9	31 57	5·6	—	6.2	3	5.93	5.8
1529	Columba . .	—	104	2334	2148	3058	8023	29.0	37 37	5·6	6	5.8	3	5.23	5.6
1530	Carina . . .	—	9	2349	2150	3061	8034	29.0	51 45	6·5	5.5	6.1	3	5.68	5.9
1533	Columba . .	—	106	2341	2158	3070	8057	30.3	36 9	6·5	6	5.9	3	5.30	5.8
1535	Pictor . . .	μ	64	2373	2167	3078	8071	30.5	58 41	6·5	6	6.0	3	5.82	6.0
1538	Canis Major .	—	50	2347	2162	3077	8068	30.9	32 38	5·6	—	6.1	3	5.93	6.0
1544	Columba . .	—	108	2359	2172	3091	8093	32.0	36 42	6·5	6	6	3	5.73	5.8
1553	Carina . . .	N	11	2383	2176	3103	8133	32.8	52 53	5	5	4.8	3	4.46	4.5
1561	Columba . .	—	112	2376	2180	3112	8155	33.8	36 54	6·5	—	6.3	3	5.80	6.0
1564	Canis Major .	—	59	2374	2183	3115	8160	34.0	32 15	5·6	6	5.7	3	5.17	5.9
1569	Puppis . . .	ν	20	2386	2188	3124	8181	34.7	43 6	4·3	4	3.5	7	3.23	3.7
1579	Canis Major .	—	63	2388	—	3132	8212	35.9	30 22	6	—	5.9	3	5.73	6.1
1583	Puppis . . .	—	21	2402	2193	3136	8227	36.0	48 8	5·6	6	5.8	3	4.99	5.2
1595	Puppis . . .	—	23	2411	2202	3153	8282	38.0	40 15	6	6	6.5	2	6.15	6.2
1607	Canis Major .	—	67	2429	2214	3177	8351	40.7	30 58	5·6	5.5	5.7	4	5.05	5.7
1614	Canis Major .	—	74	2438	2219	3188	8382	41.8	30 51	6·5	—	6.2	3	5.97	6.0
1618	Carina . . .	—	12	2459	2227	3196	8408	42.1	54 38	5·6	—	6.8	3	6.85	6.5
1619	Carina . . .	—	13	2460		3197	8412	42.2	54 36		—	6.4	3	6.69	6.2
1626	Puppis . . .	x	31	2455	2231	3212	8455	44.0	37 50	6·5	5.5	5.3	3	5.30	5.8
1628	Carina . . .	—	15	2478	—	3218	8473	44.5	51 10	6·5	—	6.1	3	5.28	5.9
1637	Carina . . .	—	17	2490	2250	3229	8511	45.4	55 26	6·5	4.5	6.3	3	5.69	6.0
1643	Canis Major .	κ	81	2474	2246	3234	8518	46.1	32 24	4·5	4.5	4.0	6	3.90	4.1
1644	Canis Major .	—	83	2479	2251	3239	8528	46.6	31 36	6·5	—	6.3	3	5.70	6.0
1648	Puppis . . .	—	38	2492	2253	3249	8554	47.1	46 31	5	5.5	5.4	4	5.12	5.7
1649	Puppis . . .	—	37	2486	2252	3248	8551	47.2	34 15	5·6	5.5	5.5	3	4.93	5.5
1650	Pictor . . .	α	66	2525	2260	3253	8570	47.2	61 50	4·3	3.8	3.5	6	3.29	3.6
1653	Puppis . . .	τ	39	2505	2256	3252	8568	47.4	50 30	4·3	4	3.2	6	2.76	2.9
1654	Carina . . .	A	18	2511	2259	3255	8573	47.6	53 31	5	6.5	4.8	3	4.35	5.3
1655	Puppis . . .	—	40	2493	2258	3257	8577	48.2	36 7	6·5	6.5	6.2	3	6.10	6.3

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								h. m.	° ′						
1658	Mensa . . .	ζ	40	2648	2290	3290	8667	6 48.4	80 43	5·6	5.5	5.8	8	5.62	5.9
1679	Volans . .	ι	5	2597	2297	3315	8738	52.6	70 50	5	5.5	5.6	3	5.53	5.9
1685	Puppis . . .	—	47	2557	2289	3319	8739	53.6	48 35	5·6	5	5.5	3	4.91	5.0
1686	Puppis . . .	—	48	2546	2288	3317	8736	53.7	35 23	6	R	6.5	4	6.32	6.1
1693	Puppis . . .	t	49	2554	2295	3332	8757	54.7	33 59	5·6	5	5.4	3	5.20	5.5
1720	Carina . . .	—	23	2601	2321	3381	8874	58.4	51 16	6·5	5	5.8	3	5.04	5.5
1731	Volans . . .	—	6	2646	2333	3403	8934	7 0.1	67 47	5·6	6	5.7	3	5.02	5.4
1738	Puppis . . .	C	59	2607	2327	3404	8935	0.9	42 11	5·6	6	5.5	3	5.25	5.7
1739	Puppis . . .	—	60	2608	2328	3405	8936	0.9	43 28	5·6	6	5.8	3	5.48	5.8
1742	Puppis . . .	H	61	2624	2332	3410	8948	1.3	49 26	5·6	5.5	5.3	3	5.18	5.2
1745	Carina . . .	—	26	2640	2336	3418	8973	1.7	59 2	6	R	6.5	3	5.85	5.9
1750	Carina . . .	—	27	2642	2339	3425	8984	2.5	56 36	6	5	5.7	3	5.31	5.6
1758	Mensa . . .	θ	42	2758	2370	3444	9054	2.9	79 16	6·5	5.5	5.6	3	5.46	5.8
1765	Puppis . . .	—	66	2638	2344	3435	9013	3.8	40 44	6·5	—	6.2	3	5.97	6.2
1771	Carina . . .	—	28	2651	2353	3447	9046	4.8	51 48	—	4.5	6.7	3	6.04	6.1
1775	Puppis . . .	A	67	2649	2355	3453	9060	5.5	39 29	5·6	5.5	5.3	3	4.87	5.5
1793	Puppis . . .	—	68	2673	2375	3483	9135	8.1	48 46	5·6	6.5	5.5	3	5.08	5.5
1799	Puppis . . .	E	70	2672	2380	3490	9152	8.9	40 19	5·6	6	5.7	3	5.50	5.8
1803	Volans . . .	γ^1	8	—	—	—	9199	9.6	70 20	4·5	5	6	6	3.62	3.8
1804	Volans . . .	γ^2	9	2746	2400	3503	9206	9.6	70 20			4.5			
1805	Puppis . . .	I	71	2687	2389	3493	9176	9.7	46 35	5	5	4.8	3	4.54	5.0
1809	Canis Major .	—	137	2676	2385	3494	9175	10.0	30 54	6	5.5	6.9	7	6.60	6.5
1813	Puppis . . .	L^1	72	2690	2392	3501	9194	10.2	45 0	5	5.5	5.3	3	5.08	5.0
1815	Puppis . . .	L^2	73	2691	2395	3505	9197	10.5	44 29	5	4.5	var.	10	var.	var.
1818	Carina . . .	—	34	2735	2408	3520	9234	11.1	63 1	6·5	—	6.3	3	6.05	6.0
1823	Canis Major .	—	142	2688	2399	3516	9221	11.5	30 30	6	—	6.1	7	5.47	5.9
1825	Puppis . . .	—	77	2710	2403	3527	9243	11.9	46 41	6	R	6.2	3	5.84	6.0
1826	Puppis . . .	—	78	2711	2404	3528	9244	11.9	48 6	5	6	5.0	3	4.88	5.3
1839	Canis Major .	—	148	2706	—	3542	9266	13.1	30 43	6	5.5	6.7	3	6.53	6.6
1840	Puppis . . .	—	80	2714	2413	3547	9276	13.3	36 25	6·5	—	5.6	3	5.20	5.7
1842	Puppis . . .	—	81	2732	2415	3548	9283	13.4	46 36	6	R	6.1	3	5.61	6.0
1845	Puppis . . .	π	82	2720	2414	3550	9288	13.6	36 55	3·2	3.5	2.7	7	2.49	2.8
1856	Puppis . . .	v^1	83	2733	2422	3566	9326	14.8	36 33	R	R	5.3	3	4.80	5.6
1859	Puppis . . .	—	85	2742	2426	3569	9339	15.0	43 49	6·5	—	6.3	3	5.98	6.1
1860	Puppis . . .	v^2	84	2736	2425	3570	9338	15.1	36 34	R	R	5.4	3	5.33	5.7
1861	Puppis . . .	F	87	2739	2427	3571	9341	15.2	39 2	5·6	5.5	5.8	3	5.33	5.7
1874	Volans . . .	δ	10	2809	2447	3593	9407	16.9	67 47	5·4	4.8	4.1	6	3.92	4.3
1883	Carina . . .	—	40	2783	—	3604	9433	18.2	51 54	—	—	5.9	3	5.54	6.0
1889	Canis Major .	—	161	2769	2449	3615	9455	19.2	31 44	5·6	5.5	5.9	3	5.56	6.0
1895	Canis Major .	—	163	2773	2452	3619	9464	19.8	32 1	5·6	5.5	5.8	3	5.46	5.8
1904	Canis Major .	—	171	2793	2461	3633	9503	20.9	31 37	5·6	R	5.8	3	5.30	5.8
1926	Carina . . .	—	44	2829	2476	3665	9594	23.8	50 49	6·5	5	5.7	3	5.04	5.3
1935	Puppis . . .	—	R	2821	2477	3672	9616	25.1	31 39	6·5	6	7.2	3	6.47	6.2
1936	Puppis . . .	—	R				9617	25.1	31 38			7.8			
1939	Puppis . . .	—	96	2823	2478	3676	9621	25.3	31 15	6·5	6	6.4	3	6.10	6.1
1943	Puppis . . .	—	97	—	—	—	9632	25.6	22 49	6·5	6	5.7	3	4.93	5.7
1946	Puppis . . .	y	98	2832	2479	3681	9637	25.7	38 36	6·5	6	5.9	3	5.63	5.7
1951	Puppis . . .	σ	99	2837	2482	3683	9652	26.1	43 6	4·3	4	3.5	7	2.99	3.4
1953	Puppis . . .	—	100	2834	2484	3689	9664	26.9	30 45	5	5	5.3	4	4.72	5.0
1961	Carina . . .	—	47	2851	2490	3698	9697	27.6	52 26	6·5	—	6.4	3	5.94	6.2

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								h. m.	° ′						
1977	Puppis . . .	Z	115	2860	2502	3722	9751	7 30.2	36 7	6	6	6.0	3	5.63	5.8
1983	Mensa . . .	ε	43	2993	2539	3752	9843	31.2	78 53	6	6	6.0	3	5.43	5.9
1996	Carina . . .	Q	50	2902	2524	3756	9845	33.2	52 18	5·6	6.2	5.5	3	4.91	5.7
1997	Puppis . . .	f	127	2890	2523	3759	9850	33.6	34 44	5	5	4.8	3	4.67	5.1
2002	Puppis . . .	—	130	2904	2529	3765	9863	33.9	48 36	6·5	6	6.1	3	5.91	6.0
2012	Puppis . . .	—	138	2903	2536	3780	9895	35.1	36 16	6·5	—	6.3	3	5.97	5.9
2017	Puppis . . .	—	142	2918	2541	3784	9917	35.5	48 22	6·5	6.5	6.0	3	5.61	6.0
2021	Puppis . . .	d^1	143	2909	2543	3787	9925	36.0	38 4	—	—	5.4	3	5.13	5.8
2023	Puppis . . .	d^2	144	2912	2545	3789	9934	36.2	37 54	5	5	6.6	3	5.93	6.2
2025	Puppis . . .	d^3	145	2913	2546	3792	9935	36.3	38 1	—	—	6.5	3	5.97	6.4
2036	Puppis . . .	—	150	2924	2554	3811	9978	37.8	38 18	6	—	6.2	3	5.67	5.8
2050	Puppis . . .	—	156	2939	2561	3829	10031	39.5	35 49	—	6	6.2	3	5.80	5.9
2054	Puppis . . .	—	159	2950	2566	3832	10042	39.9	44 55	6·5	6	5.6	3	5.08	5.7
2059	Puppis . . .	—	162	2945	2570	3840	10060	40.2	40 42	5·6	6	5.8	3	5.10	5.5
2065	Puppis . . .	—	164	2944	2572	3844	10067	40.5	35 50	6	6	6.3	3	5.87	6.1
2075	Puppis . . .	c	175	2958	2580	3864	10113	41.7	37 44	4	4.5	3.6	7	3.40	3.9
2076	Puppis . . .	—	171	2957	2581	3869	10120	41.8	34 0	6·5	6	6.0	3	5.40	5.9
2082	Volans . . .	ζ	16	3056	2607	3900	10203	43.0	72 22	5·4	5	4.3	7	3.82	4.1
2090	Puppis . . .	—	185	2991	2595	3898	10188	43.9	38 16	6·5	—	5.9	3	5.30	5.7
2094	Puppis . . .	—	187	3003	2603	3909	10211	44.5	46 22	5·6	6.5	5.9	3	5.28	5.8
2100	Carina . . .	—	—	3030	2615	3924	10248	45.1	58 40	6·5	—	8	4	8.02	8.1
2102	Puppis . . .	Q	196	3017	2611	3925	10249	45.3	46 50	5	5.8	5.1	3	4.68	5.3
2108	Puppis . . .	P	199	3022	2620	3934	10268	46.2	46 8	5	5	4.3	3	4.11	4.6
2109	Carina . . .	—	59	3036	2623	3938	10277	46.2	56 13	R	—	7.0	3	6.22	6.1
2110	Puppis . . .	—	200	3024	2621	3935	10269	46.3	46 37	6·5	—	6.5	3	5.98	6.1
2114	Carina . . .	—	60	3046	2626	3947	10301	46.9	56 10	R	—	5.9	3	5.62	5.9
2119	Carina . . .	—	61	3060	2630	3957	10320	47.5	60 2	6	—	6.2	3	5.85	6.0
2120	Puppis . . .	—	208	3043	2628	3956	10316	47.7	50 15	6	—	6.4	3	5.85	6.6
2124	Puppis . . .	—	212	3035	2629	3963	10335	48.5	34 28	6·5	6	5.8	3	5.03	5.5
2129	Puppis . . .	a	213	3044	2634	3965	10343	48.8	40 19	4·5	4.5	4.0	8	3.72	3.9
2133	Volans . . .	—	19	3083	2641	3974	10372	49.0	65 57	6	6.5	6.2	3	6.00	6.0
2134	Puppis . . .	b	214	3049	2635	3968	10350	49.1	38 36	4·5	5	4.9	3	4.67	4.8
2135	Puppis . . .	—	215	3052	2637	3970	10357	49.4	36 6	6	6.5	6.0	3	5.43	5.7
2140	Carina . . .	—	62	3074	2645	3978	10389	50.1	54 7	6·5	—	6.1	3	5.95	6.1
2142	Puppis . . .	—	216	3069	2642	3979	10390	50.2	49 21	5·6	6.5	5.0	3	4.81	5.0
2143	Puppis . . .	J	218	3068	2644	3981	10392	50.3	47 51	5	6.5	4.5	3	4.28	4.6
2144	Puppis . . .	—	217	3059	2640	3980	10391	50.5	35 37	6	6	6.1	3	5.57	5.8
2163	Carina . . .	—	64	3097	2656	4004	10470	52.8	57 2	6	—	6.1	3	5.52	6.0
2171	Puppis . . .	—	225	3081	2655	4008	10482	53.7	30 4	6·5	5	5.5	9	4.91	5.5
2172	Puppis . . .	—	227	3087	—	4011	10489	53.7	43 14	6	5.5	6	3	5.58	5.9
2176	Puppis . . .	N	228	3089	2661	4015	10496	54.1	43 50	6·5	5.5	5.7	3	5.21	5.8
2178	Carina . . .	χ	65	3102	2665	4017	10507	54.2	52 43	4·5	4.0	3.7	7	3.56	3.8
2184	Puppis . . .	O	231	3099	2667	4023	10516	54.7	45 18	6·5	5.5	5.6	3	5.14	5.9
2190	Puppis . . .	—	233	3105	2670	4029	10534	55.3	48 58	5	6.5	5.0	7	4.50	4.9
2197	Carina . . .	—	69	3122	2678	4043	10561	55.9	60 2	—	6.5	6.1	3	5.72	6.0
2201	Puppis . . .	—	234	3103	2671	4037	10546	56.0	39 1	—	6.5	5.9	3	5.20	6.0
2206	Puppis . . .	—	236	3112	—	4047	10566	56.4	49 42	5·6	—	6.8	3	5.98	6.2
2207	Puppis . . .	—	237	—	—	4048	10568	56.4	49 42		—	7			
2224	Carina . . .	—	73	3140	2694	4074	10641	57.9	60 19	6	R	5.5	3	5.06	5.8
2235	Carina . . .	D	77	3154	2913	4089	10678	59.1	63 17	5	—	5.2	7	4.97	5.4

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2237	Puppis . . .	—	246	3128	—	4086	10668	7	59.3	41	2	6·5	6.5	6.2	3	5.71	5.9
2248	Puppis . . .	ζ	248	3136	2710	4097	10691	8	0.1	39	43	3·2	4	2.5	6	2.33	2.5
2251	Puppis . . .	—	250	3131	2712	4101	10699		0.4	32	23	6·5	6.5	5.8	3	5.20	5.7
2259	Vela . . .	—	1	3156	2741	4110	10736		1.9	50	18	—	—	6.6	2	6.04	6.8
2276	Carina . . .	—	79	3178	2738	4132	10779		3.3	62	33	6	—	6.8	3	6.40	6.8
2277	Vela . . .	—	3	3163	2733	4130	10769		3.5	44	58	6·5	6	5.8	3	4.82	5.7
2288	Puppis . . .	—	260	3169	2743	4151	10820		5.3	35	9	—	—	6.8	2	6.20	7.0
2298	Vela . . .	—	6	3181	2752	4158	10853		6.1	48	23	6	—	6.2	3	5.88	5.9
2300	Vela . . .	—	7	3180	—	4160	10856		6.3	43	49	6·5	6	5.9	3	5.21	5.7
2303	Vela . . .	—	8	—	2754	4162	10861		6.4	47	3	—	—	6.5	3	4.91	5.7
2305	Vela . . .	γ	9	3185	2755	4163	10863		6.5	47	2	2·3	2.8	3	9	1.91	2.6
2309	Vela . . .	—	10	3187	2756	4166	10873		6.7	47	38	6	—	5.9	3	5.38	6.0
2312	Carina . . .	—	80	3208	2764	4179	10889		7.2	55	47	6	—	6.0	3	5.75	5.9
2313	Carina . . .	B	82	3222	2770	4187	10904		7.3	60	59	6	6.5	5.3	3	4.82	5.3
2314	Volans . . .	ε	22	3242	2773	4196	10923		7.6	68	19	5·4	5	4.8	3	4.45	4.9
2318	Puppis . . .	h¹	267	3191	2762	4188	10901		7.8	39	19	5·6	6	4.8	3	4.27	4.6
2321	Puppis . . .	—	268	3197	2767	4192	10913		8.0	42	41	5·6	5.5	5.4	3	4.85	5.7
2336	Puppis . . .	r	274	3212	2774	4213	10963		9.7	35	35	5·6	5.5	5.3	3	5.00	5.6
2344	Puppis . . .	—	276	3219	2777	4217	10973		10.2	36	1	6·5	—	5.9	3	5.27	5.9
2348	Puppis . . .	—	—	3221	—	4221	10982		10.4	35	11	—	—	6.4	3	5.82	6.3
2350	Puppis . . .	h²	279	3223	2780	4222	10984		10.5	40	2	5·6	6	4.8	3	4.30	5.0
2351	Vela . . .	—	15	3228	—	4223	10986		10.5	46	41	6	—	5.8	3	5.31	5.9
2353	Vela . . .	—	16	3236	—	4227	10996		10.7	49	53	—	—	6.0	3	5.45	5.7
2383	Carina . . .	C	84	3275	2796	4261	11097		13.8	62	37	5·6	6.5	6	3	5.30	5.6
2389	Puppis . . .	—	287	3257	—	4263	11104		14.5	35	9	6	—	6.3	3	5.63	5.9
2393	Puppis . . .	q	289	3259	2795	4268	11111		14.8	36	21	5·6	4.5	4.7	3	4.53	5.1
2413	Volans . .	—	24	3313	2812	4296	11201		17.2	65	18	5·6	—	5.7	4	4.96	5.7
2415	Puppis . . .	w	294	3277	2802	4293	11191		17.5	32	44	6·5	5.5	5.7	3	4.77	5.7
2416	Puppis . . .	—	295	3281	2805	4295	11194		17.5	36	10	6·5	5.5	5.9	3	5.33	5.7
2428	Carina . . .	—	87	3315	2821	4314	11239		19.0	57	39	6·5	—	6.4	4	6.14	6.1
2433	Vela . . .	B	26	3308	2823	4319	11248		19.5	48	10	5·6	—	5.4	4	4.83	5.4
2437	Volans . . .	κ¹	25	3355	2855	4338	11293		20.1	71	12	5·4	5	5.2	3	5.41	5.9
2439	Volans . . .	κ²	26	3357	2837	4339	11297		20.2	71	11			5.7	3	5.71	5.9
2441	Carina . . .	ε	89	3327	2832	4336	11285		20.4	59	11	2	3	2.1	7	1.74	2.2
2444	Chamaeleon .	α	4	3400	2849	4351	11334		21.1	76	36	4·5	5	4.2	3	4.06	4.4
2453	Puppis . . .	—	309	3323	2838	4353	11326		22.4	41	50	6·5	6	6.0	3	5.48	5.8
2456	Vela . . .	—	28	3337	—	4357	11340		22.7	51	24	6	—	5.7	3	5.31	5.8
2463	Volans . . .	η	27	3396	2856	4373	11378		23.0	73	5	5	5.5	5.7	3	5.38	5.6
2468	Chamaeleon .	θ	5	3435	2870	4389	11405		23.7	77	10	4·5	5.5	4.7	3	4.19	4.4
2481	Volans . . .	β	29	3384	2863	4398	11407		24.7	65	48	4·5	5	3.9	6	3.61	3.9
2482	Vela . . .	F	30	3359	2857	4392	11402		24.9	52	46	6·5	6	5.7	3	5.10	5.6
2490	Vela . . .	A	33	3367	2865	4405	11424		25.9	47	36	6·5	—	6.0	3	5.51	6.0
2491	Vela . . .	—	34	3366	2866	4407	11429		26.0	44	23	6·5	6	6.2	3	5.15	5.6
2499	Pyxis . . .	—	7	3356	—	4410	11434		26.5	31	49	6	6.5	6.1	3	5.47	6.0
2505	Volans . . .	—	30	3424	2881	4433	11474		27.1	69	46	6·5	6	6.0	4	5.58	5.9
2529	Chamaeleon .	—	6	3537	2928	4486	11598		30.3	80	35	6	6	6.2	7	5.57	6.0
2536	Vela . . .	C	46	3428	2904	4484	11583		31.7	49	36	6·5	—	5.5	3	4.91	5.5
2544	Carina . . .	e¹	95	3452	2920	4499	11622		33.0	57	53	6	6.2	5.9	3	5.40	5.8
2543	Carina . . .	e²	96	3451	2921	4501	11624		33.0	57	40	6		5.4	3	4.76	5.6
2554	Vela . . .	e	48	3446	2926	4517	11653		34.2	42	38	5·4	4.5	4.6	3	4.08	4.5

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2567	Carina . . .	—	97	3475	2939	4534	11711	8 35.5	62 30	6	—	6.0	3	5.38	5.9
2568	Vela . . .	—	49	2936	3467	4536	11712	35.9	52 44	neb.	—	7.0	3	6.45	6.9
2572	Pyxis . . .	β	22	3462	2935	4538	11714	36.2	34 57	5	4.5	4.4	7	3.92	4.2
2575	Vela . . .	—	50	3463	2941	4539	11727	36.6	39 54	6	6	6.2	3	5.33	5.6
2576	Vela . . .	—	51	3472	2944	4541	11733	36.6	53 5	6·5	—	6.2	3	5.56	6.0
2577	Vela . . .	—	54	3476	2948	4549	11751	37.1	52 42	—	—	6	3	5.41	6.1
2580	Vela . . .	—	52	3468	2946	4548	11750	37.2	44 50	—	R	6.5	5	5.62	6.4
2582	Vela . . .	b	53	3470	2947	4551	11755	37.3	46 17	4·5	5	4.1	7	3.71	4.1
2583	Vela . . .	o	56	3482	2950	4555	11760	37.4	52 34	5·4	4.0	4.0	6	3.58	4.0
2584	Vela . . .	n	58	3478	2955	4562	11770	37.9	46 57	5·6	—	5.2	3	4.81	5.3
2589	Vela . . .	—	59	3486	2959	4570	11786	38.5	45 3	6·5	R	5.9	3	5.21	5.9
2590	Carina . . .	d	99	3504	2962	4571	11790	38.5	59 24	5·4	6	4.7	3	4.40	5.4
2592	Volans . . .	θ	35	3536	2969	4578	11810	38.7	70 1	5·6	6	5.6	4	5.22	5.5
2595	Vela . . .	—	60	3492	2963	4575	11797	39.0	47 44	neb.	—	6.1	3	5.48	5.9
2599	Vela . . .	—	61	3505	2967	4585	11814	39.4	52 44	5·6	5.5	6.6	3	5.68	6.2
2600	Vela . . .	—	62	3507	2968	4586	11817	39.5	52 45		6.5	6.3	3	5.05	6.0
2602	Pyxis . . .	α	24	3487	2964	4581	11806	39.6	32 49	4·5	4	3.8	10	3.72	3.9
2613	Vela . . .	D	63	3514	2972	4601	11849	40.6	49 27	6·5	—	5.8	3	5.24	5.8
2614	Vela . . .	d	64	3508	2973	4603	11852	40.8	42 17	5·4	4.5	4.4	7	3.98	4.5
2623	Vela . . .	δ	65	3532	2979	4627	11887	42.0	54 20	2·3	3	2.2	10	2.00	2.6
2629	Vela . . .	a	66	3526	2981	4632	11900	42.6	45 40	4·5	4.5	4.1	7	4.01	4.7
2633	Vela . . .	—	68	3530	—	4643	11917	43.1	45 32	—	—	6.2	3	5.58	6.1
2639	Carina . . .	f	103	3554	2998	4664	11956	44.1	56 25	6·5	6	5.1	7	4.65	5.2
2645	Chamaeleon .	η	8	3623	3023	4684	12016	44.7	78 37	6	6	5.6	3	5.68	5.8
2652	Pyxis . . .	—	33	3549	3006	4675	11988	45.8	32 25	6	5	5.8	7	5.17	5.7
2654	Vela . . .	—	74	3556	3009	4678	11994	45.9	39 57	6	—	6.2	7	5.50	5.9
2659	Vela . . .	g	76	3565	3014	4687	12013	46.4	44 57	6·5	6	5.7	3	4.94	5.5
2670	Vela . . .	f	78	3572	3020	4697	12035	47.1	46 10	6·5	—	5.6	7	5.23	5.8
2682	Carina . . .	—	104	3594	3036	4717	12090	49.0	57 16	6·5	—	6.3	3	5.73	5.9
2683	Volans . . .	—	43	3609	3043	4722	12101	49.2	66 26	6	6	5.9	3	5.39	5.8
2695	Vela . . .	—	84	3596	3045	4734	12122	50.5	47 9	6·5	—	5.8	5	5.32	5.9
2702	Carina . . .	—	106	3613	3057	4744	12149	51.6	59 59	6	—	6.6	2	5.96	6.8
2706	Carina . . .	c	108	3626	3064	4755	12175	52.8	60 16	5·4	5.5	4.0	7	3.95	3.9
2707	Vela . . .	H	88	3620	3066	4757	12180	53.3	52 21	5·6	5.5	5.4	3	4.71	5.5
2717	Carina . . .	b[1]	109	3639	3073	4770	12221	54.5	58 51	5·6	R	5.5	3	5.09	5.6
2727	Vela . . .	—	90	3635	3077	4778	12235	55.5	46 51	6·5	—	5.9	3	5.21	5.9
2729	Vela . . .	w	91	3638	3081	4787	12253	56.3	40 52	5·6	5	5.2	3	4.37	5.0
2737	Carina . . .	b[2]	110	3661	3089	4796	12286	56.9	58 42	6·5	R	5.7	3	5.23	5.8
2744	Vela . . .	—	93	3651	3090	4803	12297	57.6	41 28	6	6	6.2	3	5.68	5.9
2751	Vela . . .	—	94	3667	3098	4816	12330	58.7	51 48	6	6.5	5.9	3	5.41	5.8
2761	Vela . . .	c	97	3677	3110	4830	12372	9 0.7	46 42	5·4	6	4.6	3	3.74	3.8
2762	Volans . . .	α	46	3696	3114	4831	12378	0.9	66 0	5·4	4.5	4.2	7	4.13	4.3
2777	Vela . . .	λ	100	3699	3126	4860	12438	4.3	43 2	2	3	2.5	6	2.10	2.3
2787	Carina . . .	E	115	3730	3134	4871	12465	4.8	70 8	5·6	5.5	5.2	3	4.76	5.5
2788	Carina . . .	G	116	3736	3136	4872	12472	4.9	72 12	5·4	4.5	4.8	3	4.53	5.0
2802	Vela . . .	—	103	3723	3142	4891	12515	7.4	44 27	6·5	5.5	5.6	3	5.04	5.7
2806	Vela . . .	—	105	3727	3145	4896	12526	8.0	46 10	6	—	6.2	3	6.01	6.2
2808	Carina . . .	a	117	3738	3149	4898	12535	8.4	58 33	4·5	5.5	3.8	6	3.51	3.6
2814	Carina . . .	i	119	3753	3152	4910	12557	9.0	61 54	4·5	5	4.3	3	4.20	4.5
2823	Carina . . .	—	121	3760	3159	4922	12590	10.4	59 0	6	—	6.1	3	5.56	6.1

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2825	Vela . . .	z	112	3749	3156	4926	12593	9 10.6	42 49	6·5	6.5	5.9	3	5.34	6.0
2834	Vela . . .	—	114	3762	3167	4936	12613	11.3	55 9	6	—	6.0	3	5.19	5.9
2835	Octans . . .	ζ	9	3953	3211	4967	12688	11.3	85 16	6·5	5.5	5.7	8	5.46	5.9
2838	Vela . . .	l	115	3756	3163	4938	12617	11.7	38 9	5·6	5	5.5	3	4.80	5.5
2841	Vela . . .	k	117	3755	3165	4940	12620	11.8	37 0	5·4	—	5.1	3	4.70	5.2
2844	Carina . . .	β	123	3791	3177	4949	12636	12.1	69 18	2·1	2.2	2.0	10	1.73	2.3
2849	Vela . . .	—	118	3764	3173	4950	12635	12.7	43 51	6·5	6	5.6	3	4.94	5.9
2853	Vela . . .	—	120	3765	3174	4954	12640	13.1	38 59	6	6	5.8	3	5.17	5.8
2857	Carina . . .	g	125	3782	3179	4959	12652	13.4	57 7	5·4	—	4.8	3	4.16	5.1
2868	Carina . . .	ι	127	3792	3186	4968	12672	14.4	58 51	3·2	3	2.5	6	2.24	2.7
2870	Vela . . .	K	122	3786	3187	4973	12676	14.7	50 38	6	6.5	5.8	3	5.34	5.7
2883	Carina . . .	—	128	3811	3198	4988	12717	15.9	68 16	—	—	6.0	3	5.36	5.8
2895	Carina . . .	—	130	3845	3214	5005	12767	17.6	74 18	5	5	6.4	3	5.98	6.0
2896	Carina . . .	—	131	3846	3215	5008	12768	17.6	74 28			5.8	3	5.38	5.9
2903	Carina . . .	k	132	3823	3212	5014	12782	18.5	61 58	6·5	—	5.5	3	4.82	5.3
2907	Vela . . .	—	128	3813	3210	5017	12785	18.8	55 5	—	—	6.4	3	5.70	6.3
2911	Vela . . .	κ	129	3816	3213	5018	12788	19.0	54 35	3	3.2	2.7	6	2.59	2.9
2938	Vela . . .	I	136	3854	3236	5067	12885	23.0	52 56	6·5	6	5.8	3	5.22	5.8
2958	Antlia . . .	ϵ	2	3861	3244	5090	12930	25.1	35 30	5·6	5	5	3	4.40	4.8
2970	Carina . . .	—	138	3914	3264	5122	12994	26.2	71 10	6	—	6.0	3	5.44	5.8
2975	Antlia . . .	ζ¹	9	3880	3254	5116	12978	26.5	31 26	6·5	5	6.5	3	6.13	6.1
2976	Antlia . . .		8	—	—	5115	12977	26.5	31 27			6.8			
2977	Vela . . .	—	141	3894	3259	5125	12991	26.7	51 4	6·5	—	5.9	3	5.61	5.8
2978	Vela . . .	ψ	140	3885	3257	5124	12989	26.8	40 1	4	4.5	3.7	6	3.53	3.8
2983	Antlia . . .	ζ²	10	3884	3262	5130	13001	27.3	31 25	6·5	—	6.3	3	6.00	6.1
2989	Chamaeleon .	ι	13	3981	3279	5146	13048	27.5	80 22	5	5.5	5.8	8	5.32	5.8
2996	Vela . . .	N	144	3910	3269	5143	13030	28.2	56 36	4·3	4.2	3.2	6	2.98	3.5
2999	Vela . . .	—	143	3900	3267	5142	13028	28.4	40 13	6·5	—	6	3	5.37	5.9
3006	Vela . . .	—	145	3917	3276	5161	13077	30.2	48 34	5·6	6	5.6	3	5.31	5.7
3011	Vela . . .	L	146	3925	3280	5168	13090	30.7	50 49	5·6	6.5	5.4	3	5.18	5.6
3014	Carina . . .	H	146	3968	3291	5174	13107	30.9	72 39	6	6	5.9	3	5.48	5.8
3020	Carina . . .	h	147	3949	3289	5179	13112	31.5	58 47	5·4	5.5	4.9	3	4.18	4.8
3028	Antlia . . .	—	17	3939	3296	5194	13132	32.9	31 44	6	—	6.2	3	5.57	6.0
3030	Vela . . .	M	148	3952	3300	5203	13145	33.3	48 55	5	5.5	4.9	3	4.41	5.0
3032	Vela . . .	—	150	3961	3304	5210	13157	33.8	53 13	6·5	—	6.0	3	5.48	6.0
3035	Vela . . .	y	151	3956	3302	5213	13159	34.1	42 45	6	—	6.0	3	5.41	5.7
3053	Carina . . .	m	150	3987	3320	5240	13217	36.6	60 53	5	—	5.1	7	4.56	5.0
3055	Chamaeleon .	ζ	14	4048	3334	5252	13246	36.8	80 30	5	5	5.5	8	5.21	5.8
3060	Carina . . .	—	152	3990	3326	5247	13234	37.7	57 32	6	—	6	3	5.38	5.9
3069	Vela . . .	O	154	4003	3338	5270	13282	40.3	53 26	6	—	5.8	4	5.68	6.1
3084	Carina . . .	l	157	4033	3353	5291	13336	42.5	62 3	5·4	4	var.	8	var.	var.
3085	Vela . . .	—	157	4022	3348	5288	13331	42.6	44 18	6·5	—	6	3	5.74	6.0
3095	Carina . . .	υ	160	4051	3365	5311	13389	44.6	64 37	R	3.8	3.5	7	2.99	3.2
3110	Vela . . .	u	160	4047	3370	5325	13417	46.1	45 16	6·5	5.5	5.6	6	5.30	5.7
3112	Chamaeleon .	ν	16	4081	3384	5335	13447	46.3	76 19	5	5.5	6.1	3	5.39	6.0
3119	Vela . . .	—	162	4055	3379	5338	13451	47.5	45 44	6	—	6.2	3	5.61	6.0
3121	Vela . . .	m	163	4057	3382	5342	13455	47.9	46 5	5·6	—	5	3	4.45	5.4
3124	Carina . . .	—	162	4066	3389	5348	13466	48.1	62 17	6	—	6.3	3	5.59	6.0
3139	Vela . . .	—	165	4070	3395	5367	13512	50.2	50 40	6	6.5	6.2	3	6.01	6.0
3140	Vela . . .	—	166	4068	3396	5368	13518	50.4	44 49	6	—	6.2	3	5.81	6.1

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								h. m.	° ′						
3146	Vela . . .	—	167	4075	3400	5374	13535	9 51.1	49 46	6·5	6.5	6.1	3	5.85	6.1
3155	Vela . . .	φ	171	4093	3410	5400	13593	53.4	54 5	4·5	3.5	3.9	6	3.67	3.9
3159	Antlia . . .	η	38	4095	3417	5410	13618	54.6	35 25	6·5	5.5	5.6	3	5.30	5.8
3196	Vela . . .	—	—	4136	—	5459	13739	59.9	47 40	6·5	—	9	3	8.87	8.9
3209	Vela . . .	—	182	4158	3461	5486	13797	10 2.2	46 53	6	—	5.7	3	5.20	5.6
3212	Chamaeleon .	μ	19	4232	3480	5501	13840	3.4	81 44	5	6	6.0	4	5.57	5.8
3224	Vela . . .	Q	186	4172	3472	5511	13850	5.1	51 19	5·6	6	5.3	3	5.16	5.4
3232	Carina . . .	—	176	R	3481	5523	13875	5.9	65 19	6·0	—	5.7	3	5.36	5.7
3254	Antlia . . .	—	55	4202	3497	5562	13941	9.5	39 51	R	R	6.4	3	5.96	6.5
3255	Vela . . .	—	189	4206	3499	5563	13942	9.6	50 44	6·5	6.5	5.8	3	5.56	5.5
3256	Antlia . . .	—	56	4204	3498	5565	13943	9.7	39 48	R	R	6.8	2	6.24	7.0
3258	Vela . . .	—	190	4208	3501	5566	13945	9.7	51 15	6	—	6.2	3	5.99	5.9
3265	Vela . . .	q	191	4212	3509	5578	13968	10.6	41 37	4	4.5	4	6	3.96	4.4
3266	Carina . . .	M	184	4233	3513	5584	13983	10.7	65 52	6	6	5.7	3	5.39	5.8
3271	Vela . . .	—	193	4222	3512	5587	13991	11.3	42 36	6·5	—	6.2	3	5.68	5.9
3274	Carina . . .	ω	185	4243	3516	5593	14008	11.4	69 32	4·3	4	3.6	6	3.61	3.6
3277	Vela . . .	—	194	4229	—	5592	14002	11.6	54 28	6	—	6.9	3	6.50	6.4
3293	Carina . . .	q	187	4249	3526	5617	14054	13.7	60 50	4	4.5	3.3	6	3.42	3.5
3308	Vela . . .	—	201	4263	3536	5636	14105	15.8	54 32	5·6	6.5	5.4	3	4.47	5.5
3312	Vela . . .	—	202	4260	3537	5640	14114	16.2	47 12	6	—	6.3	3	5.62	5.9
3317	Vela . . .	J	203	4272	3546	5655	14145	17.2	55 33	5·4	5	5	3	4.44	5.3
3323	Vela . . .	r	204	4271	3552	5662	14156	18.1	41 9	5·6	5	5.3	3	4.88	5.1
3333	Antlia . . .	—	64	4278	3557	5676	14191	19.1	37 31	6	—	5.7	3	5.51	5.8
3344	Carina . . .	L	191	4296	3564	5684	14216	20.0	66 24	6·5	6.5	5.4	3	5.38	5.6
3359	Carina . . .	I	193	4319	3585	5717	14276	22.4	73 32	5	5	4.4	3	4.02	4.1
3360	Antlia . . .	α	67	4298	3578	5714	14266	22.5	30 34	5·4	4.5	4.4	5	4.23	4.3
3366	Vela . . .	—	209	—	3581	5718	14277	23.0	54 22	—	—	6.2	3	5.51	6.0
3369	Carina . . .	—	195	4310	3589	5724	14295	23.7	57 8	5·6	6	5.4	3	4.91	5.6
3374	Carina . . .	s	196	4314	3594	5729	14304	24.2	58 14	5·4	4.8	4.6	3	4.05	4.5
3380	Antlia . . .	δ	68	4309	3598	5738	14319	24.9	30 6	6·5	—	6	4	5.82	5.9
3385	Carina . . .	—	199	4330	—	5750	14337	25.5	63 40	—	—	6.1	3	5.23	6.0
3394	Vela . . .	—	215	4336	3614	5767	14369	27.5	53 13	6·5	6	5.8	3	5.07	5.6
3397	Vela . . .	s	217	—	3615	5770	14373	27.7	44 33	6·5	5.5	6.2	3	5.82	5.5
3398	Vela . . .	—	216	4334	3613	5769	14372	27.7	44 34			6.8			
3399	Carina . . .	K	202	4357	3617	5774	14383	27.8	71 29	5·6	6	5.0	3	4.91	5.1
3406	Carina . . .	p	203	4348	3619	5778	14392	28.5	61 11	4	4	3.6	7	3.62	3.5
3408	Carina . . .	—	204	4367	3624	5784	14405	28.7	72 43	6·5	6.5	5.6	3	4.82	5.6
3409	Vela . . .	t	219	4344	3618	5781	14397	28.8	46 30	6·5	—	5.8	3	5.09	5.5
3423	Antlia . . .	—	71	4358	3630	5800	14440	30.8	39 3	—	—	5.9	3	5.41	5.9
3428	Carina . . .	r	208	4373	3635	5816	14478	31.8	57 3	5·6	6	5.3	3	4.55	5.5
3429	Carina . . .	—	209	4375	3636	5822	14489	32.0	57 43	—	—	7.5	3	R	R
3432	Carina . . .	t¹	210	4380	3642	5832	14504	32.6	59 3	6·5	4.5	5.5	4	5.28	5.6
3436	Vela . . .	p	222	4378	3644	5839	14517	33.2	47 43	5·4	4.5	4.1	6	3.99	4.4
3446	Chamaeleon .	γ	23	4428	3660	5859	14557	34.3	78 6	5	5	4.4	3	4.09	4.3
3452	Carina . . .	t²	213	4396	3655	5861	14558	34.9	58 40	5·6	5	5.5	4	4.74	5.5
3454	Vela . . .	x	225	4398	3658	5867	14569	35.3	55 5	5·4	5	5	3	4.40	5.1
3469	Antlia . . .	—	78	4415	3677	5903	14635	38.1	32 12	6·5	—	5.9	3	5.92	5.9
3472	Carina . . .	—	221	4440	—	5914	14653	38.7	63 57	—	—	5.7	3	5.18	5.7
3474	Carina . . .	—	222	4435	3680	5915	14656	38.9	58 42	6·5	—	6.5	7	5.51	6.1
3476	Carina . . .	θ	223	4447	3686	5920	14667	39.4	63 52	3·4	3	2.9	7	3.01	3.3

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3477	Carina . . .	w	224	4446	3688	5921	14673	10	39.7	60	3	6·5	—	5.2	3	4.44	5.7
3482	Carina . . .	—	229	4455	3694	5934	14702		40.5	63	26	6	5	5.6	3	5.12	5.8
3485	Carina . . .	η	231	4457	3695	5938	14720		41.2	59	10	var.	—	var.	7	var.	var.
3488	Carina . . .	—	232	4467	3699	5945	14731		41.4	70	20	6·5	6.5	6.9	5	6.26	6.6
3491	Carina . . .	—	233	—	—	5946	14735		41.6	70	20			6.9	5	6.64	6.7
3495	Vela . . .	μ	229	4461	3702	5957	14751		42.5	48	54	3·4	3.5	2.9	7	2.81	3.1
3498	Carina . . .	—	237	4473	3706	5964	14769		42.8	63	44	—	—	6.2	3	5.45	5.8
3499	Vela . . .	—	230	4468	3705	5963	14767		42.9	56	14	6·5	—	5.8	3	5.47	5.8
3502	Carina . . .	—	238	4475	—	5966	14775		43.2	63	52	—	—	5.8	3	5.05	5.8
3505	Hydra . . .	—	252	4463	—	5969	14778		43.6	31	10	6	—	6.2	3	6.03	5.9
3510	Chamaeleon .	δ^1	25	4509	3723	5991	14817		44.4	79	57	5	5	6.2	6	5.48	5.9
3517	Chamaeleon .	δ^2	26	4513	3724	5994	14829		44.9	80	1			4.9	6	4.62	5.2
3520	Antlia . . .	—	80	4483	3719	5993	14820		45.3	33	32	6·5	—	5.8	3	5.83	5.9
3547	Carina . . .	—	244	4507	3734	6018	14886		48.4	56	43	6·5	—	6.0	3	5.67	5.8
3556	Carina . . .	u	246	4515	3740	6034	14910		49.4	58	19	4·5	6	4.1	7	3.85	4.2
3562	Carina . . .	—	248	4531	3753	6043	14943		50.4	70	11	6	—	6.5	3	6.06	6.5
3570	Carina . . .	T	249	4530	3754	6050	14955		51.3	59	59	—	—	var.	4	6.03	6.4
3574	Antlia . . .	ι	84	4527	3755	6052	14963		52.1	36	36	5·6	5	5.1	3	4.61	4.9
3582	Vela . . .	—	237	4533	—	6058	14982		52.8	50	14	—	—	6.4	5	6.22	6.3
3593	Hydra . . .	—	259	4540	3763	6069	15020		54.5	33	12	6·5	—	6.0	3	5.83	6.0
3598	Vela . . .	—	238	4549	3770	6079	15043		55.4	43	16	—	—	6.2	3	6.12	6.1
3601	Vela . . .	i	239	4550	3772	6081	15048		55.5	41	41	5	5	4.5	3	4.58	4.6
3605	Hydra . . .	—	260	4552	3774	6088	15061		56.0	31	18	6·5	—	6.3	3	6.19	6.0
3638	Vela . . .	—	247	4584	3791	6131	15153	11	0.0	47	8	6	6.5	6.0	3	5.92	5.9
3639	Octans . . .	η	11	4643	3803	6146	15189		0.0	84	3	6	6	6.3	9	6.22	6.2
3640	Antlia . . .	—	85	4580	3792	6134	15155		0.2	35	16	—	5.5	5.8	3	5.71	5.8
3656	Centaurus .	—	3	4601	—	6155	15206		2.0	50	25	—	—	6.8	2	6.22	6.8
3659	Carina . . .	—	256	4604	3802	6160	15215		2.3	58	7	—	—	6.9	3	6.04	6.2
3662	Carina . . .	z	257	4611	3805	6165	15222		2.4	61	53	5·6	5.5	5.3	3	4.80	5.0
3663	Centaurus .	—	4	4603	3804	6169	15224		2.7	42	6	6·5	5.5	5.8	3	5.35	5.6
3668	Carina . . .	—	259	4625	3814	6177	15243		3.2	70	20	6·5	6.5	6.1	3	5.86	6.0
3678	Carina . . .	x	260	4627	3818	6184	15266		4.4	58	26	5·4	5	4.6	3	4.03	4.7
3679	Carina . . .	—	261	4629	3820	6186	15269		4.4	61	24	6·5	6.5	6.0	3	5.47	5.7
3686	Hydra . . .	—	272	4623	3822	6189	15279		5.1	31	49	5·6	6	5.9	5	5.84	5.9
3714	Centaurus .	—	9	4649	3830	6220	15347		8.0	48	33	6·5	6	5.8	3	5.68	5.7
3716	Carina . . .	y	263	4652	3835	6223	15356		8.3	59	46	5·6	6	5.2	3	4.73	5.6
3718	Carina . . .	—	264	4657	3839	6230	15365		8.6	63	37	6·5	—	5.7	3	5.53	5.5
3765	Chamaeleon .	—	30	4729	3865	6313	15525		15.6	79	7	5	5.5	6.6	3	6.30	6.4
3774	Centaurus .	π	24	4717	3866	6321	15539		16.4	53	56	5·4	4	4.3	3	4.38	4.1
3785	Centaurus .	—	26	4728	3875	6333	15571		18.4	35	37	5·6	5.5	5.8	3	5.00	5.6
3788	Musca . . .	—	4	4737	3880	6341	15588		19.1	64	24	6·5	—	6	3	5.43	5.7
3792	Musca . . .	—	5	4744	3889	6349	15612		20.2	71	42	—	—	6.1	7	5.64	5.9
3794	Centaurus .	—	29	4739	3890	6350	15619		20.6	35	31	5·6	6	5.7	3	5.44	5.8
3799	Centaurus .	—	31	4747	3895	6356	15640		21.4	63	25	6	—	5.7	3	5.34	5.7
3802	Centaurus .	—	33	4751	3899	6360	15652		22.1	60	34	6·5	—	6.2	3	5.57	5.8
3822	Centaurus .	—	34	4754	3907	6376	15684		23.8	42	7	6·5	5.5	5.5	3	5.38	5.6
3840	Centaurus .	o^1	37	4774	3924	6409	15755		27.1	58	53	6·5	6.5	5.2	3	4.93	5.4
3841	Centaurus .	o^2	38	4775	3923	6410	15756		27.1	58	58			5.5	3	5.30	5.6
3848	Hydra . . .	—	287	4776	3926	6421	15777		27.9	30	32	6	6	5.8	4	4.94	5.2
3849	Centaurus .	—	39	4778	3927	6420	15776		27.9	39	53	6	R.	6.2	3	5.67	5.7

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3853	Hydra . . .	ξ	288	4779	3928	6425	15786	11	28.1	31	18	4·3	4	3.7	8	3.65	3.6
3860	Centaurus .	—	41	4785	3929	6428	15795		28.7	40	2	6·5	R	5.7	3	5.61	5.7
3868	Hydra . . .	—	289	4788	3934	6436	15815		29.6	32	18	6	—	6.2	3	6.17	6.0
3871	Centaurus .	A	42	4794	3935	6439	15825		30.0	53	42	5	5	5.2	3	4.79	5.4
3873	Centaurus .	—	43	4795	—	6442	15827		30.2	48	35	6	—	6.0	3	5.55	5.8
3876	Centaurus .	C¹	44	4796	3936	6446	15832		30.4	46	49	6·5	6	6.0	3	5.71	5.8
3882	Centaurus .	C²	45	—	3938	6448	15841		31.1	47	5	—	—	5.5	3	5.45	5.6
3883	Centaurus .	λ	46	4804	3941	6452	15848		31.1	62	28	6	4.5	3.4	6	3.31	3.7
3888	Hydra . . .	—	291	4800	3945	6455	15854		31.6	33	1	6	—	6.2	3	5.85	5.9
3893	Centaurus .	—	52	4816	3950	6469	15877		32.4	60	44	6·5	—	5.9	3	5.21	5.7
3894	Centaurus .	C³	53	4815	3951	6472	15883		32.7	47	11	6	6	5.9	3	5.41	5.7
3900	Chamaeleon .	π	32	4831	3957	6481	15898		33.1	75	20	6	6.5	6.2	3	5.66	6.0
3905	Centaurus .	—	54	4834	—	6485	15901		33.5	61	16	—	—	6.0	3	5.38	5.8
3911	Musca . . .	—	12	4843	3960	6505	15937		34.8	64	50	5·6	—	5.8	3	5.08	5.5
3918	Hydra . . .	o	293	4839	3963	6510	15950		35.2	34	11	5	5	4.9	3	4.98	4.5
3927	Centaurus .	—	58	4856	3967	6523	15975		36.2	61	32	6·5	6.5	5.7	3	4.85	5.6
3932	Centaurus .	—	59	4852	—	6527	15983		36.4	42	32	6·5	5	6.1	3	5.59	5.8
3933	Hydra . . .	—	295	4857	3969	6529	15986		36.7	31	56	6·5	6	5.8	4	4.98	5.3
3938	Chamaeleon .	—	33	4873	—	6541	16016		37.6	82	32	—	—	6.7	3	6.19	6.5
3949	Centaurus .	—	61	4868	3976	6549	16039		38.8	61	56	6·5	—	5.8	3	5.17	5.8
3962	Centaurus .	—	64	4878	3983	6565	16080		40.8	45	8	6·5	5.8	5.9	3	5.42	5.7
3963	Musca . . .	λ	15	4883	3984	6567	16085		40.9	66	10	4·5	5	3.8	6	3.77	3.8
3966	Centaurus .	—	65	4885	3986	6573	16100		41.7	60	37	5·4	5.5	4.7	3	4.28	4.6
3969	Centaurus .	—	66	4887	3988	6576	16103		41.8	39	57	6·5	5	5.4	6	5.11	5.6
3970	Centaurus .	—	67	4886	—	6581	16110		42.0	35	21	—	—	6.6	2	6.13	6.7
3978	Musca . . .	μ	16	4899	3993	6591	16133		43.4	66	15	5·6	6.5	5.3	3	4.69	5.4
3987	Centaurus .	j	69	4903	4000	6601	16151		44.8	63	14	5·4	6	4.9	3	4.62	4.6
3990	Musca . . .	—	17	4907	4001	6604	16162		45.2	69	40	6·5	6.5	5.6	3	4.92	5.6
3995	Centaurus .	B	71	4910	4007	6614	16179		46.1	44	37	5·6	5	5.0	3	4.59	4.7
4000	Hydra . . .	—	300	4913	4009	6617	16192		46.7	30	16	6	6.5	6.2	4	5.94	5.7
4001	Musca . . .	—	18	4920	4011	6620	16200		47.0	64	39	5·6	—	5.5	3	5.11	5.3
4002	Centaurus .	—	74	4922	4013	6623	16206		47.2	56	26	6	—	6.1	3	5.65	5.9
4005	Hydra . . .	β	301	4923	4015	6626	16217		47.9	33	21	5·4	4.5	4.5	4	4.47	4.3
4026	Crux . . .	—	2	4959	4040	6667	16341		53.2	55	45	6	—	6.1	3	5.58	5.9
4039	Chamaeleon .	ε	37	4974	4048	6684	16382		54.7	77	40	5·6	5.5	5.0	7	5.06	5.2
4054	Octans . . .	—	12	4991	4058	6703	16438		57.3	85	4	6	6.5	6.6	5	5.86	6.3
4057	Musca . . .	—	22	4985	4060	6706	16441		57.6	68	38	6·5	6.5	6.5	3	6.10	6.2
4059	Crux . . .	θ¹	6	4990	4061	6711	16451		58.0	62	45	5	R	4.7	3	4.47	5.1
4063	Centaurus .	—	88	4992	4062	6713	16458		58.5	41	52	6·5	6	5.7	3	5.36	5.5
4066	Crux . . .	θ²	7	4999	4067	6722	16479		59.2	62	36	5·6	R	5.3	3	4.94	5.2
4067	Musca . . .	—	25	5000	4068	6725	16481		59.5	67	46	6	6.5	6.0	3	5.43	5.8
4069	Chamaeleon .	κ	38	5004	4071	6727	16484		59.6	75	57	6·5	6	5.6	3	4.93	5.6
4070	Crux . . .	—	9	5003	—	6731	16488		59.8	60	24	—	—	6.6	2	5.92	6.9
4077	Hydra . . .	—	311	5013	—	6743	16512	12	0.8	35	8	—	6.5	6.2	3	6.45	6.0
4079	Musca . . .	—	27	5020	—	6752	16534		1.2	65	9	—	—	7	2	5.88	6.9
4080	Musca . . .	—			—	—	16535		1.2	65	9	—	—	8.5			
4083	Crux . . .	η	10	5023	4078	6754	16541		1.7	64	3	4·5	5.5	4.7	3	4.31	4.4
4088	Musca . . .	—	29	5028	4082	6760	16560		2.6	74	48	6·5	6	5.8	3	5.11	5.8
4089	Centaurus .	—	92	5030	4084	6762	16566		2.9	50	6	—	—	5.8	3	4.79	5.7
4092	Centaurus .	E	93	5031	4086	6764	16570		3.1	48	8	6·5	6.5	6.1	3	5.65	5.9

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4093	Centaurus .	δ	94	5033	4087	6766	16572	12 3.2	50 10	3	3	2.8	6	2.81	2.7
4094	Crux . . .	—	11	5032	4089	6767	16574	3.2	60 17	—	—	6.8	2	6.22	7.2
4096	Centaurus .	—	95	5036	4091	6770	16588	3.7	43 46	6	6.5	6.1	3	6.03	6.0
4099	Centaurus .	—	96	5037	4092	6771	16589	3.8	40 40	6	6	5.9	3	5.74	5.8
4107	Centaurus .	ρ	101	5055	4103	6793	16652	6.4	51 48	4·5	4.5	4.5	3	4.15	4.5
4122	Centaurus .	—	102	5065	4113	6808	16688	8.2	38 22	6	6.5	6.1	3	6.04	6.0
4127	Centaurus .	D	103	5069	4115	6813	16700	8.8	45 10	6	6	6.5	3	5.36	5.7
4134	Crux . . .	δ	18	5075	4120	6824	16726	9.8	58 11	3·4	3.5	3.4	7	3.08	3.1
4144	Musca . . .	—	34	5083	—	6833	16756	11.7	65 8	—	—	6.7	5	6.23	6.4
4147	Musca . . .	ε	35	5084	4129	6834	16761	12.1	67 24	5·4	5	4.7	7	4.15	4.5
4148	Chamaeleon .	β	40	5085	4131	6836	16766	12.5	78 45	5	5	4.6	4	4.34	4.7
4153	Crux . . .	ζ	19	5090	4133	6841	16778	13.0	63 26	5·4	6	4.6	3	4.25	4.6
4157	Centaurus .	F	108	5092	4138	6843	16793	13.6	54 35	6	6.5	5.8	3	4.97	5.6
4173	Crux . . .	ε	22	5110	4158	6865	16835	15.9	59 51	4·5	4.5	4.0	6	3.53	3.7
4176	Musca . . .	ζ²	38	5112	4162	6869	16845	16.6	66 58	5·6	6	5.8	3	5.30	5.8
4187	Centaurus .	x¹	113	5129	4174	6887	16894	18.3	34 51	6·5	5.5	5.5	3	5.44	5.7
4190	Centaurus .	—	114	5130	4175	6889	16896	18.5	38 21	6·5	5	6.1	3	6.14	6.0
4199	Centaurus .	—	117	5141	4182	6901	16923	19.8	41 57	—	6	6.6	3	6.18	6.2
4202	Centaurus .	x²	118	5142	4183	6904	16929	20.1	34 38	6	5.5	5.8	3	5.84	5.8
4207	Centaurus .	G	119	5150	4189	6910	16946	21.1	50 53	5·6	5	5.7	3	5.07	5.5
4208	Crux . . .	α¹	26	5148	4187	6908	16942	21.1	62 32	1	2	1.5	10	1.02	1.3
4209	Crux . . .	α²	27	—	—	6909	16943	21.1	62 32			1.8			
4212	Hydra . . .	—	323	5154	4192	6915	16957	21.6	32 16	6·5	6	5.6	2	5.64	5.7
4222	Centaurus .	σ	121	5162	4197	6922	16976	22.6	49 40	5	4	4.3	3	4.14	4.6
4224	Centaurus .	u	122	5164	4202	6927	16991	23.0	38 29	6·5	5.5	5.9	3	5.71	5.7
4227	Crux . . .	—	32	5175	—	6928	16992	23.2	55 50	—	—	6.2	3	6.17	6.2
4232	Crux . . .	—	33	5178	—	6935	17014	24.4	55 58	—	—	5.9	3	5.67	6.0
4242	Crux . . .	γ	34	5180	4215	6947	17048	25.6	56 33	2·1	2.3	2.0	10	1.55	2.0
4245	Musca . . .	—	43	5181	—	6953	17061	26.1	72 27	—	—	6.2	3	5.96	6.1
4247	Musca . . .	γ	44	5184	4224	6958	17072	26.5	71 35	4·5	4.5	4.0	7	4.01	4.4
4261	Centaurus .	—	127	5207	4236	6983	17130	29.3	44 7	6	6.5	6.2	3	5.83	5.7
4263	Centaurus .	—	128	5211	4243	6987	17141	30.3	40 28	6·5	5.5	5.7	4	5.48	5.7
4264	Centaurus .	—	129	5214	—	6989	17149	30.6	39 19	6·5	—	6.4	3	5.95	6.0
4270	Musca . . .	α	45	5213	4245	6992	17156	31.3	68 35	3·4	4	2.9	7	2.91	3.2
4276	Centaurus .	τ	131	5222	4251	6998	17180	32.3	47 59	5·4	4.5	4.4	3	3.99	4.4
4286	Hydra . . .	—	329	5229	4256	7006	17216	33.7	29 52	—	—	6.4	5	5.95	6.1
4289	Centaurus .	l	132	5231	4262	7010	17234	34.4	39 26	5·6	5	5.2	3	4.71	5.3
4294	Centaurus .	γ	134	5243	4264	7022	17269	36.0	48 24	3	3	2.4	6	2.36	2.4
4297	Crux . . .	—	39	5241	4265	7023	17270	36.2	59 8	6·5	6.5	6.0	3	5.04	5.8
4300	Crux . . .	—	40	5247	—	7029	17296	36.9	62 30	—	—	6.1	3	5.98	6.3
4301	Centaurus .	w	136	5250	4272	7032	17300	37.1	48 16	6	—	5.4	3	4.63	5.7
4302	Crux . . .	—	41	5249	4273	7033	17301	37.1	55 24	6	R	6.5	3	6.16	6.3
4310	Crux . . .	ι	44	5265	4279	7049	17366	39.7	60 26	6·5	6.5	5.7	3	4.71	5.7
4312	Musca . . .	β	51	5267	4280	7053	17374	40.1	67 33	4	4.5	3.4	6	3.26	3.7
4317	Crux . . .	—	45	5273	4284	7055	17390	40.6	55 56	5·6	—	5.4	3	4.93	5.6
4324	Crux . . .	β	46	5277	4289	7062	17411	41.8	59 8	2.1	2.5	1.7	10	1.49	1.8
4340	Crux . . .	—	—	5286	—	7077	17450	44.3	62 6	6·5	—	7.2	3	6.51	6.1
4341	Octans . . .	ι	16	5268	4293	7073	17440	44.4	84 35	6·5	5.5	6.0	7	5.37	5.9
4346	Centaurus .	—	142	5294	4307	7083	17471	45.2	52 14	6	6.5	6.2	3	5.88	6.0
4347	Centaurus .	p	143	5296	4309	7084	17473	45.3	33 27	5	5	5.3	3	5.12	5.7

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4352	Crux . . .	—	48	5303	—	7099	17504	12 47.4	59 47	R	R	6.3	7	5.78	6.1
4354	Centaurus .	e	149	5308	4317	7101	17506	47.5	48 24	5	6	5.0	3	4.36	5.1
4361	Centaurus .	n	150	5312	4321	7105	17521	47.9	39 38	5	4	4.4	3	4.31	4.8
4362	Crux . . .	κ	50	5309	—	7104	17518	47.9	59 50	R	R	6.7	5	6.11	6.6
4365	Crux . . .	λ	51	5316	4324	7111	17540	48.7	58 36	5·6	6.5	5.6	3	4.84	5.7
4366	Crux . . .	—	53	—	4327	7113	17542	48.8	56 37	—	—	5.5	3	5.42	5.1
4367	Crux . . .	μ	52	5317	4325	7112	17541	48.8	56 38	4·5	4	4.4	3	4.29	4.5
4371	Centaurus .	—	152	5322	4332	7118	17568	49.8	42 22	6	—	6.1	3	5.40	5.9
4373	Crux . . .	—	54	5321	4333	7119	17572	50.1	56 17	6·5	—	6.0	3	5.62	5.9
4384	Centaurus .	H	156	5331	4344	7130	17608	51.3	50 39	6·5	6	5.8	3	5.21	5.4
4402	Musca . . .	δ	54	5349	4353	7160	17693	55.4	71 0	4·5	5	3.7	7	3.60	3.6
4412	Centaurus .	ξ¹	165	5370	4368	7181	17747	57.7	48 59	6·5	6	5.8	3	5.00	5.6
4422	Centaurus .	f	171	5390	4377	7200	17811	13 0.4	47 56	5·6	5.5	5.3	3	4.94	5.7
4425	Centaurus .	ξ²	173	5396	4379	7207	17826	1.0	49 22	5·6	5	4.8	3	4.36	5.1
4428	Centaurus .	—	176	5400	4383	7210	17835	1.4	35 19	6·5	6	6.0	4	5.58	5.9
4431	Centaurus .	—	177	5398	4385	7214	17844	1.7	52 55	6·5	6.5	6.1	3	5.89	6.1
4432	Musca . . .	θ	56	5394	4381	7213	17840	1.7	64 46	6	6	6	5	5.64	5.9
4450	Centaurus .	—	181	5420	4405	7232	17925	5.4	41 42	6	—	6.1	3	5.78	5.8
4452	Centaurus .	—	182	5422	4409	7235	17929	5.6	42 50	6	5.5	5.7	3	5.08	5.6
4453	Centaurus .	—	183	5418	4412	7238	17936	6.0	59 23	5·6	5	5.4	7	4.74	5.2
4461	Centaurus .	—	185	5429	4417	7243	17949	6.5	37 16	6·5	5	5.2	3	4.82	5.3
4467	Centaurus .	—	191	5437	4422	7253	17977	8.0	58 34	6·5	6	5.9	7	4.99	5.6
4470	Musca . . .	η	59	5433	4426	7259	17989	8.5	67 22	5·6	5	5.3	3	4.91	5.3
4480	Musca . . .	—	62	5451	4434	7275	18039	10.5	66 15	5·6	6	5.5	3	4.82	5.6
4481	Centaurus .	r	195	5466	4437	7280	18060	11.3	30 59	6·5	5	5.7	6	5.16	5.4
4483	Centaurus .	—	196	5464	—	7282	18064	11.4	43 27	6	6	6.1	3	5.90	6.0
4503	Centaurus .	—	202	5484	4454	7302	18139	14.5	52 13	6·5	6.5	6.1	7	5.72	5.9
4507	Centaurus .	ι	204	5491	4458	7306	18149	15.0	36 11	3·4	3	3.0	7	2.98	2.7
4515	Centaurus .	J	208	5492	4463	7319	18174	16.2	60 28	5·6	4.5	5.2	4	4.56	5.4
4521	Centaurus .	m	214	5500	4469	7330	18202	17.2	64 1	5	5.5	5.3	3	4.43	5.8
4522	Musca . . .	ι¹	66	5486	4465	7326	18192	17.2	74 22	5·6	6	5.6	3	4.90	5.9
4535	Musca . . .	—	67	5506	—	7339	18227	18.6	70 6	—	—	6.1	3	5.88	6.1
4541	Centaurus .	—	217	5531	4482	7355	18268	20.3	39 14	6	6	5.9	3	5.12	5.5
4542	Centaurus .	ω	219	5533	4485	7360	18278	20.8	46 57	cum.	4.5	4	4	R	R
4543	Centaurus .	—	221	5543	4489	7364	18290	21.1	40 59	6	6.5	6.2	3	5.72	6.0
4557	Centaurus .	K	224	5552	4495	7390	18332	23.3	50 39	6·5	6	5.8	3	5.34	5.9
4565	Octans . . .	κ	18	5482	4483	7387	18321	24.7	85 17	5·6	5	5.7	8	5.68	6.0
4567	Centaurus .	d	227	5569	4507	7405	18376	25.2	38 54	4·5	4	4.5	3	3.95	4.1
4594	Musca . . .	—	73	5587	4534	7448	18498	31.2	69 56	—	—	6.7	2	5.87	6.9
4610	Centaurus .	ε	245	5618	4549	7478	18559	33.6	52 58	3	3	2.6	8	2.58	3.0
4612	Centaurus .	—	248	5625	—	7484	18568	34.0	39 33	—	R	6.2	3	5.75	6.1
4621	Centaurus .	—	251	5627	4557	7492	18586	35.3	58 17	6	6	6.1	4	5.53	5.9
4622	Centaurus .	Q	250	5632	4558	7491	18587	35.4	54 3	5·6	6	6.2	3	5.49	5.6
4630	Centaurus .	—	254	5643	—	7507	18614	36.6	50 17	—	—	7.0	2	6.24	7.8
4641	Centaurus .	i	265	5668	4579	7536	18696	40.0	32 33	5·4	4.5	4.5	3	4.25	4.6
4646	Centaurus .	M	266	5664	4580	7538	18700	40.4	50 56	5·6	6.5	5.2	7	4.61	5.3
4651	Centaurus .	z	267	5676	4586	7542	18718	41.1	35 45	5·6	6	5.8	3	5.18	6.0
4653	Centaurus .	—	269	5674	—	7544	18720	41.4	49 50	—	R	6.0	6	5.56	6.1
4665	Chamaeleon .	—	50	5633	—	7546	18722	42.9	82 11	—	—	6.6	5	5.79	6.5
4672	Centaurus .	ν	272	5683	4601	7562	18772	43.5	41 12	4·5	3	3.7	7	3.54	3.8

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4675	Centaurus .	g	274	5688	4603	7565	18779	13 43.6	33 58	5·4	4.5	4.6	7	4.28	4.7
4676	Centaurus .	μ	273	5684	4602	7563	18773	43.6	41 59	4	3	3.4	6	3.33	3.7
4685	Centaurus .	—	278	5702	4617	7580	18819	45.6	46 25	—	—	6.2	7	5.85	6.1
4686	Centaurus .	N	277	5700	4616	7578	18817	45.6	52 19	—	6.5	5.9	3	5.40	5.7
4690	Centaurus .	k	R	5708	4623	7587	18833	46.0	32 30	5	4.5	5	3	4.35	5.4
4697	Centaurus .	—	283	5711	4625	7597	18849	47.2	52 53	6·5	—	6.5	7	6.05	6.1
4701	Centaurus .	h	284	5725	4629	7599	18855	47.4	31 27	5·6	5	5.5	3	4.88	5.6
4704	Centaurus .	y	286	5726	4631	7604	18863	47.7	35 11	6	6.5	6.0	5	5.72	6.2
4714	Centaurus .	—	288	5727	4635	7619	18887	48.8	51 41	6	—	6.1	3	5.83	6.1
4715	Centaurus .	ζ	289	5737	4638	7623	18897	49.3	46 47	3	3.5	2.7	7	2.81	2.6
4724	Centaurus .	—	294	5733	4644	7639	18920	50.4	63 11	5·6	6	5.7	3	4.76	5.9
4727	Circinus . .	—	3	5740	—	7643	18931	51.0	65 18	—	—	6.8	2	6.21	6.6
4731	Centaurus .	φ	296	5768	4653	7655	18960	52.2	41 36	5·4	3.5	4.1	7	4.04	4.5
4732	Centaurus .	v^1	297	5770	4654	7661	18968	52.5	44 19	5·4	3.8	4.2	7	4.05	4.4
4736	Centaurus .	—	298	5771	—	7665	18973	52.9	49 53	6	—	6.6	2	6.14	6.3
4748	Centaurus .	v^2	303	5782	4668	7687	19027	55.4	45 7	5	4.2	5.0	3	4.50	5.2
4749	Apus . . .	θ	4	5757	4660	7679	19014	55.6	76 19	6	5.5	var.	10	5.68	6.0
4753	Centaurus .	β	304	5784	4669	7691	19043	56.7	59 53	1	1.2	1.2	10	0.83	1.2
4772	Centaurus .	χ	311	5810	4681	7710	19107	59.9	40 42	5	4.5	4.8	3	4.59	5.6
4775	Centaurus .	θ	314	5820	4686	7719	19129	14 0.8	35 52	3·2	2	2.2	11	2.19	2.4
4791	Circinus . .	—	5	5804	—	7729	19154	2.1	69 50	—	—	6.7	2	6.08	6.5
4798	Centaurus .	—	321	5827	4695	7737	19179	3.3	52 57	—	6	5.4	3	4.83	4.8
4806	Apus . . .	η	6	5792	4692	7745	19197	5.7	80 32	5·4	5	5.3	7	5.04	5.4
4813	Centaurus .	—	324	5840	4704	7756	19242	6.6	53 12	6	—	6.1	3	5.47	6.0
4820	Centaurus .	—	328	5850	4709	7772	19273	8.0	56 37	6·5	6.5	5.6	3	5.22	5.7
4822	Circinus . .	—	8	5846	4715	7775	19280	8.7	66 7	6	6.5	6.2	3	5.89	5.9
4832	Apus . . .	ε	9	5828	4712	7782	19289	10.3	79 39	5	5.5	5.5	3	5.29	5.9
4837	Octans . . .	δ	19	5802	4705	7780	19284	10.9	83 13	5·4	4.5	4.7	10	4.10	4.8
4843	Centaurus .	—	334	5875	4730	7802	19344	12.5	60 48	5·6	—	5.9	3	5.25	5.3
4845	Lupus . . .	ι	1	5881	4734	7806	19354	13.0	45 36	5·4	R	3.8	7	3.91	3.7
4848	Centaurus .	v	336	5879	4735	7809	19358	13.3	55 56	5·6	5	5.0	4	4.36	5.4
4853	Lupus . . .	—	3	5891	4744	7819	19379	14.3	44 43	6·5	6	5.7	3	4.81	5.0
4854	Centaurus .	ψ	338	5895	4745	7821	19387	14.5	37 26	5·4	4	4.4	3	4.19	4.2
4858	Centaurus .	—	328	5893	4749	7827	19406	15.5	58 0	5·6	6	6	7	4.95	5.4
4864	Centaurus .	—	341	5907	4757	7835	19435	16.3	34 20	6	—	6.0	3	5.86	5.7
4865	Lupus . . .	—	5	5903	—	7838	19437	16.7	50 19	6	—	6.7	2	6.04	6.6
4866	Centaurus .	a	342	5911	4759	7841	19445	16.8	39 3	5	4.5	4.9	7	4.61	4.9
4867	Circinus . .	—	10	5890	4754	7837	19432	16.8	67 44	6·5	6·5	6.0	4	5.86	5.9
4877	Circinus . .	—	13	5908	—	7858	19493	19.2	65 22	6	—	6.6	2	5.72	6.5
4879	Lupus . . .	τ^1	9	5928	4768	7864	19514	19.7	44 46	5·6	4.5	5.3	3	4.58	4.8
4880	Lupus . . .	τ^2	10	5927	4770	7866	19515	19.8	44 56	5·6	—	4.9	3	4.35	4.7
4896	Lupus . . .	—	14	5951	4793	7892	19598	23.7	44 53	6	6·5	6.2	3	5.61	5.8
4897	Lupus . . .	—	13	5950	4791	7890	19597	23.7	49 4	6	—	5.9	3	5.54	5.8
4921	Lupus . . .	σ	15	5964	4801	7913	19661	25.9	50 1	5	4.5	5.2	5	4.61	5.3
4927	Centaurus .	—	352	5983	—	7921	19697	27.3	30 17	—	6.5	6.4	3	6.02	6.5
4941	Centaurus .	η	356	5993	4811	7935	19737	29.2	41 43	3	2.5	2.5	7	2.54	2.4
4943	Lupus . . .	—	18	5995	4815	7941	19746	29.7	45 49	6	R	6.2	5	5.34	6.0
4948	Centaurus .	—	359	6002	4818	7946	19768	30.5	39 47	—	6.5	6.2	3	6.06	6.1
4949	Lupus . . .	a	19	6001	4819	7949	19773	30.8	45 42	6	R	6.2	7	5.44	5.9
4950	Lupus . . .	ρ	20	6003	4821	7952	19785	31.2	49 0	5	4·	4.5	3	4.04	5.0

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4960	Centaurus .	a^1	363	6017	4832	7964	19825	14 32.8	60 25	1	1	1	8	0.20	0.7
4961	Centaurus .	a^2	364	6014	4831	7965	19826	32.8	60 25			3.5			
4969	Circinus . .	α	17	6012	4835	7975	19849	34.4	64 33	4·3	4	3.5	7	3.37	3.6
4972	Centaurus .	—	367	6038	—	7984	19867	34.9	35 43	6	—	6.2	3	5.82	6.1
4975	Lupus . . .	α	27	6034	4839	7986	19873	35.2	46 57	3·2	3	2.6	7	2.46	2.7
4976	Apus . . .	α	14	5980	4833	7979	19851	35.4	78 38	4·5	5	4.0	6	3.80	4.4
4978	Centaurus .	b	368	6048	4842	7994	19890	35.7	37 21	5·4	4	4.2	7	4.17	4.4
4985	Circinus . .	—	19	6039	4844	8005	19916	37.3	62 26	6·5	6.5	6.0	3	5.15	6.0
4987	Centaurus .	c^1	371	6063	4852	8008	19931	37.5	34 44	5·4	4	4.3	4	3.76	4.7
4988	Circinus . .	—	21	6057	4851	8010	19934	38.0	55 10	—	—	6.5	4	6.24	6.4
4993	Centaurus .	c^2	372	6071	4858	8018	19958	38.8	34 46	6·5	6	5.4	4	4.96	5.2
4995	Octans . . .	—	20	5823	4790	7960	19776	39.1	87 45	—	—	6.8	7	6.54	6.4
4999	Lupus . . .	b	30	6070	4862	8031	19985	40.0	51 57	6	6	5.8	3	5.12	6.0
5003	Circinus . .	—	22	6059	—	8030	19980	40.3	66 10	6	—	6.1	3	6.00	6.2
5023	Apus . . .	—	17	6066	4875	8056	20049	43.2	72 46	6	6.5	6.1	3	5.62	5.8
5032	Octans . . .	π^1	21	—	4859	8052	20034	44.2	82 49	6	—	6.0	9	5.60	6.0
5034	Lupus . . .	o	35	6114	4892	8078	20109	45.1	43 9	5	5	5.0	4	4.43	5.3
5040	Circinus . .	ζ	28	6106	4893	8088	20124	46.3	65 35	6·5	6	6.6	4	6.13	6.2
5042	Apus . . .	—	18	6077	4889	8085	20115	46.5	76 15	6	6.5	5.5	10	5.37	6.0
5044	Centaurus .	—	376	6124	4901	8090	20132	46.6	37 23	6·5	5	5.7	3	5.22	5.3
5047	Octans . . .	π^2	22	6019	4871	8083	20104	47.3	82 38	6	—	5.9	8	5.52	5.9
5052	Circinus . .	—	29	6119	4904	8100	20157	47.9	59 42	6·5	6.5	5.9	3	5.33	5.9
5060	Circinus . .	θ	31	6122	4908	8113	20174	48.7	62 22	5·6	6	5.8	3	5.19	5.7
5061	Lupus . . .	c	36	6132	4914	8118	20189	49.2	52 24	6	6.5	6.0	7	5.57	5.9
5063	Octans . . .	ω	23	6006	—	8091	20125	49.4	84 23	—	—	5.9	8	5.80	6.0
5065	Centaurus .	—	381	6146	4916	8121	20203	49.6	33 27	6	6	5.8	3	5.32	5.9
5066	Lupus . . .	—	37	6141	—	8122	20202	49.8	47 28	6	—	6.8	3	5.74	5.9
5081	Lupus . . .	β	41	6160	4924	8143	20263	52.0	42 44	3·4	3	2.8	7	2.74	2.9
5085	Centaurus .	κ	385	6170	4928	8152	20286	52.6	41 42	4	3.5	3.3	6	3.36	3.2
5104	Circinus . .	η	33	6181	4938	8178	20367	56.5	63 38	5	6	5.9	3	5.19	6.0
5106	Lupus . . .	—	45	6198	—	8183	20392	56.8	32 15	6	6	5.8	3	5.52	5.8
5119	Lupus . . .	π	47	6201	4948	8191	20428	58.3	46 40	5	4	4.3	3	3.84	4.8
5124	Lupus . . .	—	49	6209	4954	8195	20444	58.8	40 41	6	6.5	5.7	3	5.34	5.8
5129	Circinus . .	—	34	6192	—	8196	20447	59.4	64 53	—	—	6.8	2	5.89	6.7
5138	Lupus . . .	—	55	6226	—	8211	20484	15 0.5	30 32	6	5.5	6.5	7	6.00	6.3
5141	Lupus . . .	—	56	6231	—	8223	20509	1.7	40 12	—	6.5	6.2	3	6.09	5.9
5142	Lupus . . .	—	58	6233	—	8224	20513	2.0	42 29	6	—	6.5	3	6.01	6.0
5143	Lupus . . .	λ	57	6232	4973	8225	20514	2.1	44 54	5	4·5	4.8	4	4.34	4.8
5152	Lupus . . .	—	59	6236	4977	8236	20543	3.8	54 58	6	—	6.3	6	5.57	6.4
5160	Triang. Aust.	—	3	6222	4976	8242	20554	4.8	69 42	—	—	6.2	7	5.28	6.1
5161	Lupus . . .	κ	62	6246	4986	8251	20570	5.0	48 22	5·4	4	4.5	3	4.17	4.2
5162	Lupus . . .	—	63	—	4988	8252	20571	5.0	48 22	—	—	6.2	3	5.94	6.1
5163	Lupus . . .	ζ	64	6245	4987	8253	20572	5.1	51 43	4	3.5	3.6	6	3.46	3.4
5170	Lupus . . .	e	66	6257	4994	8259	20591	6.1	44 8	6	5.5	5.5	4	4.97	5.6
5183	Lupus . . .	i	69	6277	5009	8274	20651	8.5	31 9	6·5	5	5.5	7	5.01	5.5
5186	Circinus . .	δ	42	6262	5004	8273	20649	8.9	60 35	5·6	5	5.6	3	5.25	5.8
5188	Circinus . .	ε	43	6260	5007	8277	20654	9.2	63 15	5	5.5	5.5	3	4.85	5.7
5192	Lupus . . .	—	72	6280	5017	8286	20672	9.5	41 8	6	—	5.8	3	5.19	5.6
5193	Circinus . .	β	44	6266	5011	8284	20668	9.6	58 26	5·4	5	4.7	3	4.00	5.1
5194	Triang. Aust.	γ	5	6255	5005	8280	20657	9.6	68 19	3·4	3.5	3.1	7	3.00	3.4

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5201	Circinus . .	—	45	6272	5021	8297	20695	15 10.8	60 8	5·6	6.5	5.9	3	5.35	5.9
5207	Lupus . . .	μ	75	6296	5028	8307	20713	11.5	47 31	5	4	5	3	4.18	5.0
5214	Lupus . . .	—	79	6303	5035	8317	20731	12.4	40 26	6	—	6.2	4	5.69	6.3
5220	Lupus . . .	δ	83	6326	5046	8340	20779	14.8	40 18	4·5	3.5	3.7	7	3.37	3.4
5223	Lupus . . .	—	84	6328	—	8342	20782	15.0	40 24	—	—	7.0	2	6.13	7.5
5226	Lupus . . .	ν^1	86	6322	5049	8345	20786	15.1	47 34	6·5	5.5	5.8	3	4.98	5.9
5227	Lupus . . .	ν^2	85	6324	5050	8343	20783	15.1	47 57	6·5	—	6.4	5	5.66	6.1
5228	Circinus . .	—	46	6309	5042	8339	20775	15.1	60 18	6·5	6.5	6.1	3	5.58	5.8
5229	Circinus . .	γ	47	6312	5044	8346	20785	15.4	58 58	5	5	5.2	3	4.41	5.6
5230	Lupus . . .	ϕ^1	88	6335	5054	8347	20793	15.5	35 54	5·4	4	3.6	7	3.28	3.6
5231	Lupus . . .	ϵ	91	6333	5056	8352	20806	15.9	44 20	4·5	4	3.8	8	3.56	3.9
5237	Lupus . . .	ϕ^2	92	6349	5060	8361	20825	16.8	36 30	6·5	4.5	5.1	3	4.69	5.5
5245	Lupus . . .	υ	94	6356	5065	8374	20847	18.2	39 22	6	6.5	5.9	3	5.33	5.9
5251	Lupus . . .	k	97	6361	5069	8378	20861	18.8	38 22	6·5	5	5.1	3	4.63	5.5
5258	Octans . . .	ρ	24	6216	5037	8363	20818	20.1	84 9	6·5	6.5	5.9	11	5.70	6.3
5263	Apus . . .	κ^1	29	6323	5068	8386	20878	20.6	73 2	6	6.5	5.8	3	5.61	5.9
5264	Lupus . . .	—	100	6376	5082	8397	20909	20.9	36 25	6	—	6.0	7	5.60	5.9
5282	Lupus . . .	—	102	6380	5086	8411	20948	22.4	46 23	—	—	5.9	3	4.88	5.7
5305	Triang. Aust.	ϵ	11	6398	5103	8450	21051	27.6	65 59	5	4.5	4.6	3	4.07	4.9
5310	Lupus . . .	γ	113	6422	5118	8464	21084	28.5	40 50	4·3	3	3.2	6	2.96	2.9
5312	Lupus . . .	d	114	6424	5123	8468	21095	29.0	44 37	5·6	5.5	5.2	7	4.76	5.3
5313	Apus . . .	κ^2	33	6390	5108	8463	21078	29.2	73 7	6	6.5	6	7	5.76	5.8
5315	Lupus . . .	—	115	6427	5124	8471	21102	29.3	44 4	6	—	6.2	7	5.29	6.0
5325	Norma . . .	—	2	6437	5136	8486	21150	31.3	52 2	6	6.5	5.8	3	5.40	6.1
5324	Lupus . . .	ω	117	6443	5139	8487	21153	31.3	42 14	5·6	5	4.7	3	4.04	5.3
5331	Lupus . . .	—	118	6448	—	8496	21177	32.1	38 48	—	R	6.1	3	5.86	6.1
5337	Lupus . . .	ψ^1	119	6463	5160	8502	21207	33.4	34 5	6·5	R	5.1	4	4.44	5.2
5345	Lupus . . .	g	121	6464	5165	8513	21226	34.3	44 20	5·6	5	5.2	3	4.51	5.2
5354	Lupus . . .	h	124	6486	5171	8528	21269	36.1	37 6	6	6	5.8	3	5.22	5.8
5356	Lupus . . .	ψ^2	125	6489	5173	8533	21274	36.3	34 23	6·5	5	5.1	3	4.75	5.5
5379	Triang. Aust.	—	13	6477	5182	8549	21319	38.7	65 8	6	—	6.1	3	5.81	5.8
5387	Lupus . . .	—	128	6514	5199	8563	21360	40.4	34 22	6	R	5.8	3	5.65	5.8
5397	Norma . . .	—	12	6520	5209	8581	21399	42.5	52 54	6	6·5	6.0	3	5.89	6.0
5401	Norma . . .	—	15	6529	5222	8592	21426	43.2	45 6	—	—	6.6	5	6.18	6.3
5403	Norma . . .	—	14	6524	5218	8591	21421	43.3	54 45	6	—	6.2	3	5.70	6.1
5410	Lupus . . .	χ	132	6548	5227	8602	21454	44.6	33 20	5·5	4	4.2	7	4.20	4.1
5415	Triang. Aust.	κ	16	6518	5224	8607	21460	45.6	68 19	6·5	5.5	5.7	3	5.31	5.8
5416	Triang. Aust.	β	17	6533	5233	8612	21484	46.4	63 7	3·4	3	3.1	6	3.09	2.9
5422	Octans . . .	—	—	6404	—	8596	21419	47.0	83 57	5·6	—	7	8	7.76	7.6
5423	Norma . . .	—	18	6546	5242	8620	21499	47.2	59 53	—	—	6.2	6	6.05	6.0
5428	Triang. Aust.	—	19	6550	5247	8625	21509	47.7	60 11	—	—	6.2	4	5.98	6.1
5446	Triang. Aust.	—	20	6559	5256	8643	21552	49.8	64 45	6	5	6.1	3	5.86	5.9
5450	Lupus . . .	ξ	138	6592	5268	8655	21586	50.5	33 40	5·6	4·5	5.6	3	5.08	4.5
5451	Lupus . . .	—	139	—	5269	8657	21587	50.5	33 40	—	—	6.2			
5464	Lupus . . .	—	144	6609	5282	8674	21630	52.7	41 27	—	5	5.5	3	4.87	5.5
5469	Lupus . . .	η	146	6619	5292	8684	21653	53.4	38 6	5	3.5	3.8	6	3.77	3.7
5481	Apus . . .	—	38	6573	—	8692	21663	54.7	72 7	—	—	6.1	3	5.68	6.0
5486	Norma . . .	ι^1	28	6615	5301	8700	21694	55.4	57 29	5·6	5.5	5.5	3	4.82	5.4
5489	Norma . . .	η	30	6632	5305	8707	21710	55.8	48 57	6	5.5	5.2	7	4.66	5.2
5496	Lupus . . .	—	151	6644	5311	8715	21728	56.8	38 19	6	6	5.6	7	5.10	5.4

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5510	Norma . . .	δ	33	6664	5323	8737	21792	15 59.5	44 54	6·5	4.5	4.9	4	4.78	5.4
5512	Lupus . . .	θ	157	6678	5331	8745	21810	16 0.0	36 32	6·5	4	4.9	3	4.42	5.1
5516	Norma . . .	ι^2	36	6665	5332	8755	21827	1.0	57 40	6·5	6	6.0	3	5.84	5.9
5535	Scorpius . .	—	30	6711	5358	8781	21887	3.5	33 17	6	6	6.0	3	5.88	5.9
5549	Apus . . .	δ^1	40	6623	5339	8784	21881	5.3	78 27	R	R	5.2	3	4.73	5.5
5550	Norma . . .	—	37	6705	5370	8796	21918	5.4	55 17	6	6	6.3	6	5.99	6.3
5551	Apus . . .	δ^2	41	6628	5340	8786	21886	5.5	78 25	R	R	5.5	7	5.19	5.5
5552	Norma . . .	κ	40	6712	5373	8798	21921	5.6	54 22	6·5	5.5	5.5	3	5.10	5.8
5555	Triang. Aust.	δ	25	6701	5375	8805	21939	6.4	63 26	4·5	4.5	4.3	3	4.04	4.4
5559	Triang. Aust.	—	26	6698	5377	8810	21951	7.1	67 41	6·5	6	6.3	3	6.14	6.2
5563	Norma . . .	—	41	6722	5384	8817	21967	7.6	57 39	6	6.5	6.0	3	5.84	6.0
5566	Norma . . .	θ	42	6734	5390	8822	21974	8.0	47 7	6·5	6	5.4	7	5.31	5.7
5567	Norma . . .	—	43	6739	5397	8827	21991	8.4	42 39	—	5.5	6.6	3	6.10	6.3
5572	Norma . . .	—	44	6735	5398	8829	21995	8.8	53 34	—	R	6.0	3	5.42	5.7
5578	Norma . . .	γ^1	46	6746	5404	8836	22012	9.6	49 49	6	—	5.4	3	4.95	5.4
5591	Norma . . .	λ	50	6772	5427	8860	22082	12.3	42 26	6	—	5.7	3	5.64	5.8
5593	Norma . . .	γ^2	49	6764	5425	8859	22075	12.4	49 55	6·5	5	4.6	3	4.19	4.8
5594	Norma . . .	—	48	6761	5424	8856	22074	12.4	54 54	—	—	6.6	5	5.97	6.3
5599	Scorpius . .	—	55	6788	5435	8869	22108	13.2	30 40	6	5	6	4	5.51	5.5
5604	Norma . . .	—	51	6783	5438	8876	22126	14.1	47 57	6·5	—	7	10	6.62	6.7
5609	Norma . . .	—	52	6790	5442	8883	22147	15.0	49 20	6	6	5.9	3	5.40	5.7
5622	Scorpius . .	—	62	6810	—	8904	22194	17.3	38 58	—	6.5	5.8	3	5.32	5.8
5625	Triang. Aust.	ζ	31	6771	5450	8902	22185	17.6	69 52	5·6	6	5.6	3	4.99	5.8
5629	Scorpius . .	—	66	6816	5457	8913	22208	17.9	37 20	—	6	5.8	3	5.46	5.8
5631	Apus . . .	γ	44	6727	5439	8896	22170	18.1	78 41	5·4	5	3.9	7	3.94	4.0
5633	Triang. Aust.	ι	32	6795	5454	8917	22212	18.7	63 50	6·5	5.5	5.8	3	5.26	5.7
5639	Norma . . .	—	55	6812	5469	8930	22236	19.8	58 23	—	—	6.1	3	5.77	5.9
5640	Norma . . .	—	56	—	—	8934	22244	19.8	47 20	6	5	7	3	4.67	4.9
5641	Norma . . .	ε	57	6825	5472	8935	22246	19.8	47 20			5			
5644	Triang. Aust.	—	33	6824	5486	8942	22277	21.9	61 25	6	6.5	5.8	3	5.11	5.8
5648	Norma . . .	—	59	6841	5492	8947	22297	22.5	46 2	—	6.5	5.9	5	5.38	5.7
5655	Apus . . .	—	45	6809	—	8949	22293	23.3	70 47	—	—	5.9	7	5.53	6.0
5658	Octans . . .	—	26	6545	—	8914	22180	23.6	86 11	—	—	6.2	8	6.04	5.8
5666	Scorpius . .	—	71	6854	—	8960	22340	24.7	41 36	6	6	5.9	7	5.48	5.8
5667	Scorpius . .	N	72	6859	5508	8963	22347	24.8	34 29	5	4	4.6	7	4.46	4.7
5675	Triang. Aust.	θ	35	6844	5505	8967	22354	26.1	65 17	6	6	6.0	3	5.45	5.8
5681	Norma . . .	μ	60	6867	5521	8980	22390	27.0	43 50	6	5	5.5	4	5.16	5.4
5690	Apus . . .	β	47	6817	5510	8984	22393	28.8	77 18	5·4	5	4.5	3	4.22	4.9
5697	Norma . . .	—	61	6885	5533	8994	22441	29.4	42 39	6	—	6.0	3	5.53	6.0
5703	Scorpius . .	H	76	6890	5338	9001	22454	29.8	35 3	4	4.5	4.4	7	4.08	4.5
5711	Triang. Aust.	η^1	37	6865	5536	9005	22459	31.1	68 6	6·5	5.5	6.4	3	6.00	6.1
5715	Ara	—	2	6886	5540	9013	22482	32.1	60 15	—	—	6.8	2	6.22	6.8
5718	Scorpius . .	—	77	6910	—	9019	22503	32.4	37 1	—	6.5	6.2	3	6.18	6.1
5728	Ara	—	4	6912	5558	9037	22534	33.9	48 34	—	6	6	3	5.63	5.7
5730	Ara	—	5	6913	5561	9041	22540	34.1	49 27	—	—	6.0	3	5.91	5.8
5743	Triang. Aust.	—	41	6906	5566	9059	22582	36.6	66 55	6·5	6	5.6	3	5.28	5.9
5750	Scorpius . .	—	87	6949	5593	9072	22615	37.8	40 39	6	6	5.9	3	5.68	5.7
5751	Ara	—	8	6928	5585	9071	22613	37.8	58 19	—	R	6.1	3	5.89	5.9
5752	Triang. Aust.	α	42	6911	5578	9070	22607	38.0	68 51	2·3	2.5	2.2	10	1.89	2.1
5755	Ara	—	9	6936	5594	9078	22626	38.8	58 9	—	R	6.0	3	5.74	5.8

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5759	Scorpius . .	—	91	6970	—	9094	22658	16 40.0	39 12	6	—	6.0	3	5.45	5.8
5767	Ara	η	13	6956	5609	9105	22672	41.1	58 52	4	5	3.8	6	3.60	3.7
5771	Triang. Aust.	—	44	6954	5613	9110	22686	42.2	65 12	6	6.5	6.5	5	6.22	6.5
5787	Scorpius . .	ε	95	6996	5632	9123	22731	43.7	34 7	3	2.5	2.3	8	2.29	2.6
5793	Scorpius . .	—	97	7000	5635	9129	22748	44.5	41 4	6	5.5	5.9	6	5.48	5.9
5794	Scorpius . .	μ^1	98	7006	5638	9132	22761	45.1	37 53	4	5	3.6	7	3.26	3.4
5800	Scorpius . .	μ^2	99	7009	5640	9141	22778	45.6	37 51	5·4	4	3.9	7	3.74	3.6
5809	Scorpius . .	ζ^1	103	7016	5651	9160	22812	47.0	42 12	6·5	4.5	5.8	5	4.96	5.5
5815	Scorpius . .	ζ^2	104	7025	5661	9170	22832	47.6	42 12	5·4	3.5	3.6	7	3.53	4.2
5821	Scorpius . .	—	106	7029	—	9173	22843	48.0	41 0	6	—	6.4	3	6.11	6.1
5827	Triang. Aust.	—	45	6989	5654	9177	22841	48.9	69 7	6	6	6.2	3	6.00	6.1
5837	Ara	ζ	23	7034	5683	9209	22916	50.4	55 50	3·4	3.5	3.2	6	3.02	3.3
5838	Scorpius . .	—	113	—	—	9213	22931	50.6	33 6	—	6.5	6.0	3	5.31	5.8
5839	Ara	—	24	7045	5689	9210	22923	50.6	50 29	6	6.5	6.0	7	5.65	5.8
5844	Ara	ϵ^1	25	7050	5697	9220	22941	51.6	53 0	5	4.5	4.2	6	4.17	4.4
5872	Ara	ϵ^2	31	7073	5713	9246	23018	55.2	53 5	6	5.5	5.9	3	5.39	5.8
5875	Scorpius . .	—	117	7089	5718	9253	23035	55.4	31 59	6	5.5	5.7	3	5.15	5.8
5882	Ara	—	32	7072	5715	9256	23034	55.9	57 34	6	—	6.2	3	5.90	5.9
5886	Scorpius . .	—	118	7099	—	9268	23072	57.0	38 0	—	5.5	6.5	6	6.06	6.3
5898	Scorpius . .	k	120	7109	5735	9284	23098	58.2	33 59	6	5	5.5	3	4.98	5.4
5918	Scorpius . .	—	124	7150	5768	9322	23189	17 2.4	30 16	6	6.5	6.2	4	5.88	6.1
5924	Scorpius . .	—	125	7147	5772	9332	23206	3.5	44 26	4	5	5.7	7	4.93	5.6
5930	Scorpius . .	η	126	7155	5778	9345	23250	5.0	43 6	4	3.5	3.6	7	3.37	3.4
5934	Scorpius . .	—	127	7159	5782	9347	23257	5.3	39 23	—	—	5.9	3	5.72	5.9
5951	Scorpius . .	—	134	7179	5804	9375	23337	8.7	33 26	6	—	5.8	3	5.55	5.9
5958	Scorpius . .	—	136	7191	5809	9384	23356	9.5	30 6	—	—	6.5	3	6.15	6.4
5961	Scorpius . .	—	138	7189	—	9385	23358	9.7	35 38	—	—	6.1	6	6.18	6.0
5968	Scorpius . .	—	139	7202	5817	9398	23377	10.5	32 33	6	6	5.9	4	5.48	5.8
5972	Apus . . .	ι	58	7156	5803	9388	23362	11.0	70 1	5·4	5.5	5.8	3	5.61	5.9
5979	Ara	—	41	R	5819	9411	23397	11.5	46 32	6	—	6	3	5.54	5.7
5980	Apus . . .	ζ	60	7162	5810	9403	23378	11.5	67 40	5·4	5	5.4	3	4.70	5.2
5985	Scorpius . .	—	142	7215	5825	9423	23422	12.1	34 53	—	—	6.1	3	5.85	6.0
5989	Apus . . .	—	59	7088	5794	9393	23360	12.8	80 46	6	6.5	6.4	5	5.95	6.1
6000	Ara	—	46	7199	5835	9443	23455	14.6	62 46	6	—	6.2	3	5.83	6.0
6008	Ara	ι	49	7236	5843	9444	23486	15.8	47 23	6	—	5.8	3	5.44	5.7
6019	Scorpius . .	—	146	7247	5855	9460	23522	17.0	44 4	6	5	5.8	3	4.98	5.4
6020	Ara	β	51	7237	5852	9459	23516	17.0	55 27	3	3	2.8	6	2.72	3.1
6021	Ara	γ	50	7233	5850	9457	23515	17.0	56 17	4·3	4	3.6	6	3.42	3.3
6032	Ara	κ	53	7253	5859	9469	23549	18.2	50 33	6	R	5.8	3	5.26	5.9
6040	Ara	—	56	7267	5867	9488	23591	19.4	45 46	6	6	6.2	3	5.34	5.8
6044	Ara	—	59	7263	5872	9498	23603	20.4	55 6	—	—	6.6	5	5.97	6.4
6056	Ara	δ	60	7271	5877	9513	23636	22.1	60 37	4·3	4.5	3.7	6	3.76	4.2
6063	Scorpius . .	υ	152	7313	5901	9532	23698	24.0	37 13	3	3	3.2	7	2.84	3.0
6064	Ara	α	62	7301	5899	9530	23694	24.1	49 47	3	3.5	2.9	6	2.86	3.1
6082	Scorpius . .	λ	156	7336	5915	9562	23778	26.8	37 2	2	2.5	2.0	10	1.79	2.6
6091	Scorpius . .	—	157	7345	5923	9570	23811	28.1	32 31	—	6	5.8	3	5.85	6.0
6093	Ara	σ	67	7340	5921	9567	23805	28.3	46 26	6·5	5	5.5	3	4.54	5.4
6099	Scorpius . .	Q	159	7350	5932	9585	23841	29.6	38 34	5·6	4.5	4.7	3	4.19	5.1
6102	Ara	π	69	7342	5930	9584	23838	29.9	54 26	6	6.5	5.8	3	5.22	5.8
6104	Scorpius . .	θ	160	7351	5935	9586	23849	30.1	42 56	2·3	3.5	2.1	10	1.99	2.5

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6124	Ara	λ	71	7363	5947	9603	23888	17	32.6	49	21	6·5	6	5.6	3	4.85	5.6
6154	Scorpius . .	κ	165	7393	5970	9632	23966		35.5	38	59	3·2	3	2.6	7	2.59	2.9
6155	Pavo . . .	η	2	7364	5963	9628	23958		35.9	64	41	4·3	4.5	3.8	6	3.51	3.9
6156	Scorpius . .	—	166	7397	5974	9638	23982		36.1	36	54	—	—	6.2	3	5.42	5.9
6158	Ara	μ	75	7385	5971	9636	23974		36.2	51	47	6	6	5.7	3	5.33	5.8
6191	Scorpius . .	ι^1	169	7425	6004	9675	24107		40.5	40	6	3·4	3	3.3	7	3.10	3.4
6199	Ara	—	77	7426	6009	9687	24147		42.3	53	35	6	6.5	6.2	3	5.79	6.0
6201	Pavo . . .	—	8	7419	6007	9689	24148		42.5	60	8	6	—	6.2	3	5.74	6.0
6202	Scorpius . .	—	170	7451	6016	9698	24169		42.7	31	40	6·5	5	5.5	3	4.95	5.3
6204	Scorpius . .	G	172	7449	6018	9705	24179		43.0	37	1	3·4	3.5	3.4	7	3.22	3.1
6205	Scorpius . .	ι^2	173	7447	6019	9707	24182		43.1	40	4	6·5	6	5.6	3	4.89	5.4
6238	Scorpius . .	—	179	—	6038	9740	24266		46.7	34	52	—	—	6.8	2	5.73	7.0
6264	Scorpius . .	—	181	7485	6055	9759	24321		49.5	44	19	6·5	6	5.4	3	4.87	5.6
6276	Scorpius . .	—	183	7497	6061	9771	24348		50.7	41	42	6	6	5.3	3	4.71	5.6
6291	Sagittarius .	—	14	7521	6074	9795	24407		52.7	30	14	6	6	5.8	3	5.05	5.5
6292	Sagittarius .	—	—	—	—	—	24408		52.7	30	14	—	—	8			
6322	Octans . . .	χ	30	7001	—	9725	24176		56.1	87	40	—	—	5.8	12	5.24	5.8
6330	Apus . . .	—	66	7473	—	9816	24483		57.3	75	53	6	6.5	6.0	3	5.56	6.0
6338	Ara	θ	84	7535	6105	9836	24574		58.8	50	6	4	4	3.9	6	3.84	4.1
6339	Pavo . . .	π	16	7527	6100	9833	24559		58.9	63	40	4·5	5.5	4.6	3	4.29	4.7
6341	Sagittarius .	γ	28	7557	6115	9852	24596		59.4	30	25	3·4	3.5	2.8	7	3.02	3.2
6342	Corona Aust.	—	1	7550	6112	9853	24598		59.6	43	26	6·5	6.5	5.6	3	5.17	5.8
6345	Apus . . .	—	67	7507	—	9838	24570		59.9	73	41	—	—	6.1	3	5.95	6.1
6355	Pavo . . .	ι	17	—	6118	9861	24618	18	1.1	62	1	6	—	5.8	3	5.42	5.8
6373	Sagittarius .	—	37	7590	6145	9891	24708		3.6	30	45	6	—	6.2	4	5.61	5.7
6374	Telescopium .	ε	3	7581	6140	9889	24703		3.9	45	58	6·5	5	5.2	3	4.54	5.3
6376	Corona Aust.	—	2	7586	—	9893	24713		4.0	41	23	—	—	6.2	3	5.89	6.0
6399	Corona Aust.	—	3	7597	—	9909	24763		6.2	41	22	—	6	6.2	3	5.72	5.7
6400	Pavo . . .	—	21	7577	6148	9905	24745		6.2	63	5	6	6.5	6.0	3	5.62	5.8
6412	Corona Aust.	—	4	7621	6169	9937	24818		8.6	44	14	6	—	5.9	3	5.37	5.8
6416	Telescopium .	—	6	7608	6167	9936	24816		8.7	56	4	6	6	5.7	3	5.48	5.5
6422	Octans . . .	φ	33	7559	6164	9943	24821		10.2	75	5	6	6	5.8	4	5.48	5.9
6428	Sagittarius .	η	46	7643	6186	9962	24888		10.9	36	48	3·4	4	3.3	6	2.96	3.4
6442	Pavo . . .	ξ	26	7638	6198	9984	24958		14.0	61	33	5·4	5.5	4.4	6	4.15	4.6
6450	Corona Aust.	—	7	7671	6215	9998	25003		15.4	38	43	6	6	5.6	4	5.09	5.5
6458	Sagittarius .	—	59	7677	6221	10003	25020		16.1	36	44	6·5	6.5	6.0	3	5.55	5.8
6465	Sagittarius .	—	60	7684	6226	10010	25037		16.7	36	18	6	—	6.2	3	5.55	5.8
6468	Corona Aust.	—	8	7680	6228	10011	25040		17.0	44	9	6·5	—	5.7	7	5.45	5.8
6471	Sagittarius .	ε	61	7689	6233	10015	25060		17.6	34	25	2·3	3	2.2	11	1.93	2.3
6475	Sagittarius .	—	63	7698	6239	10021	25086		18.6	30	48	6	6.5	6.0	3	5.48	5.7
6482	Telescopium .	—	12	7690	—	10027	25095		19.3	48	10	6	6	6.2	3	5.36	5.7
6484	Telescopium .	α	13	7694	6240	10029	25105		19.6	46	1	4·5	4	3.5	7	3.69	4.0
6486	Pavo . . .	—	30	7642	6230	10023	25083		20.1	74	1	6	—	6.4	7	5.77	5.8
6491	Telescopium .	ζ	14	7702	6250	10035	25140		21.1	49	7	5	4.8	4.5	3	4.00	4.6
6495	Pavo . . .	—	32	7696	6248	10036	25137		21.4	57	35	6	6.5	6.0	3	5.80	5.9
6496	Corona Aust.	—	9	7712	6259	10041	25155		21.5	39	3	6	6.5	6.0	3	5.72	5.9
6499	Pavo . . .	ν	33	7691	6253	10043	25153		22.0	62	20	4·5	5	5	3	4.85	5.3
6510	Telescopium .	δ^1	16	7729	6278	10075	25243		24.4	45	59	5·6	R	5.7	3	5.06	4.8
6511	Sagittarius .	—	75	7746	6285	10081	25259		24.5	33	3	6	6	5.8	3	5.51	5.9
6512	Corona Aust.	—	12	7737	—	10082	25262		24.7	43	34	6	—	6.1	3	5.55	5.9

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6513	Telescopium .	δ^2	17	7734	6282	10080	25255	18 24.7	45 49	5·6	R	5.7	3	5.30	4.8
6518	Corona Aust.	—	13	7748	—	10083	25274	25.4	39 46	6	6	5.6	3	5.34	5.8
6522	Corona Aust.	—	14	7754	—	10090	25291	26.0	39 58	—	—	6.9	2	6.23	6.9
6523	Corona Aust.	θ	15	7756	6296	10092	25297	26.4	42 23	6·5	5.5	5.1	4	4.41	5.4
6525	Corona Aust.	κ	16	—	—	10093	25305	26.5	38 47	6	6	6.2	3	5.71	5.6
6526	Corona Aust.		17	7758	6298	10094	25306	26.5	38 48			6			
6531	Sagittarius .	—	77	7761	6305	10101	25330	27.4	33 5	6	6.5	5.6	3	5.38	5.7
6557	Pavo . .	ζ	35	7736	6315	10122	25383	31.3	71 31	4·5	4.5	4.2	7	4.04	4.3
6562	Corona Aust.	—	18	7790	—	10141	25428	32.4	43 16	6	6.5	5.8	4	5.11	5.7
6566	Pavo . . .	—	38	7773	6337	10153	25454	33.8	64 39	6	—	6.2	3	5.83	6.1
6572	Pavo . . .	—	39	7785	6352	10170	25500	35.7	64 58	5·4	5.5	5.3	3	4.76	5.4
6581	Corona Aust.	λ	19	7827	6359	10180	25548	36.9	38 25	6	6	5.4	3	5.18	5.4
6582	Pavo . . .	—	41	7771	6353	10177	25527	37.4	73 6	6	—	6.2	3	6.20	5.9
6584	Sagittarius .	—	91	7830	6362	10183	25565	37.6	35 45	6·5	5.5	5.2	3	4.91	5.4
6587	Corona Aust.	—	20	7829	6363	10189	25572	38.0	39 48	6	6	5.8	3	5.44	5.6
6594	Pavo . . .	θ	43	7813	6360	10191	25574	38.8	65 11	5·6	5.5	6.1	3	5.93	5.9
6605	Corona Aust.	μ	24	7846	6378	10213	25647	40.7	40 31	6	—	5.5	4	5.13	5.5
6607	Corona Aust.	η^1	25	7852	6381	10219	25666	41.6	43 48	6	6	5.7	3	5.69	5.7
6612	Corona Aust.	η^2	26	7859	6385	10226	25691	42.4	43 32	6		6.0	3	5.79	5.8
6617	Pavo . . .	λ	45	7841	6383	10227	25692	42.9	62 18	5·4	5.5	4.3	3	4.35	5.0
6624	Telescopium .	κ	31	7867	6398	10244	25748	44.7	52 13	6	5.5	5.7	3	5.19	5.5
6630	Telescopium .	—	33	7872	—	10250	25758	45.1	46 42	6	—	5.9	7	5.44	5.6
6631	Telescopium .	—	34	7878	—	10256	25779	45.6	46 42		—	6.9	3	6.35	6.0
6637	Sagittarius .	—	107	7898	6414	10259	25806	46.3	30 51	—	—	6.8	3	6.84	6.2
6640	Pavo . . .	κ	46	7856	6405	10258	25786	46.6	67 21	4·5	5	var.	14	var.	var.
6648	Corona Aust.	—	30	7909	—	10283	25870	49.2	42 50	6	6.5	5.8	3	5.35	5.4
6650	Pavo . . .	ω	51	7895	6436	10288	25872	49.7	60 20	5	6	5.4	3	5.07	5.5
6653	Corona Aust.	—	31	7916	6444	10290	25886	49.9	37 28	6	6	5.7	3	5.54	5.7
6656	Telescopium .	λ	41	7910	6443	10296	25897	50.5	53 4	6·5	5.5	5.2	3	4.86	5.2
6661	Corona Aust.	ϵ	34	7931	6458	10309	25928	52.0	37 14	6·5	5.5	5.3	3	4.91	5.5
6668	Pavo . . .	—	52	7897	6449	10311	25923	52.8	68 54	6	5.5	6.1	3	5.94	5.8
6674	Corona Aust.	—	36	7947	—	10326	25978	54.3	37 12	—	6	7	3	6.38	5.8
6675	Corona Aust.	—	37	—	—	10327	25981	54.3	37 12	—		7			
6683	Corona Aust.	ζ	39	7958	6484	10346	26027	56.1	42 14	6·5	5.5	5.2	3	4.76	5.4
6684	Telescopium .	—	43	7949	—	10344	26026	56.2	51 9	6	—	6.2	3	5.99	6.0
6686	Sagittarius .	ζ	130	7966	6489	10349	26041	56.3	30 1	3	3	3.1	8	2.69	2.8
6687	Corona Aust.	—	40	7962	—	10351	26044	56.5	38 24	—	—	6.1	3	5.75	6.1
6693	Sagittarius .	—	134	7976	6499	10357	26084	58.0	31 12	6·5	6	5.9	3	5.65	5.8
6696	Telescopium .	ρ	45	7963	6498	10358	26085	58.4	52 29	6·5	6	5.7	5	5.04	5.7
6703	Pavo . . .	—	56	7944	6494	10362	26091	59.3	68 35	6·5	6	5.7	3	5.24	5.8
6705	Corona Aust.	γ	41	7988	6511	10373	26123	59.7	37 12	5	5	4.6	3	4.28	4.1
6706	Octans . . .	σ	34	6295	5959	10085	25049	59.8	89 16	6	6.5	5.8	R	5.47	R
6716	Corona Aust.	δ	43	7992	6523	10387	26162	19 1.3	40 39	5·6	5	5.0	3	4.41	5.0
6723	Pavo . . .	—	57	7980	—	10390	26166	2.0	60 9	cum.	—	neb.	4	cum.	6.8
6727	Corona Aust.	α	44	8002	6535	10398	26189	2.7	38 4	5·4	4.5	4.2	7	4.22	4.2
6731	Corona Aust.	—	45	7999	—	10404	26198	3.0	42 3	6	—	6.2	3	5.92	5.9
6732	Corona Aust.	β	46	8007	6541	10406	26206	3.1	39 30	5·4	4.5	4.1	7	3.99	4.0
6754	Pavo . . .	—	60	7997	6558	10426	26287	7.1	66 50	6·5	6	5.6	3	5.63	5.9
6757	Corona Aust.	—	49	8029	—	10432	26311	7.4	45 22	—	6.5	6.3	3	5.88	6.0
6767	Telescopium .	—	51	8037	6570	10443	26355	9.1	45 39	6	6.5	5.9	3	5.28	5.8

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6783	Sagittarius .	—	162	8067	—	10465	26444	19 13.1	35 36	—	5.5	5.9	3	5.78	5.7
6792	Telescopium .	η	55	8062	6592	10476	26462	14.8	54 36	6·5	6	5.4	3	5.03	5.6
6797	Sagittarius .	β^1	168	8075	6608	10486	26485	15.4	44 38	5·4	4.5	4	7	4.10	3.9
6798	Sagittarius .	—	169	—	—	10488	26486	15.5	44 38			7			
6803	Sagittarius .	β^2	172	8079	6610	10491	26500	16.0	44 59	5	4.5	4.4	3	4.35	4.0
6805	Sagittarius .	α	177	8087	6622	10498	26527	16.9	40 48	5·4	4	4.0	6	4.13	4.1
6814	Telescopium .	—	59	8091	6632	10515	26593	19.8	54 31	6	6.5	5.9	3	5.43	5.6
6827	Sagittarius .	—	189	8109	—	10532	26648	22.3	43 39	6·5	6.5	5.9	3	5.78	5.8
6844	Telescopium .	—	62	8115	6669	10543	26709	25.0	53 24	—	—	6.1	3	6.02	5.9
6850	Telescopium .	—	63	8129	6675	10552	26741	26.1	45 29	6·5	6.5	6.0	3	5.72	5.7
6856	Sagittarius .	—	201	8138	—	10561	26776	27.3	40 15	—	6	6.0	3	5.91	6.0
6857	Telescopium .	ι	64	8137	6689	10563	26780	27.8	48 19	5·6	5.5	5.4	3	4.95	5.4
6886	Telescopium .	—	65	8157	—	10591	26868	32.3	54 39	—	—	6.6	3	6.25	6.6
6910	Sagittarius .	—	224	8196	—	10622	26987	37.0	37 47	—	—	6.1	3	6.34	6.2
6916	Pavo . . .	—	70	8156	6732	10621	26980	37.9	72 45	6·5	6	5.7	3	5.49	5.8
6919	Sagittarius .	—	228	8211	6755	10636	27053	39.6	32 8	6	6	6.2	3	5.71	5.6
6920	Telescopium .	ν	67	8200	6751	10634	27043	39.9	56 36	6·5	6.5	5.5	3	5.60	5.5
6926	Pavo . . .	—	73	8201	6757	10645	27083	41.6	61 18	6·5	—	6.2	3	6.44	6.1
6929	Pavo . . .	—	74	8207	6766	10651	27100	42.2	59 26	6·5	6	5.5	3	5.54	5.5
6938	Telescopium .	—	71	8227	6782	10668	27144	44.7	55 13	6·5	6	6.1	3	5.63	5.3
6940	Sagittarius .	—	235	8239	6790	10675	27165	45.0	40 7	6·5	6	5.6	3	5.38	5.5
6952	Sagittarius .	ι	241	8255	6812	10696	27239	48.3	42 8	5·4	5	4.3	3	4.08	4.2
6953	Pavo . . .	—	76	8224	6797	10688	27219	48.3	69 25	6	6	5.9	6	5.82	5.9
6954	Pavo . . .	—	80	8245	6807	10697	27237	48.7	59 10	5·6	5.5	5.5	3	5.31	5.6
6955	Pavo . . .	—	79	8229	6804	10693	27224	48.7	69 1	5·6	—	6.7	3	6.53	6.2
6957	Pavo . . .	ϵ	78	8219	6801	10694	27225	49.0	73 10	4·3	4	4.0	7	4.04	3.9
6966	Pavo . . .	μ^1	82	8244	6820	10708	27273	50.7	67 13	6·5	5	5.9	3	5.70	5.3
6969	Pavo . . .	μ^2	83	8251	6828	10719	27298	52.2	67 13			5.6	3	5.20	5.1
6975	Sagittarius .	θ^1	256	8291	6843	10735	27344	53.2	35 33	5·6	4.5	4.5	3	4.68	4.6
6976	Sagittarius .	θ^2	257	8292	6845	10737	27346	53.3	34 58	6·5	6.5	5.8	4	5.38	5.8
6979	Pavo . . .	—	85	8269	6837	10730	27330	53.3	59 39	5·6	6	5.7	3	4.87	5.5
6981	Sagittarius .	—	260	8193	—	10740	27354	53.7	37 58	—	6.5	6.2	3	5.98	5.9
6982	Sagittarius .	—	259	8285	6846	10741	27352	53.7	45 23	6	6	5.9	3	5.82	5.8
6983	Sagittarius .	—	262	8296	—	10743	27363	53.9	33 58	6	6.5	5.9	3	5.68	5.9
6994	Sagittarius .	—	268	8310	6872	10765	27440	56.9	38 13	6·5	5.5	5.0	3	4.68	5.1
7005	Sagittarius .	—	270	8322	6877	10774	27463	58.0	32 20	6·5	5.5	5.4	3	5.01	5.2
7006	Pavo . . .	δ	88	8295	6873	10776	27468	58.9	66 26	4·3	4	3.5	7	3.56	3.7
7009	Telescopium .	ξ	78	8321	6885	10785	27496	59.7	53 10	6·5	6	5.5	3	4.82	5.4
7035	Sagittarius .	—	279	8362	6922	10813	27600	20 4.6	36 21	6·5	6	5.8	7	5.38	5.7
7041	Telescopium .	—	81	8367	6931	10826	27647	6.7	52 45	6·5	6.5	6.1	7	5.74	5.7
7067	Sagittarius .	κ^1	292	8415	6989	10889	27879	15.7	42 21	6	6	5.5	7	5.73	5.8
7071	Octans . . .	—	47	8331	6955	10882	27836	16.6	81 17	6	R	6.3	9	5.75	6.0
7072	Sagittarius .	κ^2	294	8417	7002	10893	27909	17.1	42 44	6	6	5.6	7	5.73	5.9
7074	Pavo . . .	α	99	8416	7004	10899	27918	17.7	57 3	2	2.5	2.1	10	2.05	2.4
7090	Octans . . .	—	49	8360	6993	10907	27956	21.4	81 37	6	R	6.5	7	5.67	6.1
7111	Microscopium	ν	6	8472	7072	10953	28141	27.0	44 51	5·6	6.2	5.6	7	5.12	5.6
7113	Pavo . . .	ϕ^1	104	8461	7066	10952	28140	27.3	60 55	5	5.5	4.9	7	4.73	5.3
7121	Pavo . . .	ρ	107	8470	7082	10971	28179	29.2	61 52	5	5.5	4.9	5	5.02	5.4
7123	Octans . . .	μ^1	50	8435	7068	10966	28162	29.7	76 32	6	6	6.3	8	6.12	6.1
7124	Octans . . .	μ^2	51	8443	7075	10968	28171	29.8	75 42	6	6.5	6.8	5	6.45	6.1

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7126	Indus . . .	α	1	8494	7096	10981	28213	20 30.6	47 39	3	3.5	3.1	7	3.20	3.0
7134	Pavo . . .	φ²	109	8490	7099	10988	28236	31.8	60 53	5	6	5.5	5	5.24	5.5
7137	Pavo . . .	υ	110	8488	7106	10994	28259	32.8	67 7	5·6	5.5	5.6	7	5.32	5.2
7142	Microscopium	—	13	8517	—	11008	28305	34.1	33 47	6	6.5	5.8	5	5.48	5.7
7147	Microscopium	—	17	8529	—	11018	28337	35.2	31 57	6	6	6.1	7	5.78	5.8
7150	Pavo . . .	β	111	8500	7129	11021	28338	36.0	66 34	3	3	3.3	6	3.54	3.7
7152	Indus . . .	η	2	8524	7154	11027	28363	36.7	52 17	5·6	5	4.7	7	4.73	5.1
7161	Microscopium	—	23	8545	7175	11048	28444	39.8	39 34	—	6	5.8	5	5.67	5.8
7162	Pavo . . .	σ	113	8521	7165	11045	28430	39.8	69 9	6·5	6	5.7	5	5.52	5.7
7166	Microscopium	ι	26	8554	7186	11062	28490	41.7	44 22	6·5	5.8	5.4	5	5.18	5.7
7168	Indus . . .	ζ	4	8564	7192	11067	28510	42.6	46 36	6·5	6	5.3	7	4.90	5.2
7170	Pavo . . .	—	R	8550	7191	11069	R	43.3	62 48	6·5	6	R	5	5.84	5.7
7171	Microscopium	α	27	8579	7207	11073	28544	43.8	34 9	5	5	5	5	4.98	5.3
7174	Indus . . .	ι	5	8567	7208	11074	28555	44.3	51 59	6·5	6	5.6	7	5.10	5.3
7175	Microscopium	—	28	8582	7212	11078	28565	44.6	38 17	—	6	5.9	7	5.51	5.8
7181	Microscopium	β	32	8593	7226	11092	28597	45.8	33 33	6	—	6.2	5	6.20	6.0
7191	Indus . . .	β	6	8584	7228	11097	28615	47.0	58 49	4·5	3.5	3.7	6	3.66	3.7
7192	Microscopium	—	33	8606	7234	11101	28625	47.1	40 11	6	6	5.7	6	5.32	5.6
7213	Octans . . .	α	52	8570	7250	11135	28706	52.6	77 24	6·5	5.5	5.6	5	5.31	5.5
7215	Indus . . .	—	8	8624	7065	11140	28735	53.3	51 39	6	—	6.0	7	5.84	5.8
7225	Microscopium	γ	39	8639	7280	11155	28782	55.1	32 39	5	4.5	5.0	7	4.75	4.9
7226	Microscopium	—	41	8638	—	11158	28791	55.6	43 23	6	—	6.8	7	6.49	6.4
7227	Microscopium	—	43	8644	7286	11166	28810	56.0	38 55	—	—	6.0	7	5.91	5.9
7228	Microscopium	ζ	44	8653	7292	11171	28821	56.6	39 1	6	5.5	5.5	7	5.51	5.6
7231	Pavo . . .	—	—	—	—	—	28835	57.5	60 48	—	5.5	9	5	8.38	8.1
7235	Indus . . .	μ	12	8648	7298	11183	28844	57.9	55 7	6·5	6.5	5.8	7	5.23	5.3
7236	Pavo . . .	—	119	8625	7293	11185	28851	58.8	73 34	6·5	—	5.9	5	5.89	5.9
7237	Microscopium	η	47	8675	7314	11196	28904	59.9	41 47	6	6.5	6	5	5.55	5.7
7238	Microscopium	δ	48	8683	7316	11198	28907	21 0.0	30 31	6	6	6.0	5	5.59	5.8
7240	Pavo . . .	—	121	8654	7307	11195	28900	0.2	64 20	6·5	6	6.2	5	5.78	5.8
7241	Microscopium	—	49	8685	7319	11202	28918	0.3	32 44	6·5	5	5.7	5	5.15	5.4
7258	Pavo . . .	ο	123	8668	7331	11230	28995	4.0	70 32	5·6	5.5	5.5	5	5.04	5.4
7264	Microscopium	—	55	8715	7349	11243	29048	5.8	40 40	6	6.5	6.1	5	5.76	5.9
7265	Microscopium	—	—	—	—	—	29058	6.1	31 0	—	5.5	8	6	7.15	6.8
7267	Microscopium	—	56	8719	7353	11249	29075	6.6	39 50	6	6	5.7	5	5.24	5.4
7270	Microscopium	—	57	8725	—	11253	29084	7.1	36 50	—	—	6.2	7	6.04	6.0
7277	Indus . . .	—	23	8727	7360	11265	29117	8.6	53 41	6·5	—	6.0	7	5.80	5.9
7286	Microscopium	ε	62	8761	7386	11290	29200	11.9	32 36	5	4.5	4.9	8	4.84	5.5
7293	Indus . . .	θ	25	8753	7388	11299	29216	12.7	53 52	5	6.5	4.8	7	4.56	5.2
7297	Indus . . .	—	27	8765	—	11305	29232	13.6	45 27	—	—	6.0	7	6.07	6.1
7304	Microscopium	θ¹	65	8773	7397	11313	29248	14.4	41 14	5·6	5	4.8	7	5.01	5.3
7319	Microscopium	θ²	67	8793	7414	11337	29314	18.0	41 26	6	6	6.1	7	5.87	5.8
7320	Pavo . . .	γ	128	8778	7409	11336	29309	18.2	65 50	4·5	3.5	4.5	7	4.17	4.6
7322	Indus . . .	γ	34	8792	7423	11347	29331	19.1	55 6	6	5	6.3	7	6.19	6.1
7324	Pavo . . .	—	129	8782	7420	11350	29336	19.8	69 57	6	6	5.9	7	5.42	5.8
7325	Microscopium	—	68	8808	7432	11356	29358	20.2	38 16	6	6.5	6.0	7	5.70	5.8
7331	Microscopium	—	69	8809	7439	11359	29368	20.6	42 59	6·5	6	6	7	5.56	5.8
7342	Grus . . .	ξ	2	8833	7471	11384	29482	25.8	41 38	6·5	6	5.7	7	5.36	5.7
7343	Piscis Aust.	—	2	8837	7475	11388	29490	26.2	34 24	6·5	6	6.1	7	6.22	6.1
7349	Grus . . .	—	3	8838	—	11390	29495	26.9	45 18	6	—	6.0	7	5.57	5.9

S. M. P.	Constellation	Let	U. A.	L. C.	B. A. C.	Stone.	A. G. C.	R. A. 1900.		S. Dec. 1900.		B.	H.	A. G. C.	No.	Magn.	Est.
								h.	m.	°	′						
7362	Indus . . .	—	40	8842	7486	11403	29552	21	30.0	65	16	6	6	6.3	7	6.28	6.1
7366	Octans . . .	ν	60	R	7481	11401	29533		30.4	77	50	4·5	4.5	3.8	7	3.73	4.1
7367	Piscis Aust. .	—	6	8855	7502	11412	29580		30.8	33	29	6	6.5	6.2	7	6.11	6.0
7386	Octans . . .	λ	62	8798	7498	11435	29624		35.6	83	10	6	6	5.7	7	5.41	5.9
7389	Indus . . .	—	43	8860	7529	11447	29670		36.7	71	28	6	6	6.2	7	6.13	6.0
7391	Octans . . .	B	54	6460	—	11301	29042		36.9	89	19	—	—	6.7	5	6.61	6.5
7403	Piscis Aust. .	ι	14	8901	7557	11472	29737		39.0	33	29	5	4	4.4	7	4.41	4.6
7410	Grus . . .	—	13	8912	7578	11486	29785		41.7	47	45	6	6.5	5.8	7	5.69	5.8
7411	Piscis Aust. .	θ	16	8917	7583	11490	29795		41.9	31	22	5	5	5.2	5	5.25	5.5
7412	Indus . . .	—	54	8903	7574	11489	29794		42.3	65	10	6	6.5	6.0	7	5.63	5.8
7413	Indus . . .	o	53	8899	7572	11488	29790		42.4	70	6	6	6	5.7	5	5.55	5.9
7432	Grus . . .	γ	18	8951	7613	11527	29935		47.9	37	50	3·4	3	3.0	7	3.20	3.3
7442	Grus . . .	—	20	8964	7632	11541	29989		50.4	37	44	6	—	5.8	7	5.67	5.8
7447	Grus . . .	—	21	8966	7635	11546	30004		51.0	38	13	—	6.5	6.8	7	6.22	6.4
7448	Indus . . .	δ	60	8962	7633	11544	29999		51.1	55	28	5	5	4.8	5	4.51	5.1
7451	Grus . . .	—	24	8976	7647	11561	30054		53.2	38	52	6	—	5.8	7	5.47	5.8
7452	Octans . . .	—	66	8946	7638	11557	30034		53.2	76	36	6·5	6.5	6.2	7	5.93	6.1
7463	Indus . . .	ε	64	8975	7656	11576	30105		55.7	57	11	5·6	5.5	5.2	7	4.79	5.1
7470	Indus . . .	—	65	9001	7669	11594	30176		58.9	60	7	6	—	6.0	7	5.60	5.9
7474	Grus . . .	λ	27	9017	7684	11603	30209	22	0.1	40	2	5	4	4.7	7	4.52	4.6
7481	Grus . . .	α	28	9021	7692	11617	30241		1.9	47	27	2·1	2	1.9	9	1.92	2.1
7486	Piscis Aust. .	μ	27	9029	7701	11623	30260		2.6	33	29	5·4	4	4.7	8	4.64	5.3
7487	Piscis Aust. .	υ	26	9030	7702	11624	30261		2.6	34	32	5	5.5	5.4	7	4.97	5.2
7490	Piscis Aust. .	—	29	9036	—	11632	30290		4.1	34	31	5·6	6	5.7	7	5.51	5.6
7491	Piscis Aust. .	τ	30	9037	7714	11633	30294		4.3	33	3	5·6	5	5.3	7	4.95	5.4
7503	Octans . . .	ψ	69	9022	7730	11651	30350		8.1	78	1	6·5	6	5.9	7	5.63	5.9
7505	Octans . . .	ε	70	9010	7725	11653	30358		8.8	80	57	6	5.5	5.6	7	5.16	5.7
7509	Grus . . .	μ^1	35	9069	7756	11667	30395		9.6	41	51	5·6	4.5	5.0	7	4.86	5.3
7517	Grus . . .	μ^2	36	9075	7763	11669	30405		10.4	42	8	6·5	4.5	5.4	7	5.16	5.6
7524	Tucana . .	α	2	9074	7767	11679	30422		11.6	60	46	3	3.5	2.8	7	2.90	3.1
7525	Grus . . .	—	37	9076	7769	11681	30425		11.7	54	7	6·5	6	5.7	7	5.44	5.8
7529	Octans . . .	υ	71	8924	7713	11665	30380		12.6	86	29	6	—	6.4	7	5.69	6.0
7533	Tucana . .	—	4	9092	7780	11694	30468		14.0	58	1	6	5.5	6.8	7	6.31	6.3
7536	Indus . . .	ν	70	9082	7783	11703	30500		16.0	72	44	6·5	5.5	5.7	7	5.44	5.6
7539	Grus . . .	π^2	39	9108	7794	11712	30534		16.9	46	25	6·5	6	5.9	7	5.81	5.7
7540	Octans . . .	—	72	9090	7785	11709	30520		17.1	75	31	6·5	6.5	6.5	7	6.07	6.1
7541	Indus . . .	—	71	9099	7791	11713	30532		17.4	70	56	6·5	6	6.0	7	5.94	5.9
7543	Tucana . .	—	5	9112	7801	11719	30557		18.3	58	17	6	—	5.7	6	5.40	5.7
7550	Tucana . .	δ	6	9114	7808	11731	30594		20.2	65	28	5·4	4	4.8	7	4.74	4.9
7555	Indus . . .	—	72	9117	7816	11738	30611		21.3	67	59	6·5	6	5.9	5	5.69	5.8
7561	Grus . . .	ν	41	9136	7826	11744	30641		22.8	39	38	6	6	5.8	5	5.46	5.5
7563	Grus . . .	δ^1	42	9138	7828	11745	30647		23.3	44	0	4·5	4	4.2	7	4.07	3.8
7564	Grus . . .	δ^2	43	9140	7830	11749	30657		23.8	44	15	4·5	4	4.4	3	4.26	4.2
7572	Piscis Aust. .	β	R	9162	7842	11772	30704		25.8	32	51	4·5	5	4.8	3	4.48	4.3
7573	Tucana . .	ν	8	9153	7841	11774	30709		26.2	62	29	6·5	5	5.5	3	4.80	5.1
7583	Tucana . .	—	9	9170	7860	11792	30779		29.4	58	24	6·5	6.5	6.2	4	6.15	6.0
7588	Grus . . .	—	50	9181	7869	11802	30805		30.7	41	6	R	R	6.4	3	6.12	5.8
7589	Piscis Aust. .	—	47	9184	7872	11804	30810		31.0	32	11	6	6.5	6.1	3	5.48	5.7
7590	Grus . . .	—	51	9183	7873	11805	30814		31.2	41	6	R	R	6.0	3	5.65	5.8
7596	Piscis Aust. .	—	49	9197	—	11819	30855		33.2	33	36	6·5	6	5.9	3	5.48	6.0

S. M. P.	Constellation.	Let.	U. A.	L. C.	B. A. C.	Stone.	A. G. C.	R. A. 1900.	S. Dec. 1900.	B.	H.	A. G. C.	No.	Magn.	Est.
								h. m.	° ′						
7602	Tucana . .	—	10	9198	7889	11825	30875	22 34.4	57 56	6	—	6.1	3	5.83	6.1
7612	Octans . . .	β	75	9165	7886	11830	30879	35.9	81 54	5	5	4.4	7	4.35	4.6
7615	Grus . . .	β	57	9211	7904	11837	30913	36.7	47 24	2·3	2.3	2.2	8	2.09	2.5
7619	Grus . . .	ρ	59	9218	7916	11843	30930	37.7	41 56	5·6	5	5.2	3	4.83	5.8
7627	Grus . . .	η	61	9223	7925	11851	30968	39.5	54 1	5·4	5.5	5.1	7	4.87	5.5
7628	Grus . . .	—	62	9229	7926	11853	30974	39.8	47 4	6	—	5.9	3	5.33	5.9
7637	Octans . . .	ξ	77	9202	7924	11859	30980	41.0	80 39	5·6	6	5.7	7	5.47	5.7
7645	Grus . . .	ε	68	9249	7946	11884	31044	42.5	51 50	4·5	4	3.5	7	3.69	3.7
7660	Grus . . .	—	69	9275	7957	11902	31099	45.3	39 41	6	5.5	5.8	3	5.38	5.8
7662	Tucana . .	—	18	9268	7956	11905	31100	45.6	63 43	—	—	6.2	3	5.99	6.0
7663	Piscis Aust. .	—	60	9281	7960	11907	31105	45.9	30 4	6	—	6.4	3	6.17	6.5
7668	Piscis Aust .	γ	62	9287	7966	11918	31123	47.0	33 24	5·4	4.5	4.6	8	4.63	4.4
7671	Indus . . .	ρ	79	9276	7965	11921	31127	47.7	70 36	6	6	6.2	3	6.27	6.2
7676	Grus . . .	—	72	9295	7979	11934	31162	49.5	49 0	6	—	7	3	6.85	6.6
7677	Grus . . .	τ^2	71	—	—	11933	31161	49.5	49 2		—	6.8	3	6.52	6.5
7680	Piscis Aust. .	δ	63	9304	7987	11944	31184	50.4	33 4	5·4	4.5	4.5	4	4.08	4.6
7681	Grus . . .	τ^3	75	9305	7991	11947	31196	51.0	48 30	6	6.5	6.1	3	5.97	6.0
7684	Piscis Aust. .	α	66	9314	7992	11951	31213	52.1	30 9	1·2	1	1.4	9	1.27	1.4
7691	Piscis Aust. .	—	68	9321	8002	11961	31247	54.2	30 0	6	—	5.9	3	5.58	5.9
7693	Grus . . .	ζ	77	9322	8008	11969	31263	55.0	53 17	4·5	4.5	4.0	7	4.13	4.2
7695	Grus . . .	—	78	9328	8009	11974	31273	55.3	51 29	6	6	5.9	3	5.58	5.9
7702	Piscis Aust. .	π	72	9350	8025	11991	31327	58.0	35 17	5·6	5	5.3	3	5.05	5.5
7703	Indus . . .	—	80	9337	8021	11992	31328	58.3	69 22	6	6	5.8	3	5.54	5.8
7704	Grus . . .	—	82	9354	8027	11999	31337	58.4	42 1	6	6	6.0	3	5.80	6.0
7705	Grus . . .	κ	83	9353	8029	12000	31340	58.8	54 30	5·6	6	5.6	3	5.17	5.6
7712	Octans . . .	—	79	9332	8030	12005	31360	23 0.2	80 1	—	R	6.3	5	6.10	6.3
7715	Grus . . .	θ	84	9366	8043	12013	31380	1.2	44 4	5·4	4	4.2	7	4.40	4.7
7716	Grus . . .	υ	85	9369	8045	12014	31383	1.3	39 26	6	5	5.7	3	5.58	5.9
7718	Grus . . .	—	87	9367	8046	12019	31388	1.5	51 14	6	6.5	6.2	7	6.06	5.8
7720	Indus . . .	—	81	9358	8040	12015	31381	1.6	74 8	6	5.5	6.5	3	6.09	6.1
7730	Grus . . .	—	88	9381	8063	12035	31437	4.4	43 24	6	5	6.1	7	5.89	5.8
7731	Grus . . .	—	89	9384	8066	12036	31441	4.6	41 8	6	—	6.2	3	6.02	5.7
7734	Grus . . .	ι	90	9382	8067	12038	31445	4.7	45 47	4·5	4	3.9	7	4.06	3.8
7748	Grus . . .	—	92	9407	8088	12062	31523	9.4	41 39	6	6.5	6.1	3	5.73	5.9
7754	Tucana . .	—	25	9412	8093	12072	31547	10.9	62 33	6	6.5	5.7	7	5.65	5.7
7755	Grus . . .	—	94	9419	8096	12073	31549	11.1	45 2	6	—	6.2	4	5.84	5.9
7758	Tucana . .	γ	26	9420	8098	12083	31563	11.6	58 47	4·5	4	4.0	7	3.98	4.2
7762	Grus . . .	φ	97	9432	8108	12091	31580	12.7	41 22	6	6	5.8	3	5.48	5.8
7763	Octans . . .	τ	81	9225	8072	12069	31530	13.1	88 2	6	6	6.0	6	5.58	6.0
7764	Sculptor . .	γ	7	9435	8113	12096	31591	13.5	33 5	5·4	4.5	4.4	7	4.34	4.4
7765	Sculptor . .	—	8	9437	—	12098	31594	13.6	31 6	—	—	6.9	2	6.88	6.3
7771	Grus . . .	—	101	9446	8121	12111	31630	15.2	50 51	6	6	6.2	3	5.98	5.9
7779	Grus . . .	—	104	9455	8148	12126	31687	18.2	54 22	6·5	6.5	5.8	3	5.93	6.0
7780	Grus . . .	—	106	9457	8151	12129	31697	18.6	52 27	6	—	5.9	3	5.52	5.9
7783	Tucana . .	—	29	9463	8157	12133	31714	19.6	57 24	6	—	5.7	4	5.51	5.6
7785	Grus . . .	o	107	9470	8163	12141	31737	21.0	53 17	6·5	6.5	5.7	3	5.52	5.8
7788	Tucana . .	—	32	9474	8166	12147	31750	21.5	59 2	6·5	6.5	5.7	3	5.54	5.8
7789	Phœnix . .	—	1	9476	8168	12148	31752	21.6	50 43	6	6.5	6.1	3	6.25	6.0
7794	Tucana . .	—	33	9483	8176	12161	31773	23.3	63 40	6·5	—	5.8	3	5.62	5.7
7807	Phœnix . .	—	5	9502	8189	12176	31826	26.0	45 24	6	R	6·2	3	5.83	5.9

S. M. P.	Constellation.	Let.	U. A.	L. C.	B. A. C.	Stone.	A. G. C.	R. A. 1900.	S. Dec. 1900.	B.	H.	A. G. C.	No.	Magn.	Est.
								h. m.	° ′						
7814	Octans . . .	—	83	9494	8190	12184	31840	23 26.9	77 57	6	6.5	6.1	3	5.77	5.9
7815	Sculptor . .	β	16	9513	8201	12191	31859	27.6	38 23	5·4	3.5	4.8	3	4.58	4.9
7816	Phœnix . .	ι	9	9523	8210	12206	31906	29.7	43 10	5·4	4.5	4.5	3	4.87	5.3
7823	Phœnix . .	—	11	9535	8220	12217	31955	32.5	46 3	5·4	4.5	4.5	7	4.92	5.0
7829	Phœnix . .	—	R	—	—	12227	31981	34.1	47 12	6	6	7.5	3	6.23	6.0
7830	Phœnix . .	—	12	9543	8230	12228	31982	34.1	47 12			6·5			
7833	Sculptor . .	μ	23	9552	8236	12238	32003	35.4	32 38	6·5	5	5.5	3	5.32	5.6
7844	Tucana . .	—	35	9566	8251	12262	32064	38.6	71 3	6	6	6.4	3	5.96	6.0
7845	Octans . . .	—	85	9560	8249	12260	32060	38.6	79 21	6	6.5	6.1	3	5.55	5.9
7846	Tucana . .	—	36	9571	8253	12264	32065	38.7	64 58	6	6.5	6.0	3	5.54	5.8
7853	Phœnix . .	—	17	9582	8258	12273	32101	40.7	40 45	6·5	6.5	6.1	3	6.28	6.2
7857	Phœnix . .	σ	19	9591	8264	12284	32130	41.9	50 47	5	5	5.2	3	5.35	5.6
7869	Octans . . .	γ^1	86	9607	8290	12313	32200	46.2	82 35	6	5.5	5.5	7	5.12	5.6
7880	Phœnix . .	—	27	9640	8309	12342	32256	49.4	40 52	6·5	—	6.1	3	5.95	6.0
7881	Sculptor . .	—	35	9644	—	12345	32266	50.1	32 27	6·5	5.5	6.7	3	6.55	6.3
7882	Sculptor . .	—	34	9643	8313	12344	32265	50.1	32 29			6.0	3	6.05	6.0
7890	Tucana . .	—	42	9658	8320	12362	32307	52.1	63 31	6	6	6.2	3	5.96	5.8
7891	Octans . . .	γ^2	87	9651	8319	12360	32303	52.1	82 44	6	5.5	6.1	7	5.61	5.9
7893	Tucana . .	η	43	9661	8323	12365	32311	52.3	64 52	5·6	4.5	5.2	7	5.12	5.3
7901	Phœnix . .	π	29	9671	8329	12376	32333	53.7	53 19	5·6	6	5.2	3	5.12	5.4
7902	Sculptor . .	—	38	9675	8332	12381	32337	54.3	30 3	5·6	5.5	5.8	7	5.62	5.5
7904	Tucana . .	ε	44	9678	8334	12389	32347	54.7	66 8	5	3.5	4.3	3	4.64	4.1
7906	Phœnix . .	—	31	9684	—	12394	32355	55.2	44 51	6·5	—	6.5	3	6.23	6.2
7908	Phœnix . .	τ	33	9689	8339	12398	32365	55.9	49 22	6	6	5.8	3	5.58	5.8
7909	Phœnix . .	—	34	9694	8341	12401	32372	56.2	50 54	6	6	5.6	3	5.28	5.6
7910	Octans . . .	θ	88	9691	8342	12404	32376	56.4	77 37	5·6	5	5.4	3	4.62	5.3
7913	Sculptor . .	ζ	42	9700	8352	12412	32389	57.2	30 17	5.4	6	5.2	4	4.93	5.3
7922	Tucana . .	—	45	9710	8363	12425	32421	59.6	72 0	6·5	6	5.9	3	5.56	5.8

REMARKS.

112. Combined in Houzeau, magn. 6, with 120.
116. Combined in Behrmann, magn. 6.5, with A. G. C. 658, magn. 7.0.
120. See 112.
435. Combined in Houzeau, magn. 6, with 439, magn. 6.
439. See 435.
579. Combined in Houzeau, magn. 5, with A. G. C. 3178, magn. 7.3.
582. Regarded by Stone as perhaps identical with Lacaille 956, which is probably the star observed by Houzeau. The place given by Houzeau precedes that of Stone $0^m.1$, north 52′.
637. Houzeau observed A. G. C. 3563 as magn. 6, and omits this star.
655. Combined in Behrmann, magn. 5, with 658. Combined in Houzeau, magn. 5, with 658.
657. The place given by Houzeau precedes that of Stone $1^m.3$, south 1′.
658. See 655.
689. The star observed by Behrmann may have been 691.
691. See 689.
742. Not on Behrmann's chart.
1060. Combined in Houzeau, magn. 4.5, with A. G. C. 5810, magn. 7.1.
1195. Combined in Behrmann, magn. 6.5, with A. G. C. 6520, magn. 6.8.
1364. Combined in Meridian Photometer with 1363.
1382. Combined in Houzeau, magn. 5.5, with A. G. C. 7332, magn. 6.8.
1404. The place given by Houzeau precedes that of Stone $2^m.6$, north 0′.
1480. Owing to the brightness of this star, its magnitude could not be satisfactorily estimated.
1595. The place given by Houzeau is 10′ north of that given by Stone.
1618. In U. A., for L. 2458 read L. 2459.
1686. Combined in Houzeau, magn. 6, with A. G. C. 8720, magn. 6.7.
1745. Combined in Houzeau, magn. 5, with A. G. C. 8938, magn. 7.5.
1825. Combined in Houzeau, magn. 6, with 1842.
1842. See 1825.

1856. Combined in Behrmann, magn. 6.5, with 1860. Combined in Houzeau, magn. 5.5, with 1860.
1860. See 1856.
1904. Combined in Houzeau, magn. 5.5, with A. G. C. 9501, magn. 7.8.
1935. No number in U. A., magn. 7¼. Combined with 1936, magn. 6.6.
1936. No number in U. A., magn. 7¼. See 1935.
1961. In Behrmann's catalogue, Carina, 17 and 18, the B. A. C. numbers 2490 and 2492 are transposed.
2109. Combined in Behrmann, magn. 6, with 2114.
2114. See 2109.
2224. Houzeau, magn. V, 6.8.
2348. Combined in Meridian Photometer with 2347.
2389. Combined in Meridian Photometer with 2390.
2580. Combined in Houzeau, magn. 6, with 2589.
2589. See 2580.
2717. Combined in Houzeau, magn. 6.5, with 2737.
2737. See 2717.
3095. Appears on Behrmann's chart, but not in his catalogue.
3110. Combined in Meridian Photometer with 3111.
3232. Perhaps Lacaille 4184. Identified by Behrmann with B. A. C. 3482.
3254. Combined in Behrmann, magn. 6, with 3256. Combined in Houzeau, magn. 6, with 3256.
3256. See 3254.
3380. Combined in Meridian Photometer with 3379.
3849. Combined in Houzeau, magn. 5, with 3860.
3860. See 3849.
3932. The place given by Houzeau precedes that of Stone $0^m.1$, north 11′.
4059. Combined in Houzeau, magn. 5.5, with 4066.
4066. See 4059.
4302. Combined in Houzeau, magn. 6, with A. G. C. 17308, magn. 6.6.
4352. Combined in Behrmann, magn. 5.5, with 4362. Combined in Houzeau, magn. 6.5, with 4362.
4362. See 4352.
4541. The place given by Houzeau follows that of Stone $0^m.4$, south 12′.
4612. Combined in Houzeau, magn. 6, with A. G. C. 18567, magn. 6.7.
4653. Combined in Houzeau, magn. 6.5, with A. G. C. 18716, magn. 6.7, and 18721, magn. 7¾.
4690. In U. A., Nos. 280 and 281.
4845. Magnitude in Houzeau, 5, 4, V.
4943. Combined in Houzeau, magn. 6.5, with 4949.
4949. See 4943.
5032. Identified by Behrmann with B. A. C. 4866.
5106. Identified by Behrmann with Lacaille 6229, which follows $4^m.2$, south 16′.
5331. Combined in Houzeau, magn. 5.5, with A. G. C. 21174, magn. 7.2.
5337. Marked D in Houzeau. No star brighter than the eighth magnitude is nearer than A. G. C. 21172, magn. 8.5, which precedes $1^m.6$, north 8′. Magn. in C. D. M. 7.8. The place given by Houzeau is that of this faint star. Three stars are given in Bode near the places of 5337 and 5356 and may account for the three stars indicated by Houzeau.
5356. The place given by Houzeau precedes that of Stone $0^m.1$, south 20′. See 5337.
5387. Combined in Houzeau, magn. 6, with A. G. C. 21363 and 21364, magn. 7.0 and 7.5, although these stars are 50′ south.
5549. Combined in Behrmann, magn. 5, with 5551. Combined in Houzeau, magn. 5, with 5551.
5551. See 5549.
5572. Combined in Houzeau, magn. 7.2, with A. G. C. 22003.
5751. Combined in Houzeau, magn. 6.5, with 5755.
5755. See 5751.
5759. Identified in Behrmann with Lacaille 6974 which follows $0^m.2$, south 10′.
5979. Identified by Stone with Lacaille 7194 and in the B. A. C. with Lacaille 7145.
5985. Combined in Meridian Photometer with 5986.
6032. Combined in Houzeau, magn. 6.5, with A. G. C. 23584, magn. 6.8.
6238. In U. A. cum.
6355. Identified by Behrmann with B. A. C. 6119.
6510. Combined in Houzeau, magn. 5, with 6513.
6513. See 6510.
6525. In U. A. magn. 6½. Combined with 6526, magn. 5.4.
6526. In U. A. magn. 6. See 6525.
6572. Combined in Meridian Photometer with 6573.
7071. Combined by Houzeau, magn. 5.5, with 7090.
7090. See 7071.
7170. In U. A. Nos. 114 and 115, magn. 5.9, dpl. 6.5, 6.5. In A. G. C. 28519, 28520, magn. 6.5 and 6.5.
7304. Marked double in Houzeau, but the position is that of 7304 only, and no bright star is near enough to be easily combined with it. A. G. C. 29225, magn. 7.2, precedes $1^m.3$, south 14′.
7325. Identified by Behrmann with Lacaille 8791 which precedes $2^m.8$, north 6′.
7366. Lacaille gives two stars, 8817 and 8818, in the same right ascension but differing 10′ in declination. There appears however to be only one star in this place.
7447. The place given by Houzeau follows $0^m.4$, south 13′.
7572. In U. A. Nos. 42 and 43, magn. 4.4, dpl. 4¾, 7.
7588. Combined in Behrmann, magn. 6, with 7590. Combined in Houzeau, magn. 5.5 with 7590.
7590. See 7588.
7596. See remark on H. P. 3998 in Vol. XIV. p. 310.
7712. Combined in Houzeau, magn. 6, with A. G. C. 31548, magn. 6.6.
7730. The place given by Houzeau follows that of Stone $0^m.5$, south 12′.
7807. Combined in Houzeau, magn. 6.5, with A. G. C. 31780, magn. 6.5.
7816. In U. A. magn. 4½ var. ? Combined with A. G. C. 31899, magn. 7¼. Combined magn. 4.4.
7829. No number in U. A. Combined with 7830, magn. 6.3.
7833. The place given by Houzeau is nearly that of A. G. C. 32001, magn. 9.
7881. Combined in U. A. with 7882, magn. 5.8. Only one star is mentioned in Houzeau.
7882. See 7881.
7906. Combined in Meridian Photometer with 7907.

In Table XIV. the stars are enumerated whose constellations according to Stone are different from those given in the Argentine General Catalogue. The S. M. P. number is given in the first column taken from the first column of Table VII.; the constellation according to Stone is given in the second column. The constellation according to the Argentine General Catalogue may be found in each case from the second column of Table XIII.

TABLE XIV.

DIFFERENCES IN CONSTELLATION.

S. M. P.	Constellation.	S. M. P.	Constellation.	S. M. P.	Constellation.	S. M. P.	Constellation.
68	Sculptor	1889	Puppis	3369	Vela	5423	Triang. Aust.
172	Phœnix	1895	Puppis	3476	Argo	5639	Ara
209	Phœnix	1904	Puppis	3485	Argo	5644	Ara
249	Tucana	1951	Argo	3495	Argo	5666	Norma
280	Eridanus	2142	Vela	3505	Antlia	6201	Telescopium
286	Eridanus	2178	Argo	3593	Antlia	6202	Sagittarius
539	Hydrus	2190	Vela	3598	Centaurus	6486	Octans
638	Mensa	2206	Vela	3601	Centaurus	6495	Telescopium
660	Hydrus	2207	Vela	3638	Centaurus	6731	Sagittarius
723	Hydrus	2248	Argo	3785	Hydrus	6757	Sagittarius
734	Eridanus	2277	Puppis	3788	Carina	6767	Sagittarius
761	Eridanus	2303	Argo	3792	Chamaeleon	6850	Sagittarius
960	Reticulum	2305	Argo	3794	Hydrus	6857	Sagittarius
1329	Puppis	2441	Argo	3911	Centaurus	7009	Pavo
1453	Canis Major	2453	Vela	4001	Centaurus	7041	Pavo
1474	Canis Major	2499	Malus	4026	Centaurus	7111	Indus
1480	Argo	2572	Malus	4088	Chamaeleon	7225	Piscis Aust.
1482	Canis Major	2583	Argo	4227	Centaurus	7236	Octans
1526	Carina	2602	Malus	4232	Centaurus	7241	Piscis Aust.
1529	Canis Major	2623	Argo	4317	Centaurus	7286	Piscis Aust.
1530	Puppis	2652	Malus	4366	Centaurus	7297	Microscopium
1533	Canis Major	2777	Argo	4367	Centaurus	7324	Indus
1544	Canis Major	2844	Argo	4373	Centaurus	7342	Microscopium
1561	Canis Major	2868	Argo	4521	Musca	7691	Aquarius
1569	Argo	2911	Argo	4853	Centaurus	7720	Tucana
1628	Puppis	2978	Argo	4867	Apus	7789	Grus
1649	Canis Major	3095	Argo	4985	Centaurus	7853	Grus
1653	Argo	3155	Argo	4988	Centaurus	7880	Sculptor
1845	Argo	3274	Argo	5044	Lupus		

Table XV. affords a means of finding the brighter stars in Tables VII. and XIII. from the letters by which they are sometimes designated in the latter Table. The constellations are arranged in alphabetical order. The letters applied to the stars in each constellation are followed by the corresponding numbers from the first columns of Tables VII. and XIII. When a letter is applied to a double or triple star whose components are numbered separately, the first number only is entered, and it is printed in Italics. The letters are arranged alphabetically, beginning as usual with those of the Greek alphabet.

TABLE XV.

INDEX TO LETTERS.

ANTLIA.	
α	3360
δ	3380
ε	2958
ζ^1	*2975*
ζ^2	2983
η	3159
ι	3574
APUS.	
α	4976
β	5690
γ	5631
δ^1	5549
δ^2	5551
ε	4832
ζ	5980
η	4806
θ	4749
ι	5972
κ^1	5263
κ^2	5313
ARA.	
α	6064
β	6020
γ	6021
δ	6056
ϵ^1	5844
ϵ^2	5872
ζ	5837
η	5767
θ	6338
ι	6008
κ	6032
λ	6124
μ	6158
π	6102
σ	6093
CAELUM.	
α	964
β	972
γ	1060
δ	925
ζ	993
CANIS MAJOR.	
ζ	1444
κ	1643
λ	1499
CARINA.	
α	1480
β	2844
ε	2441
η	3485
θ	3476
ι	2868
υ	3095
χ	2178
ω	3274
a	2808
b^1	2717
b^2	2737
c	2706
d	2590
e^1	2544
e^2	2543
f	2639
g	2857
h	3020
i	2814
k	2903
l	3084
m	3053
p	3406
q	3293
r	3428
s	3374
t^1	3432
t^2	3452
u	3556
w	3477
x	3678
y	3716
z	3662
A	1654
B	2313
C	2383
D	2235
E	2787
G	2788
H	3014
I	3359
K	3399
L	3344
M	3266
N	1553
Q	1996
T	3570
CENTAURUS.	
α^1	4960
α^2	4961
β	4753
γ	4294
δ	4093
ε	4610
ζ	4715
η	4941
θ	4775
ι	4507
κ	5085
λ	3883
μ	4676
ν	4672
ξ^1	4412
ξ^2	4425
o^1	3840
o^2	3841
π	3774
ρ	4107
σ	4222
τ	4276
υ^1	4732
υ^2	4748
φ	4731
χ	4772
ψ	4854
ω	4542
a	4866
b	4978
c^1	4987
c^2	4993
d	4567
e	4354
f	4422
g	4675
h	4701
i	4641
j	3987
k	4690
l	4289
m	4521
n	4361
p	4347
r	4481
u	4224
v	4848
w	4301
x^1	4187
x^2	4202
y	4704
z	4651
A	3871
B	3995
C^1	3876
C^2	3882
C^3	3894
D	4127
E	4092
F	4157
G	4207
H	4384
J	4515
K	4557
M	4646
N	4686
Q	4622
CHAMAELEON.	
α	2444
β	4148
γ	3446
δ^1	3510
δ^2	3517
ε	4039
ζ	3055
η	2645
θ	2468
ι	2989
κ	4069
μ	3212
ν	3112
π	3900
CIRCINUS.	
α	4969
β	5193
γ	5229
δ	5186
ε	5188
ζ	5040
η	5104
θ	5060
COLUMBA.	
α	1217
β	1284
γ	1322
δ	1453
ε	1176
η	1329
θ	1378
κ	1429
λ	1295
μ	1253
ξ	1310
o	1116
π^2	1382
σ	1313
CORONA AUST.	
α	6727
β	6732

γ	6705
δ	6716
ε	6661
ζ	6683
η^1	6607
η^2	6612
θ	6523
κ	*6525*
λ	6581
μ	6605

Crux.

α^1	4208
α^2	4209
β	4324
γ	4242
δ	4134
ε	4173
ζ	4153
η	4083
θ^1	4059
θ^2	4066
ι	4310
κ	4362
λ	4365
μ	4367

Dorado.

α	943
β	1199
γ	869
δ	1264
ε	1297
ζ	1071
η^1	1387
η^2	1416
θ	1117
κ	989
λ	1162
ν	1404
π^1	1496
π^2	1516
R	960

Eridanus.

α	290
θ	584
ι	516
κ	473
υ^1	931
υ^2	942
φ	438
χ	343
d	894
e	657
f	*764*
g	766
h	738
i	783
p	*294*
q^1	299
q^2	311
s	509
y	722
X	872

Fornax.

β	550
η^2	556
η^3	559
ι^1	489
ι^2	498
λ^1	482
λ^2	493
μ	421
π	367
ρ	761
φ	475
χ^1	677
χ^2	683
ψ	567

Grus.

α	7481
β	7615
γ	7432
δ^1	7563
δ^2	7564
ε	7645
ζ	7693
η	7627
θ	7715
ι	7734
κ	7705
λ	7474
μ^1	7509
μ^2	7517
ν	7561
ξ	7342
ο	7785
π^2	7539
ρ	7619
τ^2	7677
τ^3	7681
υ	7716
φ	7762

Horologium.

α	858
β	591
δ	850
ζ	521
η	500
ι	526
λ	469
μ	605
ν	561

Hydra.

β	4005
ξ	3853
ο	3918

Hydrus.

α	356
β	57
γ	779
δ	461
ε	523
ζ	548
η^2	345
θ	608
ι	663
κ	470
λ	142
μ	497
ν	575
π^1	435
π^2	439
τ^1	307
τ^2	333

Indus.

α	7126
β	7191
γ	7322
δ	7448
ε	7463
ζ	7168
η	7152
θ	7293
ι	7174
μ	7235
ν	7536
ο	7413
ρ	7671

Lupus.

α	4975
β	5081
γ	5310
δ	5220
ε	5231
ζ	5163
η	5469
θ	5512
ι	4845
κ	5161
λ	5143
μ	5207
ν	5245
ν^1	5226
ν^2	5227
ξ	5450
ο	5034
π	5119
ρ	4950
σ	4921
τ^1	4879
τ^2	4880
ϕ^1	5230
ϕ^2	5237
χ	5410
ψ^1	5337
ψ^2	5356
ω	5324
a	4949
b	4999
c	5061
d	5312
e	5170
g	5345
h	5354
i	5183
k	5251

Mensa.

α	1430
β	1072
γ	1214
δ	911
ε	1983
ζ	1658
η	1046
θ	1758
ι	1250
κ	1332
μ	995
ν	935
ξ	1101
π	1269

Microscopium.

α	7171
β	7181
γ	7225
δ	7238
ε	7286
ζ	7228
η	7237
θ^1	7304
θ^2	7319
ι	7166
ν	7111

Musca.

α	4270
β	4312
γ	4247
δ	4402
ε	4147
ζ^2	4176
η	4470
θ	4432
ι^1	4522
λ	3963
μ	3978

Norma.

γ^1	5578
γ^2	5593
δ	5510
ε	5641
η	5489
θ	5566
ι^1	5486
ι^2	5516
κ	5552
λ	5591
μ	5681

Octans.

α	7213
β	7612
γ^1	7869
γ^2	7891
γ^3	18
δ	4837
ε	7505
ζ	2835
η	3639
θ	7910
ι	4341
κ	4565
λ	7386
μ^1	7123
μ^2	7124
ν	7366
ξ	7637
π^1	5032
π^2	5047
ρ	5258
σ	6706
τ	7763
υ	7529
φ	6422
χ	6322
ψ	7503
ω	5063
B	7391

Pavo.

α	7074
β	7150
γ	7320
δ	7006
ε	6957
ζ	6557
η	6155
θ	6594
ι	6355
κ	6640
λ	6617
μ^1	6966

μ^2	6969
ν	6499
ξ	6442
ο	7258
π	6339
ρ	7121
σ	7162
υ	7137
ϕ^1	7113
ϕ^2	7134
ω	6650

PHŒNIX.

α	59
β	187
γ	257
δ	262
ε	14
ζ	196
η	118
ι	7816
κ	60
λ^1	76
λ^2	91
μ	106
ν	216
ξ	109
π	7901
ρ	146
σ	7857
τ	7908
υ	190
φ	337
χ	369
ψ	334

PICTOR.

α	1650
β	1268
γ	1288
δ	1400
ζ	1127
η^1	1057
η^2	1066
θ	1149

ι	1017
λ	981
μ	1535
ν	1476

PISCIS AUST.

α	7684
β	7572
γ	7668
δ	7680
θ	7411
ι	7403
μ	7486
π	7702
τ	7491
υ	7487

PUPPIS.

ζ	2248
ν	1569
π	1845
σ	1951
τ	1653
a	2129
b	2134
c	2075
d^1	2021
d^2	2023
d^3	2025
f	1997
h^1	2318
h^2	2350
q	2393
r	2336
t	1693
v^1	1856
v^2	1860
w	2415
x	1626
y	1946
A	1775
C	1738
E	1799
F	1861
G	1491

H	1742
I	1805
J	2143
L^1	1813
L^2	1815
N	2176
O	2184
P	2108
Q	2102
Z	1977

PYXIS.

α	2602
β	2572

RETICULUM.

α	868
β	755
γ	821
δ	809
ε	874
ζ^1	655
ζ^2	658
η	898
ι	823
κ	696

SAGITTARIUS.

α	6805
β^1	6797
β^2	6803
γ	6341
ε	6471
ζ	6686
η	6428
θ^1	6975
θ^2	6976
ι	6952
κ^1	7067
κ^2	7072

SCORPIUS.

ε	5787
ζ^1	5809
ζ^2	5815

η	5930
θ	6104
ι^1	6191
ι^2	6205
κ	6154
λ	6082
μ^1	5794
μ^2	5800
υ	6063
k	5898
G	6204
H	5703
N	5667
Q	6099

SCULPTOR.

α	163
β	7815
γ	7764
ζ	7913
η	64
θ	21
λ^1	112
λ^2	120
μ	7833
ξ	172
π	296
σ	175
τ	283

TELESCOPIUM.

α	6484
δ^1	6510
δ^2	6513
ε	6374
ζ	6491
η	6792
ι	6857
κ	6624
λ	6656
ν	6920
ξ	7009
ρ	6696

TRIANG. AUST.

α	5752
β	5416
γ	5194
δ	5555
ε	5305
ζ	5625
η^1	5711
θ	5675
ι	5633
κ	5415

TUCANA.

α	7524
β^1	78
β^2	79
γ	7758
δ	7550
ε	7904
ζ	38
η	7893
θ	88
ι	191
κ	220
λ^2	159
ν	7573
ξ	51
π	40
ρ	116

VELA.

γ	2305
δ	2623
κ	2911
λ	2777
μ	3495
ο	2583
φ	3155
ψ	2978
a	2629
b	2582
c	2761
d	2614
e	2554
f	2670
g	2659
i	3601
k	2841
l	2838
m	3121
n	2584
p	3436
q	3265
r	3323
s	3397
t	3409
u	3110
w	2729
x	3454
y	3035
z	2825
A	2490
B	2433
C	2536
D	2613
F	2482
H	2707
I	2938
J	3317
K	2870
L	3011
M	3030
N	2996
O	3069
Q	3224

VOLANS.

α	2762
β	2481
γ^1	1803
γ^2	1804
δ	1874
ε	2314
ζ	2082
η	2463
θ	2592
ι	1679
κ^1	2437
κ^2	2439

END OF VOLUME XXXIV.

INTERIOR OF THE STATION, LOOKING EAST.

VIEW FROM THE STATION, LOOKING SOUTH.