Archaeoastronomy, no. 1 (*JHA*, x (1979))

NOTE

ANOTHER LUNAR SITE IN KINTYRE

In "A reconsideration of the lunar sites in Britain" (*JHA*, ix (1978), 170–9) we described a good line given by two stones called Clach Leth Rathad on the slopes of Dunskeig in Kintyre near Clachan. The line of the stones pointed to the tops of the Arran hills showing at this point over the nearer Kintyre hills and gave accurately a lunar declination of $-(\epsilon - i)$.

In 1978 we revisited a site above Skipness on the other side of Kintyre and measured the profile of the Arran hills from the site. The germain part is shown in Figure 1 and from this we see that whereas the Dunskeig site indicates the rising Moon at the minor standstill (south) the Skipness site shows the rising Moon at the major standstill (south).

In the figure the Moon is seen rising out of a major cleft in the hills between Ben Tarsuinn and the A'Chir ridge. This pass is called Bealach an Fhir Bhogha or The Bowman's Pass. Careful Sun/azimuth measurements showed that the azimuth of the right hand corner of the notch was 159°04′·3 and the altitude

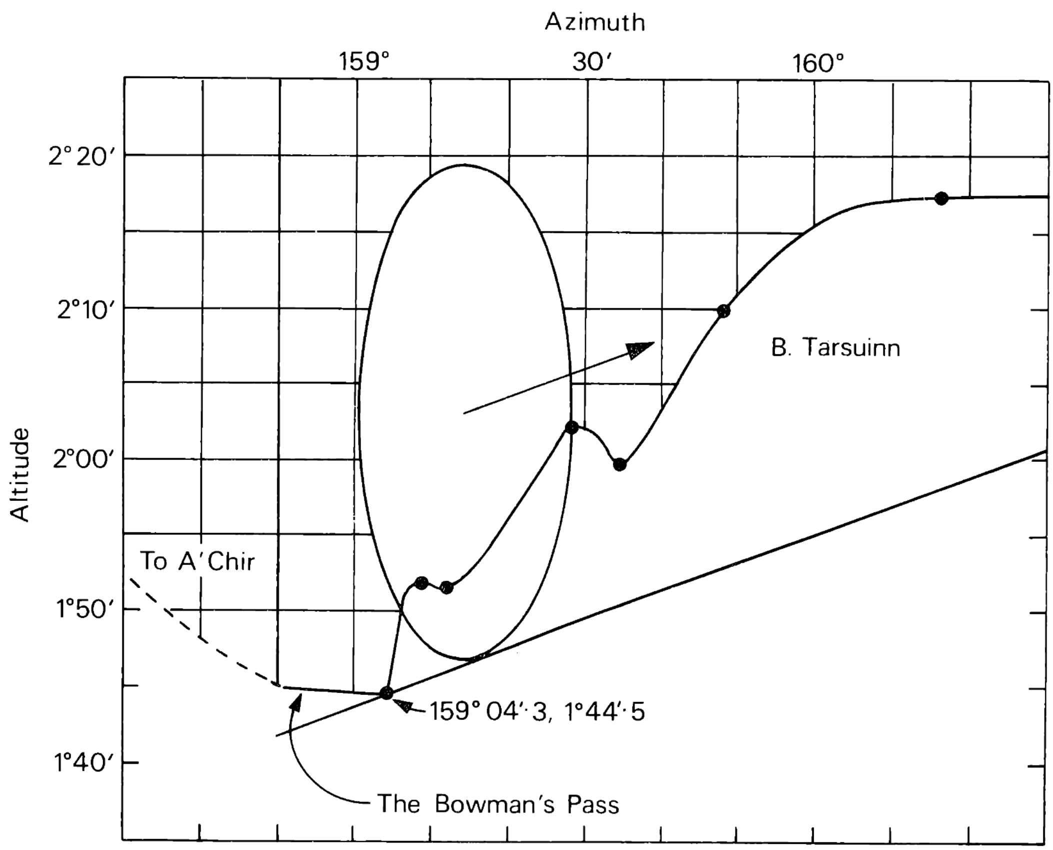

FIG. 1. Skipness, from the stone at NR 905588, with the Moon rising behind Ben Tarsuinn with declination $-(\epsilon + i + \Delta)$.

1°44′·5. These yield a nominal lunar declination of $-(\epsilon+i+\Delta+s)$ and so the observations were made either in March at about 4.25 a.m. or September about 4.25 p.m. (see our recent *Megalithic remains in Britain and Brittany*, 11–12). We take the March case as this was before sunrise; we take the temperature to be 40°F and barometer 29·5in. since the site is about 330ft O.D. These give a refraction of about −19′·8. Neither of us has been on The Bowman's Pass since the years between the wars, but our memory of it is that the ray would graze the ground for a relatively short distance. Hence we use a graze effect of only 1 arc minute. The mean parallax for this case is 57′·2 and so we find that the geocentric altitude is 2°20′·9. This, with the above azimuth and with latitude 55°46′·6, gives a declination of −29°24′·4.

We show in our recent book (p. 10) that since Megalithic Man could not in general observe the day of the standstill, his declination at the major standstill would average 0′·3 less numerically than $-(\epsilon+i)$. Applying the semi-diameter S = 15′·6 and perturbation Δ = 7′·1 yields an obliquity value of ϵ = 23°53′·0 corresponding to a date of 1580 B.C. ±100 years.

Thus again we find a date in the first half of the second millenium. It seems that the *accurate* lunar and solar lines were all set up about this time.

In view of the importance of these lunar sites it is unfortunate that this unimpressive stone has fallen or been knocked over since the time when the Ordnance Survey reported it as a "standing stone". However there is still visible, amongst the grass on the west side of the stone, the hole in which it had stood, showing that it could have been orientated on The Bowman's Pass.

A. Thom and A. S. Thom
