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NOTE

A FOURTH LUNAR FORESIGHT FOR THE BROGAR RING

In 1975 we suspected that there was a fourth lunar foresight for the Brogar ring and so we returned in 1976 to check the measurements of the profile at this foresight. It will be seen in Figure 1 that the foresight consists of a very shallow

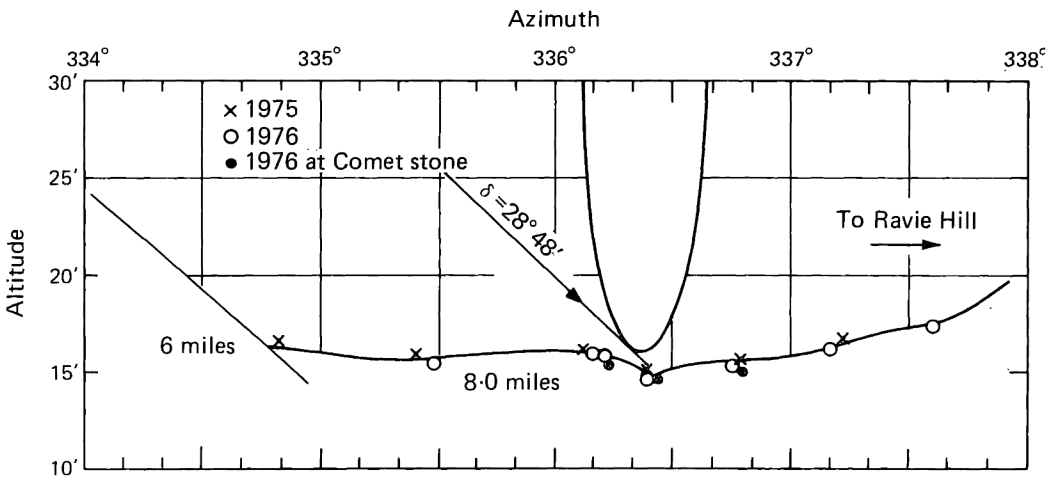

FIG. 1. Moon setting near Ravie Hill with declination $\epsilon+i$. Measurements made at the centre of the ring and at H have been reduced to the Comet stone.

notch on the horizon. We visited the site and found a shallow col running in a north-westerly direction. In the bottom of the col, or rather on the highest point of the bottom of the col, there was a low mound topped with stones which had been recently gathered. The mound as it is today is too low to be seen from Brogar but it is in exactly the correct position. It remains for archaeologists to find out if this is a prehistoric mound. Examination of Figure 3 of our paper, "Further Work on the Brogar Lunar Observatory" (*JHA*, vi (1975), 100–114, p. 102), shows that there are two lines crossing the Brogar site at the necessary angles to indicate this foresight; namely, the line joining the Comet stone to cairn B and the line of cairns H, F and T.

The distance to the foresight, 8 miles, is so large that terrestrial refraction is somewhat uncertain. Perhaps the profile should be raised by half-a-minute to reduce from daylight conditions, when it was measured, to night-time conditions, but this has not been applied. At this low altitude astronomical refraction is also uncertain being affected considerably by temperature.

This foresight is not as definite as the other three already dealt with, but in view of the accuracy with which it gives lunar declinations it seems desirable to put it on record. The particulars are given in the table. The "nominal values" shown have been calculated as in Table 1 of the paper quoted above using, as shown, $\epsilon=23°52'{\cdot}6$, and the reservations mentioned there apply here also.

Backsight	Azimuth	Altitude	Refraction	Declination	Nominal values
Comet stone	336°23′	15′	32′	28°48′	$\epsilon+i-s=28°47'$
H over FT	336°47′	14′	32′	28°53′	$\epsilon+i-\Delta=28°53'$

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