

(3) Declination values found

Standard values for refraction and Lunar parallax are applied.

The value for the lunar perturbation, Δ , is taken as $\pm 9'$ arc.

This is not strictly correct. More accurate is either $\pm 8'.6$ or $\pm 10'$ as follows:-

At the Major Standstill:-

Moon to north	+ Δ (quarters)	+8'.6
Moon to north	- Δ (full moon)	- 10'
Moon to south	- Δ (full moon)	- 10'
Moon to south	+ Δ (quarters)	+8'.6

There follows the values found for alignments at the Major Standstill $\pm \Delta$:-

Table 2

Site	Declination found	Value used for Δ		Differences – from:-	
		(a) $\pm 9'$	(b) $\pm 8'.6/10'$	(a) $\pm 9'$	(b) $\pm 8'.6/10'$
Onich (1)	-28° 38'.6	-28° 38'.5	-28° 37'.5	-0'.1	-1'.1
Achara(2)	+29° 08'.4	+29° 09'.5	+29° 08'.5	-1'.1	-0'.1
Salachary(14)	-28° 38'.9	-28° 38'.5	-28° 37'.5	-0'.4	-1'.4
Salachary(14)	-29° 27'.7	-29° 27'.5	-29° 27'.1	-0'.2	-0'.6
Ford (16)	+28° 56'.3	+28° 56'.5	+28° 56'.1	-0'.2	+0'.2
Carnasserie(19)	Approx. (-29° 28'.5)	-29° 27'.5	-29° 27'.1	(-1'.0)	(-1'.4)
Nether Largie (20)	+28° 56'.2	+28° 56'.5	+28° 56'.1	-0'.3	+0'.1
Ballymeanach (21)	+29° 27'.6	+29° 27'.5	+29° 27'.1	+0'.1	+0'.5
Torbhlaran(24)	+28° 55'.9 & (& +28° 56'.3)	+28° 56'.5	+28° 56'.1	-0'.6	-0'.2
Achnabreac(29)	Approx. (-28° 38')	-28° 38'.5	-28° 37'.5	(-0'.5)	(+0'.5)
Barnashaig(32)	+29° 28'.8	+29° 27'.5	+29° 27'.1	+1'.3	+1'.7
'Lower Fernoch' (34)	-28° 37'.7	-28° 38'.5	-28° 37'.5	+0'.8	-0'.2
				RMS 0'.68	0'.80

Note:- During the investigation a value of $\pm 9'$ arc for Δ was used for simplicity and because the main aim of the investigation was to determine whether or not there was evidence for intentional, precise (lunar) alignments in the region tested. From the above it is found that using the alternative and more correct values makes little difference. In particular all of the measured declinations fall within $\pm 2'$ arc of a theoretical value, this declination uncertainty having from the start been taken as the limit of acceptable error. (Further discussion later).