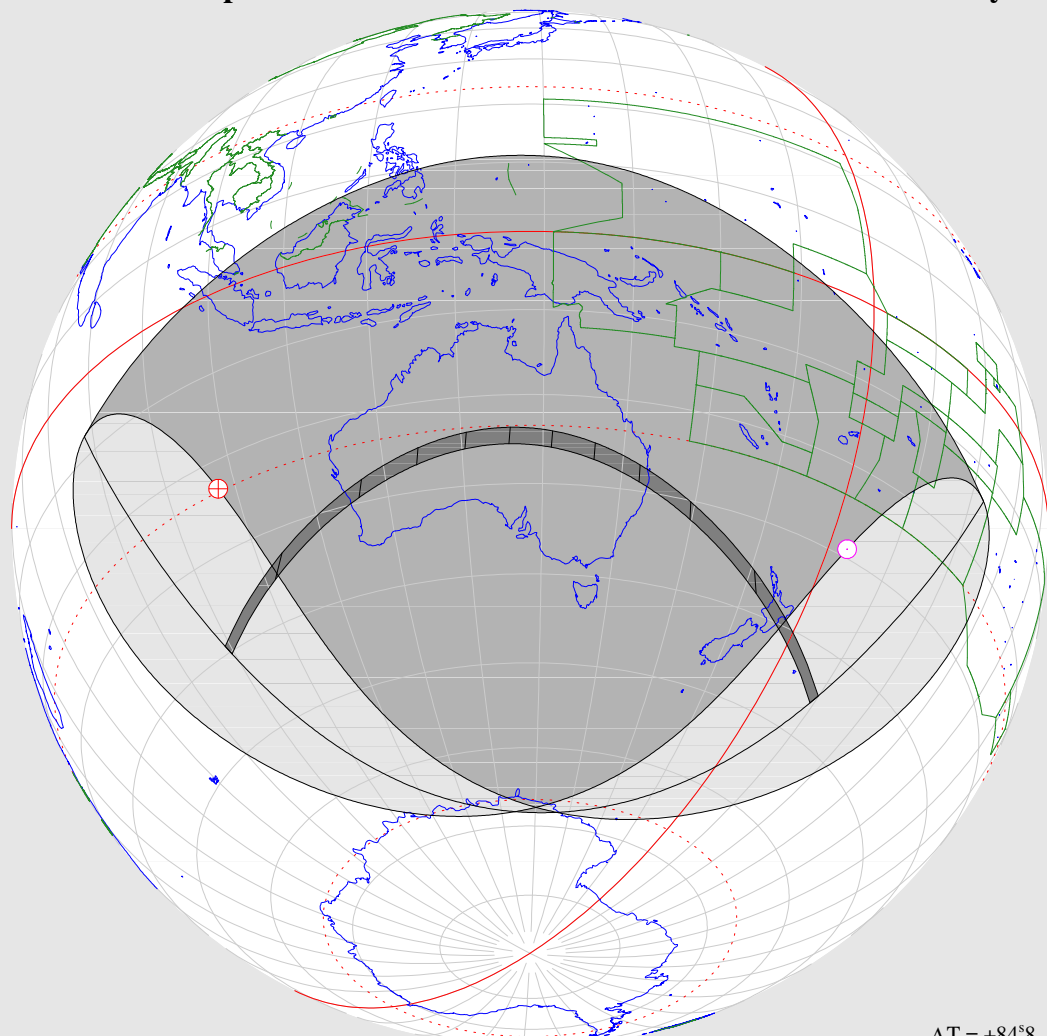


III. - Total Eclipse of the Sun

2037 July 13



©HM Nautical Almanac Office

$\Delta T = +84^s.8$
Globe centred on E 138°4 and S 35°0

| Circumstances | Time (UT) | | Longitude | | Latitude | |
|--|-----------|------|-----------|------|----------|------|
| | h | m | ° | ' | ° | ' |
| ⊕ Eclipse begins; first contact with Earth | 0 | 15.0 | E 97 | 32.8 | S 23 | 08.4 |
| Beginning of northern limit of penumbra | 1 | 04.7 | E 78 | 16.7 | S 7 | 26.9 |
| Beginning of northern limit of umbra | 1 | 25.4 | E 89 | 05.7 | S 39 | 08.9 |
| Beginning of centre line; central eclipse begins | 1 | 26.1 | E 89 | 18.4 | S 39 | 42.7 |
| Beginning of southern limit of umbra | 1 | 26.9 | E 89 | 31.5 | S 40 | 16.8 |
| Central eclipse at local apparent noon | 2 | 43.5 | E 140 | 34.4 | S 24 | 56.1 |
| End of southern limit of umbra | 3 | 51.3 | W 170 | 42.1 | S 45 | 52.1 |
| End of centre line; central eclipse ends | 3 | 52.1 | W 170 | 23.6 | S 45 | 18.0 |
| End of northern limit of umbra | 3 | 52.9 | W 170 | 05.7 | S 44 | 44.2 |
| End of northern limit of penumbra | 4 | 13.6 | W 157 | 26.9 | S 13 | 28.3 |
| ⊙ Eclipse ends; last contact with Earth | 5 | 03.2 | W 177 | 10.6 | S 29 | 02.9 |