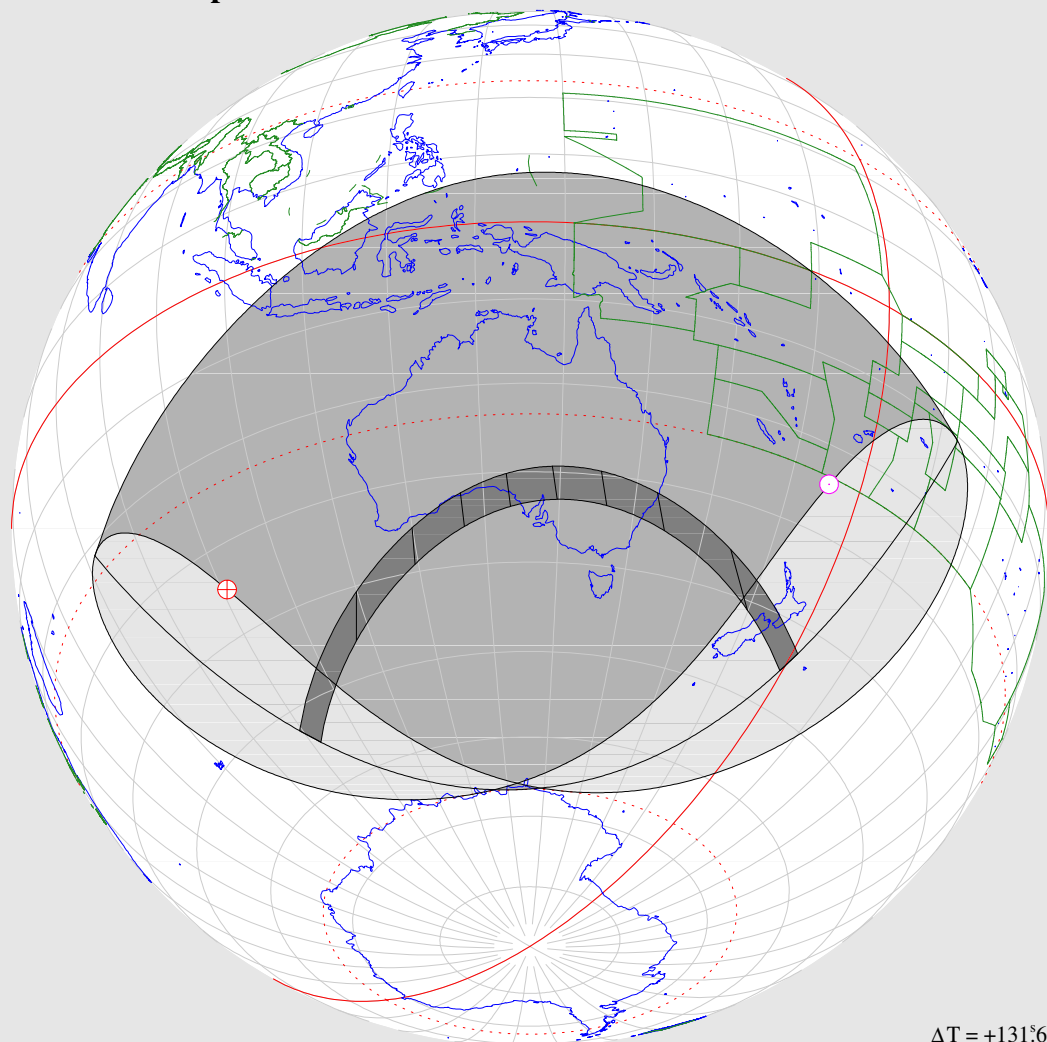


II. - Total Eclipse of the Sun

1610 June 21



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$\Delta T = +131^m 6$
Globe centred on E 136°1' and S 36°3'

| Circumstances | Time (UT) | | Longitude | Latitude |
|--|-----------|------|------------|-----------|
| | h | m | ° / | ° / |
| ⊕ Eclipse begins; first contact with Earth | 1 | 07.8 | E 90 46.2 | S 34 45.0 |
| Beginning of northern limit of penumbra | 1 | 52.2 | E 71 51.9 | S 21 14.7 |
| Beginning of northern limit of umbra | 2 | 20.1 | E 89 24.7 | S 52 20.0 |
| Beginning of centre line; central eclipse begins | 2 | 22.1 | E 90 34.7 | S 53 29.0 |
| Beginning of southern limit of umbra | 2 | 24.3 | E 91 52.5 | S 54 39.2 |
| Central eclipse at local apparent noon | 3 | 12.1 | E 132 08.5 | S 32 13.1 |
| End of southern limit of umbra | 4 | 17.3 | E 179 35.0 | S 45 31.0 |
| End of centre line; central eclipse ends | 4 | 19.5 | W 179 42.1 | S 44 12.1 |
| End of northern limit of umbra | 4 | 21.5 | W 179 03.1 | S 42 55.6 |
| End of northern limit of penumbra | 4 | 49.5 | W 166 49.6 | S 10 32.6 |
| ⊙ Eclipse ends; last contact with Earth | 5 | 33.8 | E 175 23.4 | S 24 19.4 |