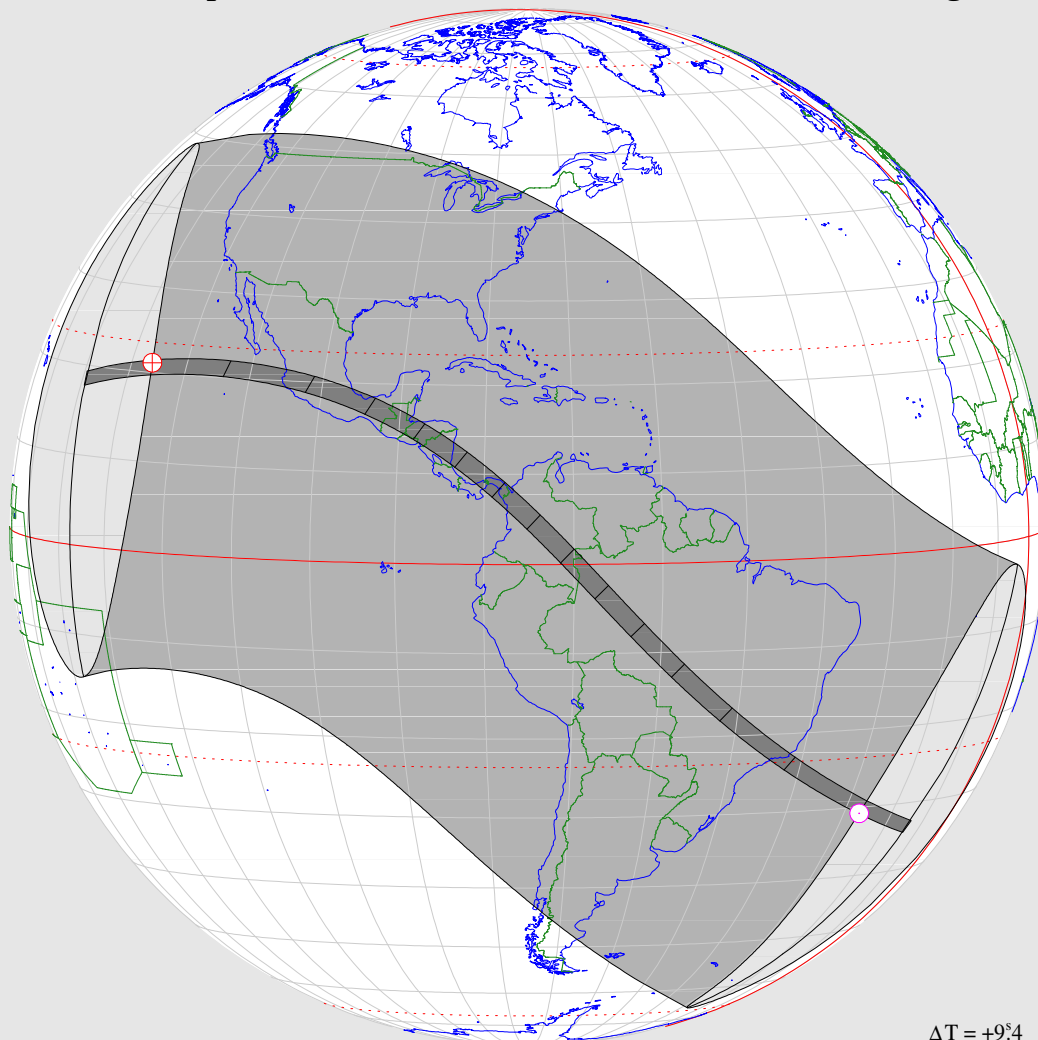


# V. - Total Eclipse of the Sun

1691 August 23



$\Delta T = +9^s.4$

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Globe centred on W 75°1' and N 4°2'

| Circumstances                                    | Time (UT) |      | Longitude |      | Latitude |      |
|--|-----------|------|-----------|------|----------|------|
|  | h         | m    | °         | '    | °        | '    |
| ⊕ Eclipse begins; first contact with Earth       | 14        | 08.6 | W126      | 03.7 | N21      | 06.9 |
| Beginning of centre line; central eclipse begins | 15        | 03.8 | W139      | 15.0 | N18      | 31.8 |
| Beginning of northern limit of umbra             | 15        | 03.7 | W139      | 25.0 | N19      | 19.6 |
| Beginning of southern limit of umbra             | 15        | 03.8 | W139      | 05.4 | N17      | 43.8 |
| Beginning of northern limit of penumbra          | 15        | 15.8 | W151      | 37.0 | N48      | 47.9 |
| Beginning of southern limit of penumbra          | 15        | 24.7 | W137      | 36.1 | S 14     | 55.7 |
| Central eclipse at local apparent noon           | 16        | 52.5 | W 72      | 36.0 | N 2      | 50.9 |
| End of southern limit of penumbra                | 18        | 06.3 | W 27      | 04.1 | S 65     | 33.5 |
| End of northern limit of penumbra                | 18        | 16.0 | W 4       | 03.1 | S 2      | 50.0 |
| End of southern limit of umbra                   | 18        | 27.6 | W 14      | 10.1 | S 34     | 10.9 |
| End of northern limit of umbra                   | 18        | 27.8 | W 13      | 45.0 | S 32     | 36.6 |
| End of centre line; central eclipse ends         | 18        | 27.7 | W 13      | 57.6 | S 33     | 23.7 |
| ⊙ Eclipse ends; last contact with Earth          | 19        | 22.9 | W 27      | 01.3 | S 30     | 49.5 |