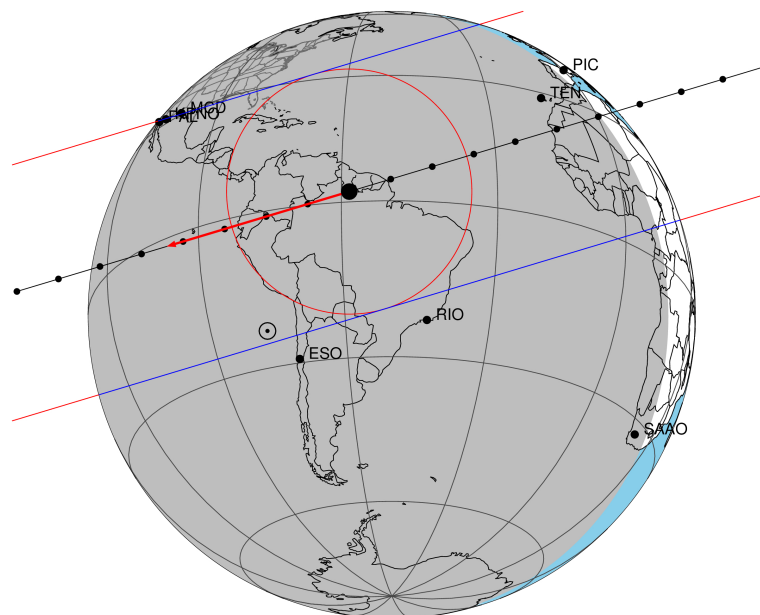


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2048-06-10T05:06:51.410
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4081699153047467776
 2Mass ID (if available) : 18591819-2209125

ICRS Star Coord at Epoch: 18h 59m 18.18327s -22:09:12.83852s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 12.866
 G magnitude : 15.390
 RP magnitude : 14.585
 BP magnitude : 15.986
 DUPflag : 0
 Distance (au) : 9.108
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.18
 Sun-Target sep (deg) : 155.62
 Sun-Moon sep (deg) : 141.24
 B (ring opening deg) : 24.76
 PA of pole (deg) : 6.58
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.411
 C/A sky separation (km) : 2715.5
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

Titan 2048-06-10T05:06:51 K12.87 G15.39 dots 60.0 sec
 Pt

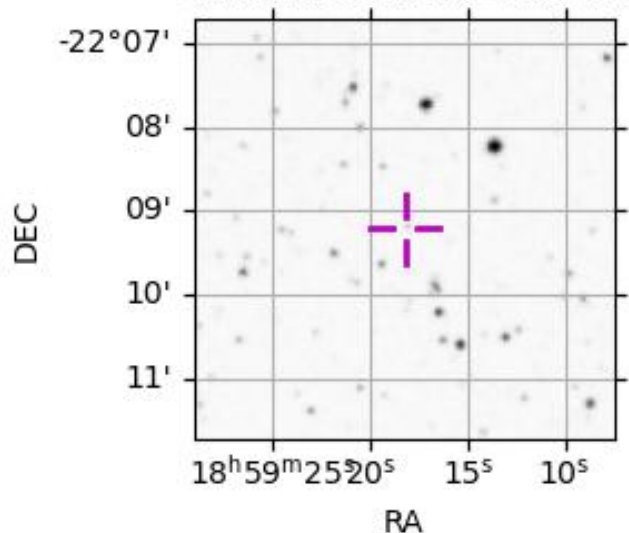


2048-06-10T05:06:51.4100 cc: 18 59 18.1833 s: -22 09 12.839 C/A 0.414" PA 343.26 deg v_sky -15.17 km/s D 09.11 AU
 Credit: Styled after SORA/Lucky Star

Observable events with sun below -5 deg and altitude above 5 deg

| Obs | Location | lat | Elon | Target | Observed Events Interval | OEncode |
|------|-----------------------------------|-------|-------|--------|-----------------------------|---------|
| PIC | Pic du Midi | 42.9 | 0.1 | | | Pnn |
| PAL | Palomar Mt (200") | 33.4 | 243.1 | | | Pnn |
| PMO | Purple Mtn Obs. Nanking | 32.1 | 118.8 | | | Pnn |
| KPNO | Kitt Peak Natl Obs | 32.0 | 248.4 | | | Pnn |
| MCD | McDonald Obs. 2.7m | 30.7 | 256.0 | | | Pnn |
| TEN | Teide Obs./Tenerife | 28.3 | 343.5 | + + | JUN 10 04:59 - JUN 10 05:04 | Pie |
| IRTF | Mauna Kea/IRTF | 19.8 | 204.5 | | | Pnn |
| KAV | Kavalur Observatory | 12.6 | 78.8 | | | Pnn |
| RIO | Rio de Janeiro | -22.9 | 316.8 | | | Pnn |
| ESO | European Southern Obs. (3.6m) | -29.3 | 289.3 | | | Pnn |
| AAT | Siding Spring (AAT) | -31.3 | 149.1 | | | Pnn |
| SAAO | So. Afr. Astro. Obs. (Sutherland) | -32.4 | 20.8 | | | Pnn |
| MSO | Mt. Stromlo Observatory | -35.3 | 149.0 | | | Pnn |

4081699153047467776



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2048-06-10T05:02:12.130
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)   : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 4081699153047467776
2Mass ID (if available) : 18591819-2209125
ICRS Star Coord at Epoch: 18h 59m 18.18327s -22:09:12.83852s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 12.866
G magnitude          : 15.390
RP magnitude         : 14.585
BP magnitude         : 15.986
DUPflag             : 0
Distance (au)        : 9.108
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.18
Sun-Target sep (deg) : 155.62
Sun-Moon sep (deg)   : 141.94
B (ring opening deg) : 24.76
PA of pole (deg)     : 6.58
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.115
C/A sky separation (km) : 756.6
NAIF SPICE kernels   : RAJobs_U111+rgf16.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
IAU_NEPTUNE_for_RINGFIT.tpc.BECAREFUL
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk

```

x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|--------|-----|-------------------------|-------|---------|--------|---------|--------------|
| Titan | I | 2048-06-10T04:59:33.047 | 31.00 | -13.83 | 2575.2 | -5.06 | -5.06 |
| Titan | E | 2048-06-10T05:04:51.206 | 30.31 | -12.88 | 2575.1 | 35.48 | 35.50 |

