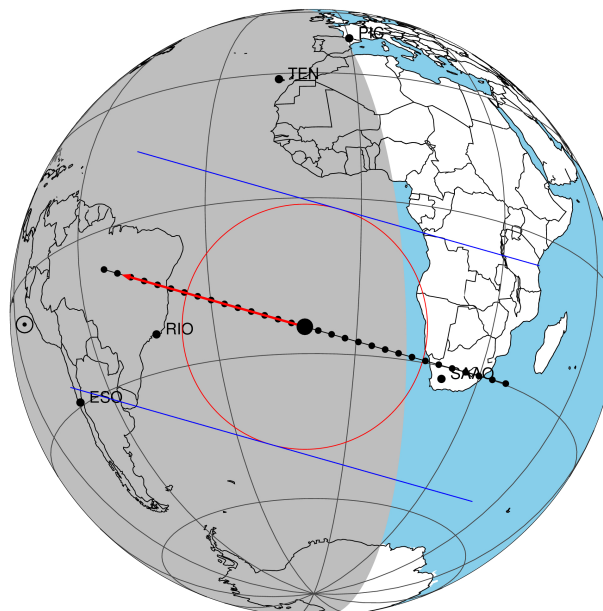


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-04-12T05:34:23.530
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4090526474761999360
 2Mass ID (if available) : 18165947-2218329

ICRS Star Coord at Epoch: 18h 16m 59.46226s -22:18:32.72899s
 RUWE (>1.4 is poor) : 0.97
 K magnitude : 13.569
 G magnitude : 16.742
 RP magnitude : 15.741
 BP magnitude : 17.606
 DUPflag : 0
 Distance (au) : 9.689
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -4.87
 Sun-Target sep (deg) : 107.66
 Sun-Moon sep (deg) : 47.01
 B (ring opening deg) : 25.99
 PA of pole (deg) : 5.97
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.043
 C/A sky separation (km) : 301.4
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

Titan 2047-04-12T05:34:23 K13.57 G16.74 dots 60.0 sec
 Pgt



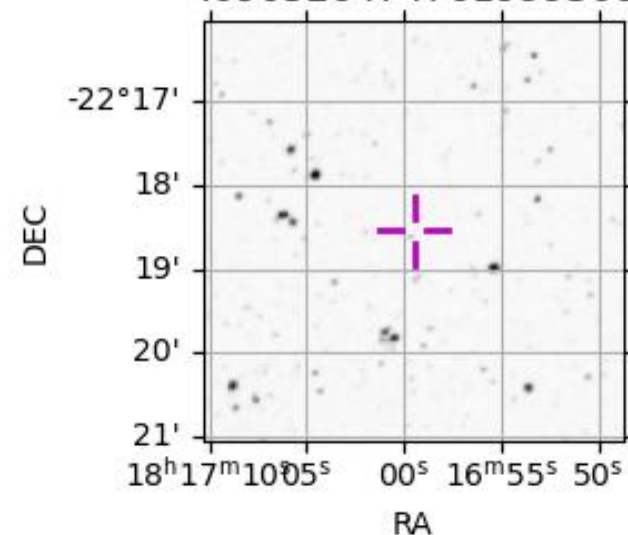
2047-04-12T05:34:23.5300 α: 18 16 59.4623 δ: -22 18 32.729 C/A 0.047" PA 195.84 deg v_sky - 4.87 km/s D 09.69 AU

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 | OCode |
|------|-----------------------------------|-------|-------|--------|-----------------------------|-------|
| 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 | | | Pnn |
| 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 | + + | APR 12 05:36 - APR 12 05:52 | Pie |
| 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 |

4090526474761999360



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-04-12T05:44:19.520
Event type           : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code        : RIO
Location             : Rio de Janeiro
Latitude (deg)       : -22.89506
E. Longitude (deg)   : 316.77708
Altitude (km)        : 0.033
Gaia source ID       : 4090526474761999360
2Mass ID (if available) : 18165947-2218329
ICRS Star Coord at Epoch: 18h 16m 59.46226s -22:18:32.72899s
RUWE (>1.4 is poor) : 0.97
K magnitude           : 13.569
G magnitude           : 16.742
RP magnitude         : 15.741
BP magnitude         : 17.606
DUPflag              : 0
Distance (au)        : 9.689
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -4.87
Sun-Target sep (deg) : 107.66
Sun-Moon sep (deg)   : 47.28
B (ring opening deg) : 25.99
PA of pole (deg)     : 5.97
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (" ) : 0.128
C/A sky separation (km) : 901.7
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 | 2047-04-12T05:36:35.637 | 58.98 | -48.51 | 2575.1 | -11.27 | -11.28 |
| Titan | E | 2047-04-12T05:52:02.647 | 62.54 | -45.03 | 2575.1 | -25.40 | -25.41 |

