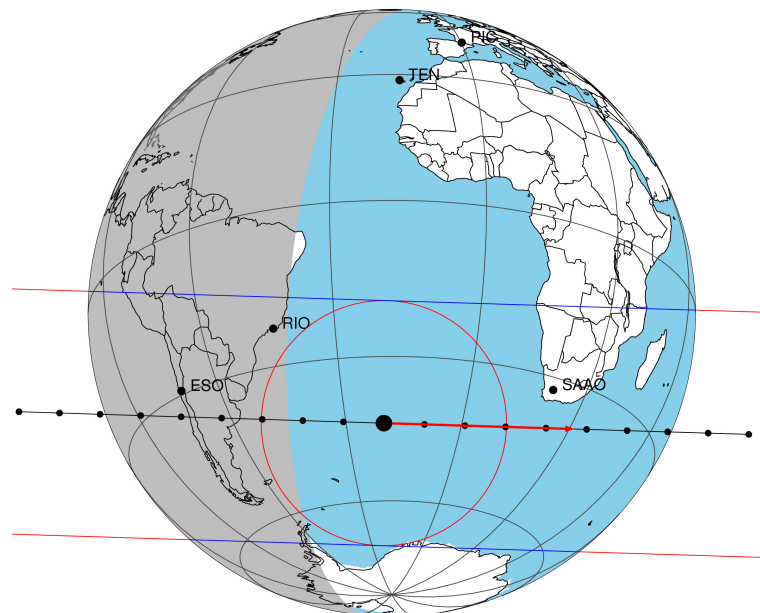


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2046-02-20T08:35:54.980
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4114871139662293760
 2Mass ID (if available) : 17222274-2142013

ICRS Star Coord at Epoch: 17h 22m 22.73864s -21:42:01.63112s
 RUWE (>1.4 is poor) : 1.04
 K magnitude : 14.569
 G magnitude : 18.224
 RP magnitude : 17.260
 BP magnitude : 19.307
 DUPflag : 0
 Distance (au) : 10.315
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 14.20
 Sun-Target sep (deg) : 69.96
 Sun-Moon sep (deg) : 119.03
 B (ring opening deg) : 26.58
 PA of pole (deg) : 4.83
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.311
 C/A sky separation (km) : 2325.3
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

Titan 2046-02-20T08:35:54 K14.57 G18.22 dots 60.0 sec
 Pgt



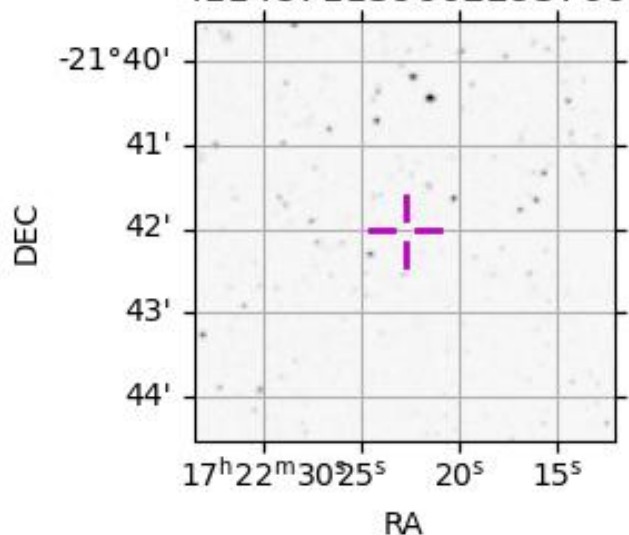
2046-02-20T08:35:54.9800 α: 17 22 22.7386 δ: -21 42 01.631 C/A 0.310" PA 181.77 deg v_sky +14.19 km/s D 10.31 AU
 Credit: Styled after SORA/Lucky Star

URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

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 | | | 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 | | | Pnn |
| ESO | European Southern Obs. (3.6m) | -29.3 | 289.3 | + + | FEB 20 08:27 - FEB 20 08:33 | Pie |
| 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 |

4114871139662293760



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2046-02-20T08:30:40.810
Event type            : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code         : ESO
Location              : European Southern Obs. (3.6m)
Latitude (deg)       : -29.26097
E. Longitude (deg)   : 289.26831
Altitude (km)        : 2.400
Gaia source ID       : 4114871139662293760
2Mass ID (if available) : 17222274-2142013
ICRS Star Coord at Epoch: 17h 22m 22.73864s -21:42:01.63112s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 14.569
G magnitude           : 18.224
RP magnitude          : 17.260
BP magnitude          : 19.307
DUPflag              : 0
Distance (au)         : 10.315
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 14.20
Sun-Target sep (deg) : 69.96
Sun-Moon sep (deg)   : 119.97
B (ring opening deg) : 26.58
PA of pole (deg)     : 4.83
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.073
C/A sky separation (km) : 544.3
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 | 2046-02-20T08:27:40.545 | 40.54 | -25.32 | 2575.1 | 13.12 | 13.13 |
| Titan | E | 2046-02-20T08:33:41.144 | 41.85 | -24.18 | 2575.1 | 8.65 | 8.66 |

