

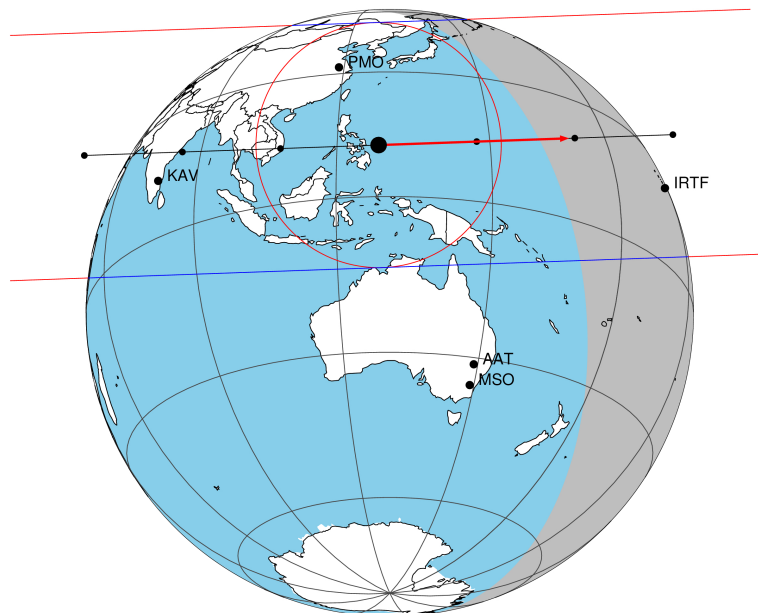
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2048-11-14T06:36:32.780
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4078678794612881152
 2Mass ID (if available) : 18504414-2236052

ICRS Star Coord at Epoch: 18h 50m 44.12901s -22:36:05.47475s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 12.632
 G magnitude : 15.782
 RP magnitude : 14.874
 BP magnitude : 16.641
 DUPflag : 0
 Distance (au) : 10.645
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 34.34
 Sun-Target sep (deg) : 49.81
 Sun-Moon sep (deg) : 58.16
 B (ring opening deg) : 25.43
 PA of pole (deg) : 6.50
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.458
 C/A sky separation (km) : 3536.2
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

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

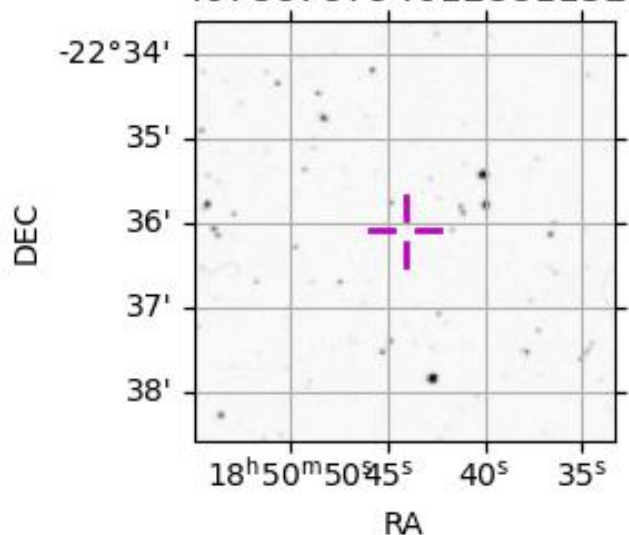
| Obs | Location | lat | Elon | Target | Observed Events Interval | OCode |
|------|-----------------------------------|-------|-------|--------|-----------------------------|-------|
| PIC | Pic du Midi | 42.9 | 0.1 | | | Pnn |
| PAL | Palomar Mt (200") | 33.4 | 243.1 | | | Pnn |
| PMO | Purple Mtn 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 | + + | NOV 14 06:38 - NOV 14 06:40 | Pie |
| 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 |

Titan 2048-11-14T06:36:32 K12.63 G15.78 dots 60.0 sec
Pt



2048-11-14T06:36:32.7800 α: 18 50 44.1290 δ: -22 36 05.475 C/A 0.457" PA 357.96 deg v_sky +34.35 km/s D 10.65 AU
Credit: Styled after SORA/Lucky Star

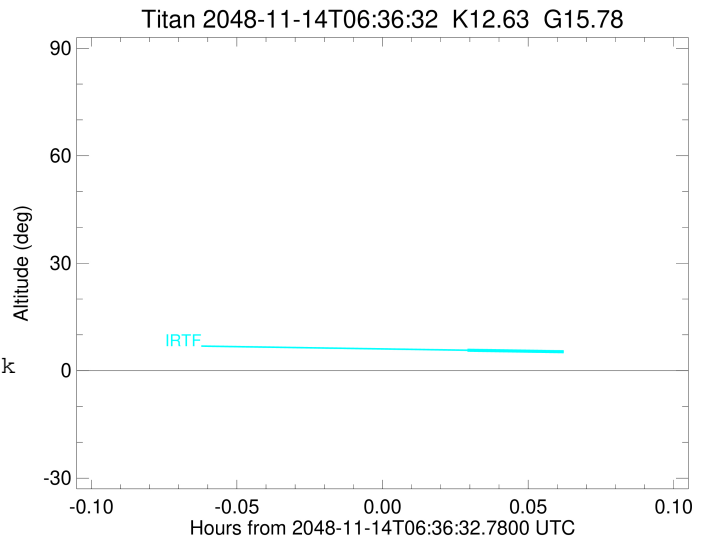
4078678794612881152



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target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2048-11-14T06:39:24.450
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : IRTF
Location              : Mauna Kea/IRTF
Latitude (deg)       : 19.82622
E. Longitude (deg)   : 204.52800
Altitude (km)        : 4.168
Gaia source ID       : 4078678794612881152
2Mass ID (if available) : 18504414-2236052
ICRS Star Coord at Epoch: 18h 50m 44.12901s -22:36:05.47475s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 12.632
G magnitude           : 15.782
RP magnitude          : 14.874
BP magnitude          : 16.641
DUPflag              : 0
Distance (au)         : 10.645
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 34.34
Sun-Target sep (deg) : 49.81
Sun-Moon sep (deg)   : 57.75
B (ring opening deg) : 25.43
PA of pole (deg)     : 6.50
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.154
C/A sky separation (km) : 1191.8
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

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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 | 2048-11-14T06:38:17.778 | 5.70 | -41.04 | 2575.1 | -16.89 | -16.90 |
| Titan | E | 2048-11-14T06:40:31.109 | 5.23 | -41.56 | 2575.1 | -32.38 | -32.39 |