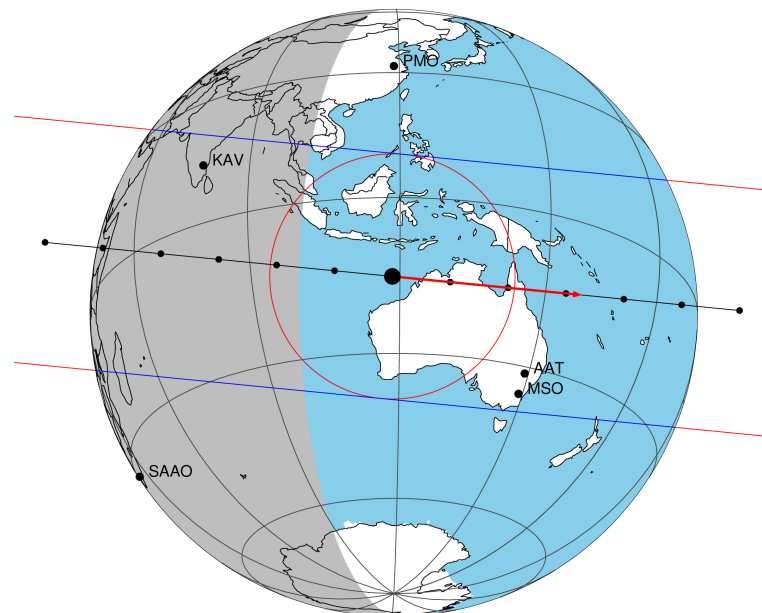


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-03-05T23:25:05.790
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4066727687381621120
 2Mass ID (if available) : 18120578-2220264

ICRS Star Coord at Epoch: 18h 12m 05.77152s -22:20:26.74701s
 RUWE (>1.4 is poor) : 1.12
 K magnitude : 9.606
 G magnitude : 16.292
 RP magnitude : 14.737
 BP magnitude : 19.284
 DUPflag : 0
 Distance (au) : 10.311
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 20.35
 Sun-Target sep (deg) : 71.85
 Sun-Moon sep (deg) : 172.68
 B (ring opening deg) : 26.14
 PA of pole (deg) : 5.89
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.103
 C/A sky separation (km) : 770.1
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

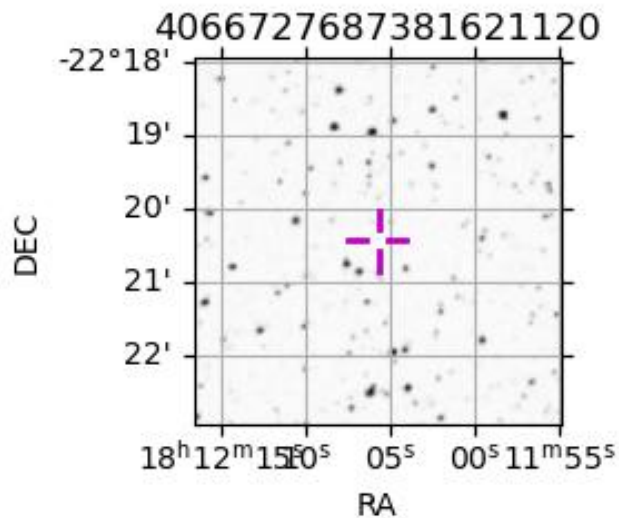
Titan 2047-03-05T23:25:05 K9.61 G16.29 dots 60.0 sec
 Pgt



2047-03-05T23:25:05.7900 α: 18 12 05.7715 δ: -22 20 26.747 C/A 0.101" PA 5.64 deg v_sky +20.35 km/s D 10.31 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 | OEcode |
|------|-----------------------------------|-------|-------|--------|-----------------------------|--------|
| 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 | + + | MAR 05 23:20 - MAR 05 23:22 | Pie |
| 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 |



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-03-05T23:21:31.850
Event type           : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)  : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 4066727687381621120
2Mass ID (if available) : 18120578-2220264
ICRS Star Coord at Epoch: 18h 12m 05.77152s -22:20:26.74701s
RUWE (>1.4 is poor) : 1.12
K magnitude          : 9.606
G magnitude          : 16.292
RP magnitude         : 14.737
BP magnitude         : 19.284
DUPflag             : 0
Distance (au)        : 10.311
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 20.35
Sun-Target sep (deg) : 71.85
Sun-Moon sep (deg)  : 172.43
B (ring opening deg) : 26.14
PA of pole (deg)    : 5.89
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.255
C/A sky separation (km) : 1904.2
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 | 2047-03-05T23:20:05.300 | 36.66 | -24.60 | 2575.1 | 41.49 | 41.50 |
| Titan | E | 2047-03-05T23:22:58.429 | 37.20 | -23.89 | 2575.1 | 41.70 | 41.72 |

