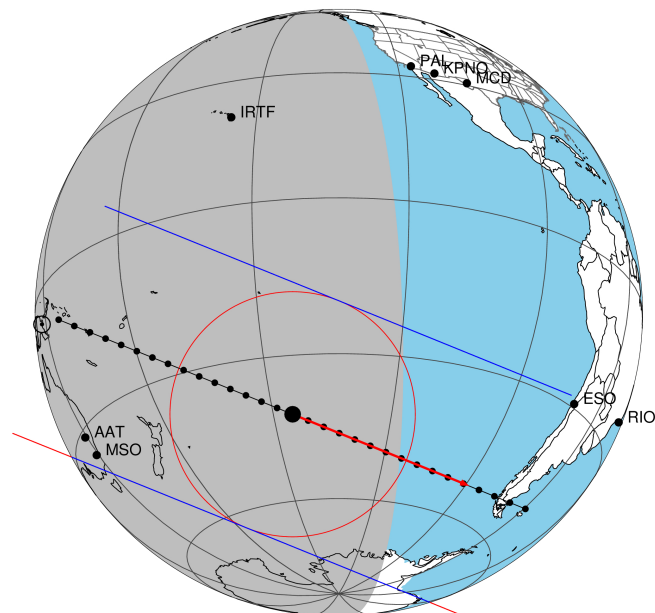


target : Titan  
 target radius (km) : 2575.15  
 C/A epoch : 2047-04-06T14:14:06.830  
 Event type : Pgt  
 : Titan occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4090526891454141952  
 2Mass ID (if available) : 18170513-2217262

ICRS Star Coord at Epoch: 18h 17m 05.13166s -22:17:26.39117s  
 RUWE (>1.4 is poor) : 0.90  
 K magnitude : 13.228  
 G magnitude : 14.985  
 RP magnitude : 14.365  
 BP magnitude : 15.442  
 DUPflag : 0  
 Distance (au) : 9.790  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 5.87  
 Sun-Target sep (deg) : 102.10  
 Sun-Moon sep (deg) : 131.31  
 B (ring opening deg) : 25.97  
 PA of pole (deg) : 5.97  
 Pole direction: RA (deg): 39.48270  
 Dec (deg): 83.42790  
 C/A sky separation (") : 0.324  
 C/A sky separation (km) : 2297.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf16.spk

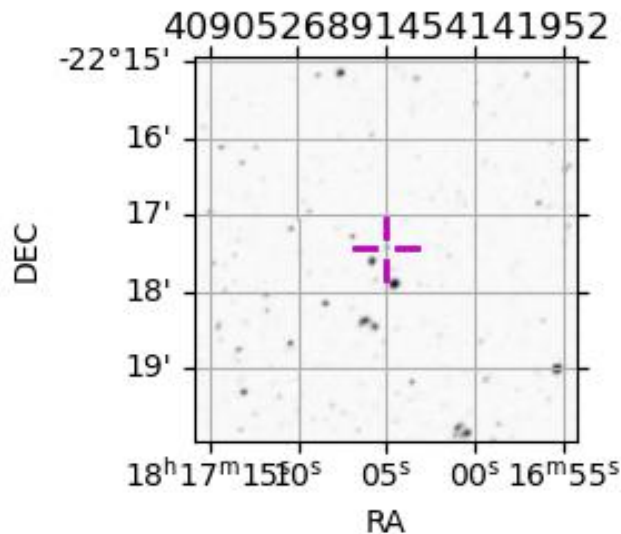
Titan 2047-04-06T14:14:06 K13.23 G14.99 dots 60.0 sec  
 Pgt



2047-04-06T14:14:06.8300 α: 18 17 05.1317 δ: -22 17 26.391 C/A 0.329" PA 202.09 deg v<sub>sky</sub> + 5.87 km/s D 09.79 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			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	+ +	APR 06 13:59 - APR 06 14:06	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	APR 06 14:01 - APR 06 14:06	Pie



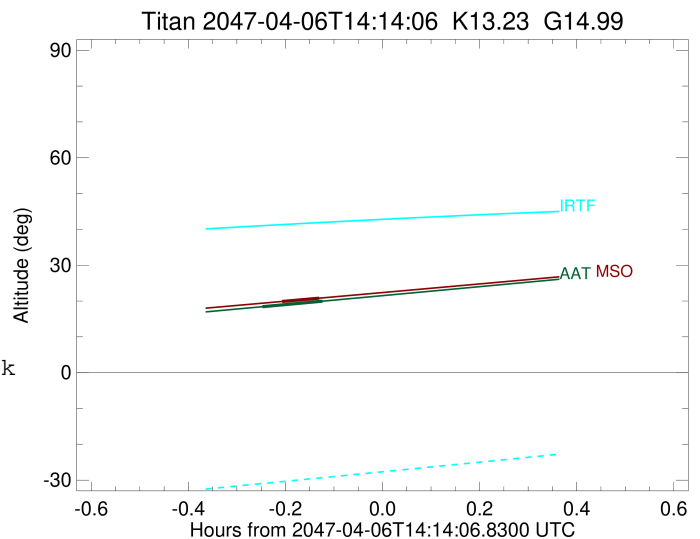
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2047-04-06T14:02:58.050
Event type            : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code         : AAT
Location              : Siding Spring (AAT)
Latitude (deg)        : -31.27703
E. Longitude (deg)    : 149.06608
Altitude (km)         : 1.164
Gaia source ID        : 4090526891454141952
2Mass ID (if available) : 18170513-2217262
ICRS Star Coord at Epoch: 18h 17m 05.13166s -22:17:26.39117s
RUWE (>1.4 is poor) : 0.90
K magnitude           : 13.228
G magnitude           : 14.985
RP magnitude          : 14.365
BP magnitude          : 15.442
DUPflag              : 0
Distance (au)         : 9.790
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 5.87
Sun-Target sep (deg)  : 102.10
Sun-Moon sep (deg)    : 132.15
B (ring opening deg) : 25.97
PA of pole (deg)      : 5.97
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.311
C/A sky separation (km) : 2205.7
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	2047-04-06T13:59:12.445	18.40	-65.41	2575.1	-60.96	-60.97
Titan	E	2047-04-06T14:06:44.137	19.96	-65.46	2575.1	-36.40	-36.41



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-04-06T14:03:59.860
Event type           : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code        : MSO
Location             : Mt. Stromlo Observatory
Latitude (deg)      : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)       : 0.770
Gaia source ID      : 4090526891454141952
2Mass ID (if available) : 18170513-2217262
ICRS Star Coord at Epoch: 18h 17m 05.13166s -22:17:26.39117s
RUWE (>1.4 is poor) : 0.90
K magnitude          : 13.228
G magnitude          : 14.985
RP magnitude         : 14.365
BP magnitude         : 15.442
DUPflag             : 0
Distance (au)       : 9.790
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 5.87
Sun-Target sep (deg) : 102.10
Sun-Moon sep (deg)  : 132.14
B (ring opening deg) : 25.97
PA of pole (deg)    : 5.97
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.344
C/A sky separation (km) : 2445.0
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	2047-04-06T14:01:42.548	19.88	-61.41	2575.0	-64.02	-64.03
Titan	E	2047-04-06T14:06:17.392	20.79	-61.43	2575.1	-46.77	-46.79

