

target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2045-05-05T13:57:07.270
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4131212012754908672
 2Mass ID (if available) : 16325780-1955414

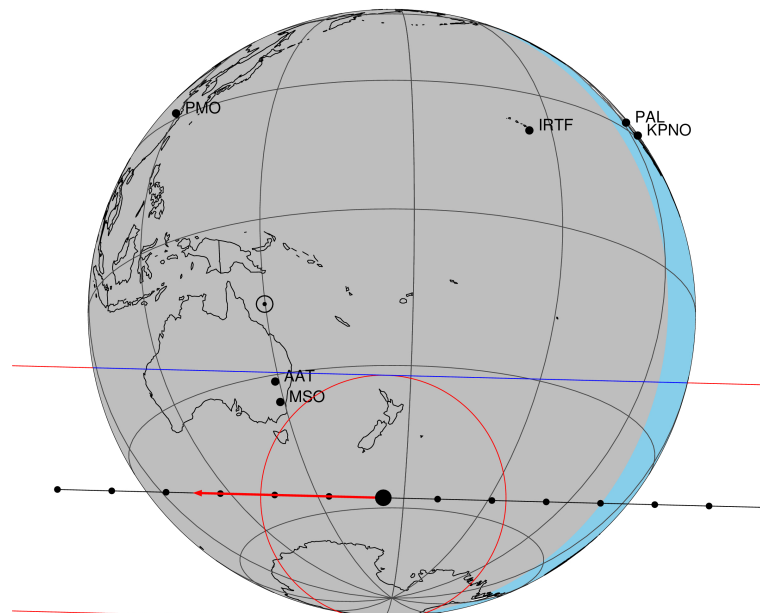
ICRS Star Coord at Epoch: 16h 32m 57.81342s -19:55:41.45406s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 14.935
 G magnitude : 17.983
 RP magnitude : 17.038
 BP magnitude : 18.872
 DUPflag : 0
 Distance (au) : 9.071
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -19.01
 Sun-Target sep (deg) : 155.19
 Sun-Moon sep (deg) : 27.16
 B (ring opening deg) : 25.65
 PA of pole (deg) : 3.50
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.593
 C/A sky separation (km) : 3898.0
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

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

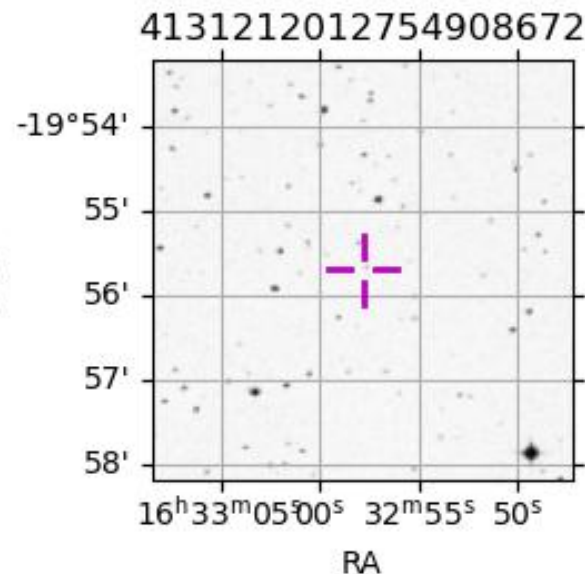
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	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			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1	+ +	MAY 05 13:58 - MAY 05 13:59	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	MAY 05 13:57 - MAY 05 14:00	Pie

Titan 2045-05-05T13:57:07 K14.94 G17.98 dots 60.0 sec
 Pt



2045-05-05T13:57:07.2700 cc: 16 32 57.8134 d: -19 55 41.454 C/A 0.591" PA 181.45 deg v_sky -19.01 km/s D 09.07 AU
 Credit: Styled after SORA/Lucky Star



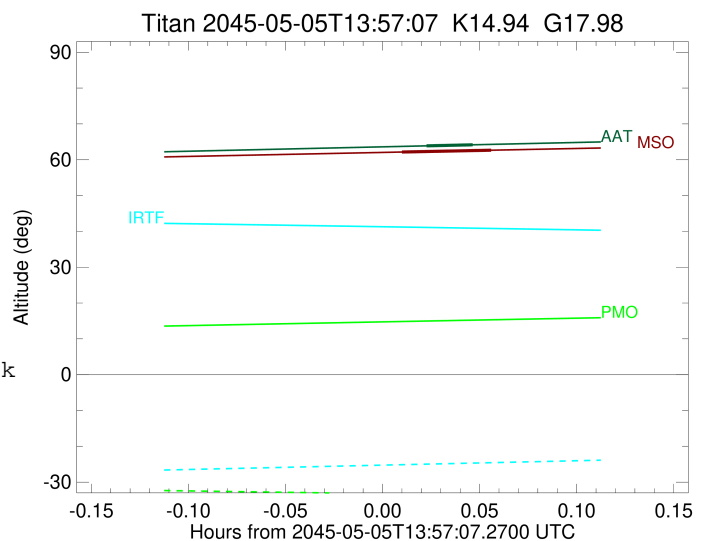
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2045-05-05T13:59:11.830
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : AAT
Location             : Siding Spring (AAT)
Latitude (deg)       : -31.27703
E. Longitude (deg)   : 149.06608
Altitude (km)        : 1.164
Gaia source ID       : 4131212012754908672
2Mass ID (if available) : 16325780-1955414
ICRS Star Coord at Epoch: 16h 32m 57.81342s -19:55:41.45406s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 14.935
G magnitude           : 17.983
RP magnitude         : 17.038
BP magnitude         : 18.872
DUPflag              : 0
Distance (au)        : 9.071
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -19.01
Sun-Target sep (deg) : 155.19
Sun-Moon sep (deg)   : 27.77
B (ring opening deg) : 25.65
PA of pole (deg)     : 3.50
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.370
C/A sky separation (km) : 2430.9
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	2045-05-05T13:58:27.966	63.87	-75.36	2575.1	57.00	57.01
Titan	E	2045-05-05T13:59:55.689	64.16	-75.37	2575.1	59.54	59.55



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2045-05-05T13:59:06.080
Event type           : Pt
: Titan occs: topocentric, not geocentric
: 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       : 4131212012754908672
2Mass ID (if available) : 16325780-1955414
ICRS Star Coord at Epoch: 16h 32m 57.81342s -19:55:41.45406s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 14.935
G magnitude          : 17.983
RP magnitude         : 17.038
BP magnitude         : 18.872
DUPflag             : 0
Distance (au)        : 9.071
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -19.01
Sun-Target sep (deg) : 155.19
Sun-Moon sep (deg)   : 27.73
B (ring opening deg) : 25.65
PA of pole (deg)     : 3.50
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.305
C/A sky separation (km) : 2004.4
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	2045-05-05T13:57:42.530	62.14	-71.33	2575.1	42.77	42.78
Titan	E	2045-05-05T14:00:29.620	62.65	-71.34	2575.1	46.32	46.33

