

target : Titan  
 target radius (km) : 2575.15  
 C/A epoch : 2049-08-27T17:14:04.720  
 Event type : Pt  
 : Titan occs: topocentric, not geocentric  
 : Not a ringed target  
 Gaia source ID : 6772856460190711936  
 2Mass ID (if available) : 19292723-2152502

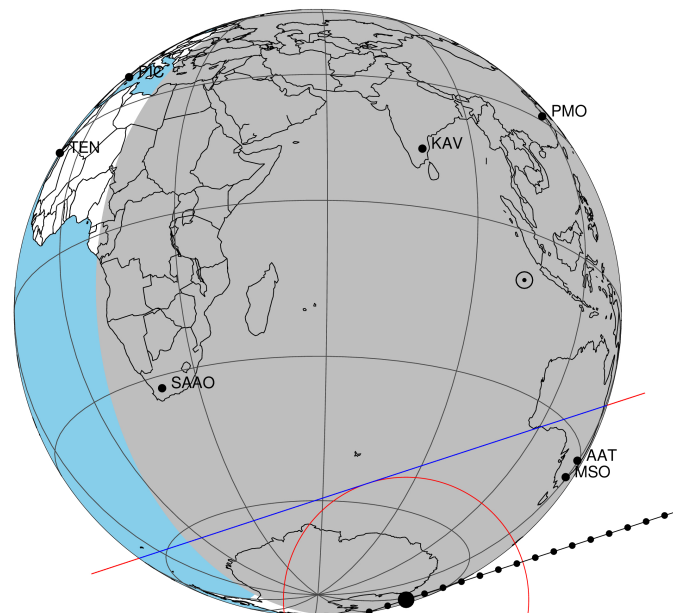
ICRS Star Coord at Epoch: 19h 29m 27.24326s -21:52:50.62569s  
 RUWE (>1.4 is poor) : 1.02  
 K magnitude : 13.183  
 G magnitude : 15.282  
 RP magnitude : 14.622  
 BP magnitude : 15.777  
 DUPflag : 0  
 Distance (au) : 9.251  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -6.80  
 Sun-Target sep (deg) : 136.49  
 Sun-Moon sep (deg) : 144.53  
 B (ring opening deg) : 23.67  
 PA of pole (deg) : 6.86  
 Pole direction: RA (deg): 39.48270  
 Dec (deg): 83.42790  
 C/A sky separation (") : 0.943  
 C/A sky separation (km) : 6325.6  
 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

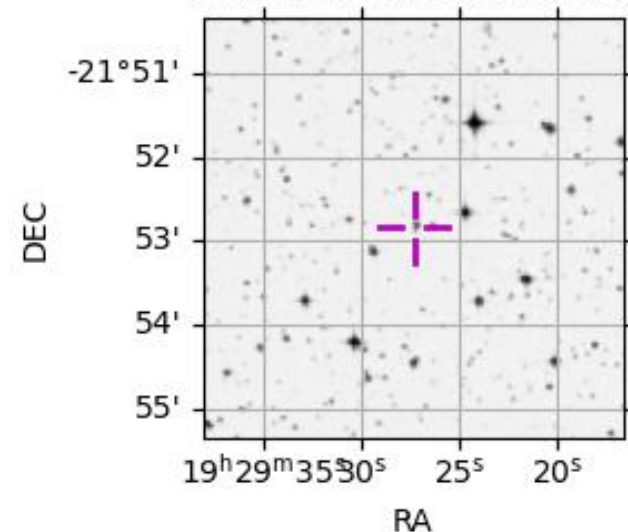
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	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	+ +	AUG 27 16:59 - AUG 27 17:08	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	AUG 27 16:59 - AUG 27 17:09	Pie

Titan 2049-08-27T17:14:04 K13.18 G15.28 dots 60.0 sec  
Pt



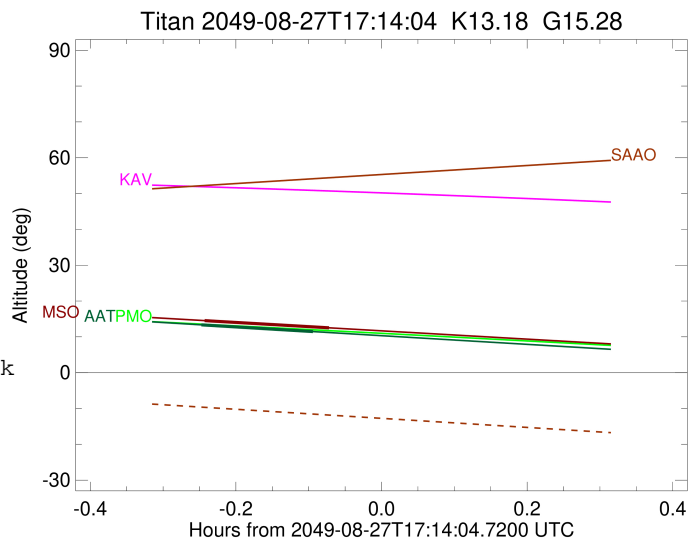
2049-08-27T17:14:04.7200 α: 19 29 27.2433 δ: -21 52 50.626 C/A 0.940" PA 161.89 deg v\_sky - 6.79 km/s D 09.25 AU  
Credit: Styled after SORA/Lucky Star

6772856460190711936



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2049-08-27T17:03:48.010
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       : 6772856460190711936
2Mass ID (if available) : 19292723-2152502
ICRS Star Coord at Epoch: 19h 29m 27.24326s -21:52:50.62569s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 13.183
G magnitude          : 15.282
RP magnitude         : 14.622
BP magnitude         : 15.777
DUPflag             : 0
Distance (au)        : 9.251
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -6.80
Sun-Target sep (deg) : 136.49
Sun-Moon sep (deg)   : 144.13
B (ring opening deg) : 23.67
PA of pole (deg)     : 6.86
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.263
C/A sky separation (km): 1762.2
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	2049-08-27T16:59:10.691	13.36	-44.34	2575.2	17.81	17.82
Titan	E	2049-08-27T17:08:25.719	11.47	-42.45	2575.1	57.40	57.41

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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2049-08-27T17:04:37.750
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       : 6772856460190711936
2Mass ID (if available) : 19292723-2152502
ICRS Star Coord at Epoch: 19h 29m 27.24326s -21:52:50.62569s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 13.183
G magnitude           : 15.282
RP magnitude         : 14.622
BP magnitude         : 15.777
DUPflag              : 0
Distance (au)        : 9.251
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -6.80
Sun-Target sep (deg) : 136.49
Sun-Moon sep (deg)   : 144.18
B (ring opening deg) : 23.67
PA of pole (deg)     : 6.86
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.224
C/A sky separation (km) : 1501.9
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

```

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	2049-08-27T16:59:28.836	14.53	-42.94	2575.2	10.93	10.94
Titan	E	2049-08-27T17:09:47.157	12.51	-40.97	2575.1	52.07	52.09

