

target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2048-06-16T20:00:41.120
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4075739696939093632
 2Mass ID (if available) : 18570682-2213357

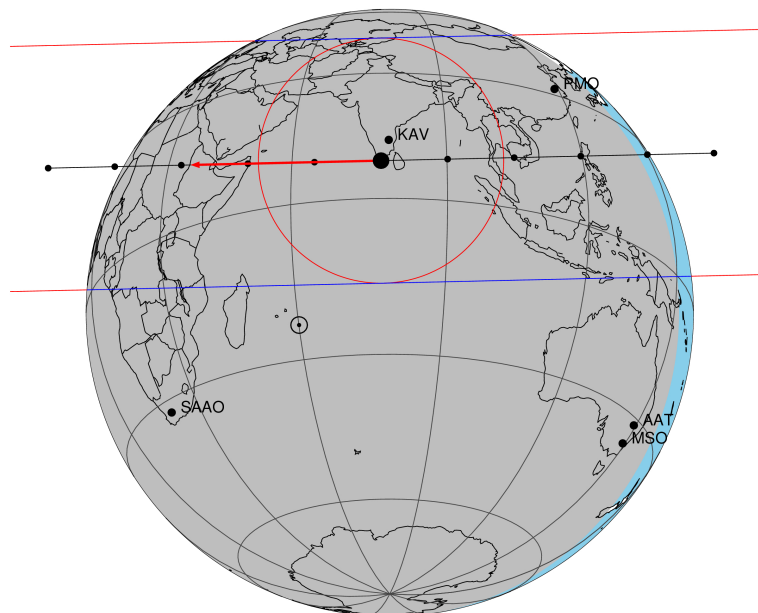
ICRS Star Coord at Epoch: 18h 57m 06.84256s -22:13:35.93141s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 14.811
 G magnitude : 16.777
 RP magnitude : 16.096
 BP magnitude : 17.246
 DUPflag : 0
 Distance (au) : 9.058
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -23.30
 Sun-Target sep (deg) : 162.46
 Sun-Moon sep (deg) : 138.66
 B (ring opening deg) : 24.89
 PA of pole (deg) : 6.56
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.488
 C/A sky separation (km) : 3208.7
 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	+ +	JUN 16 19:56 - JUN 16 19:59	Pie
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	+ +	JUN 16 19:58 - JUN 16 20:02	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

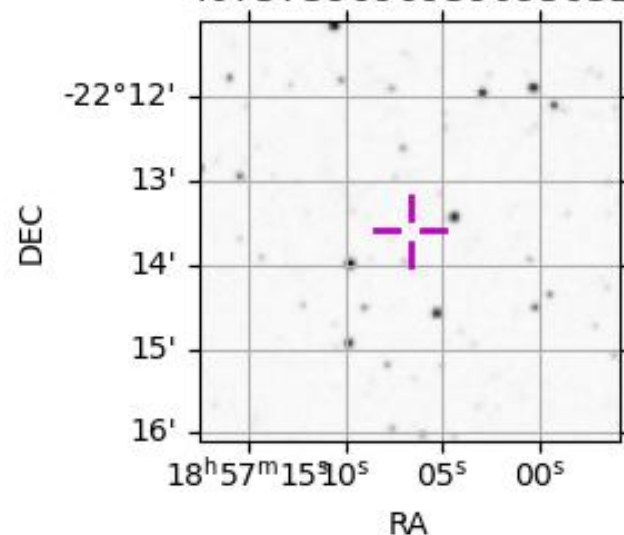
Titan 2048-06-16T20:00:41 K14.81 G16.78 dots 60.0 sec
Pt



2048-06-16T20:00:41.1200 cc: 18 57 06.8426 s: -22 13 35.931 C/A 0.487" PA 358.71 deg v_sky -23.30 km/s D 09.06 AU

Credit: Styled after SORA/Lucky Star

4075739696939093632



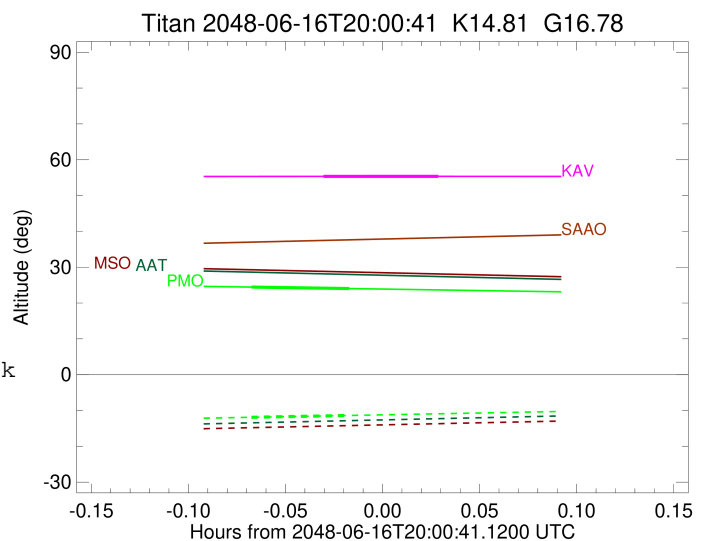
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2048-06-16T19:58:09.310
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : PMO
Location             : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)   : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 4075739696939093632
2Mass ID (if available) : 18570682-2213357
ICRS Star Coord at Epoch: 18h 57m 06.84256s -22:13:35.93141s
RUWE (>1.4 is poor) : 0.99
K magnitude           : 14.811
G magnitude           : 16.777
RP magnitude          : 16.096
BP magnitude          : 17.246
DUPflag              : 0
Distance (au)         : 9.058
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -23.30
Sun-Target sep (deg) : 162.46
Sun-Moon sep (deg)   : 138.43
B (ring opening deg) : 24.89
PA of pole (deg)     : 6.56
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.213
C/A sky separation (km): 1396.1
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

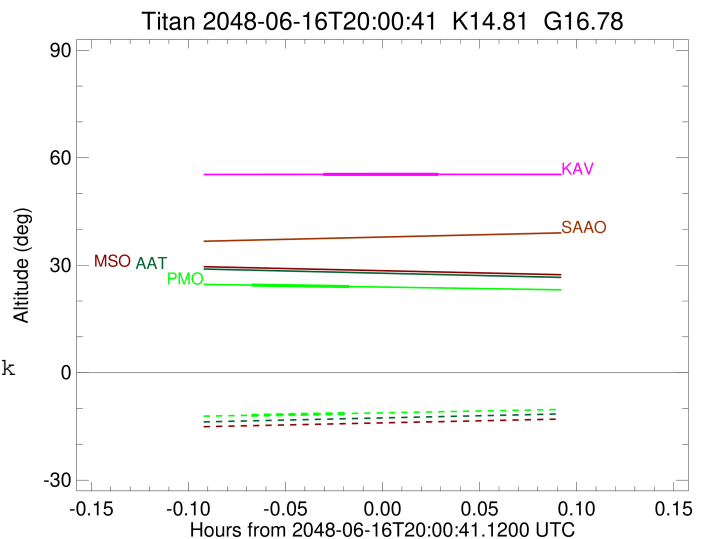
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x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2048-06-16T19:56:37.659	24.45	-11.90	2575.1	22.74	22.75
Titan	E	2048-06-16T19:59:40.969	24.03	-11.38	2575.1	36.04	36.05



target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2048-06-16T20:00:37.880
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : 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 : 4075739696939093632
 2Mass ID (if available) : 18570682-2213357
 ICRS Star Coord at Epoch: 18h 57m 06.84256s -22:13:35.93141s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 14.811
 G magnitude : 16.777
 RP magnitude : 16.096
 BP magnitude : 17.246
 DUPflag : 0
 Distance (au) : 9.058
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -23.30
 Sun-Target sep (deg) : 162.46
 Sun-Moon sep (deg) : 139.08
 B (ring opening deg) : 24.89
 PA of pole (deg) : 6.56
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.063
 C/A sky separation (km) : 416.9
 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	2048-06-16T19:58:50.918	55.34	-49.90	2575.2	1.35	1.35
Titan	E	2048-06-16T20:02:24.847	55.35	-49.50	2575.1	15.50	15.51