



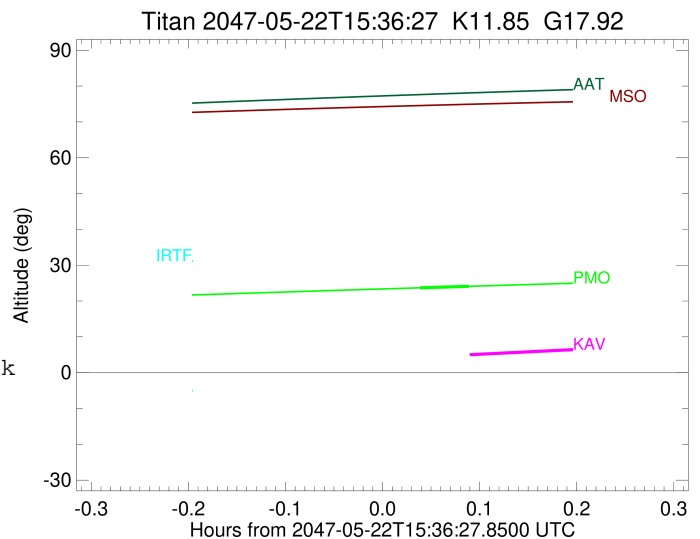
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-05-22T15:40:17.770
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : PMO
Location             : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)  : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 4066730917172012544
2Mass ID (if available) : 18120226-2217359
ICRS Star Coord at Epoch: 18h 12m 02.25382s -22:17:36.43139s
RUWE (>1.4 is poor) : 0.95
K magnitude          : 11.854
G magnitude          : 17.918
RP magnitude         : 0.000
BP magnitude         : 0.000
DUPflag             : 0
Distance (au)        : 9.179
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -10.90
Sun-Target sep (deg) : 148.03
Sun-Moon sep (deg)  : 123.67
B (ring opening deg) : 26.09
PA of pole (deg)    : 5.88
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.355
C/A sky separation (km) : 2361.8
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	2047-05-22T15:38:46.267	23.68	-37.37	2575.0	43.46	43.47
Titan	E	2047-05-22T15:41:49.248	24.10	-37.44	2575.1	63.06	63.07



target : Titan  
 target radius (km) : 2575.15  
 C/A epoch : 2047-05-22T15:45:07.720  
 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 : 4066730917172012544  
 2Mass ID (if available) : 18120226-2217359  
 ICRS Star Coord at Epoch: 18h 12m 02.25382s -22:17:36.43139s  
 RUWE (>1.4 is poor) : 0.95  
 K magnitude : 11.854  
 G magnitude : 17.918  
 RP magnitude : 0.000  
 BP magnitude : 0.000  
 DUPflag : 0  
 Distance (au) : 9.179  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -10.90  
 Sun-Target sep (deg) : 148.03  
 Sun-Moon sep (deg) : 123.19  
 B (ring opening deg) : 26.09  
 PA of pole (deg) : 5.88  
 Pole direction: RA (deg): 39.48270  
 Dec (deg): 83.42790  
 C/A sky separation (") : 0.006  
 C/A sky separation (km) : 39.5  
 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	2047-05-22T15:41:14.077	4.87x	-34.82	2575.1	-16.05	-16.05
Titan	E	2047-05-22T15:49:01.135	6.60	-36.34	2575.1	14.62	14.63

