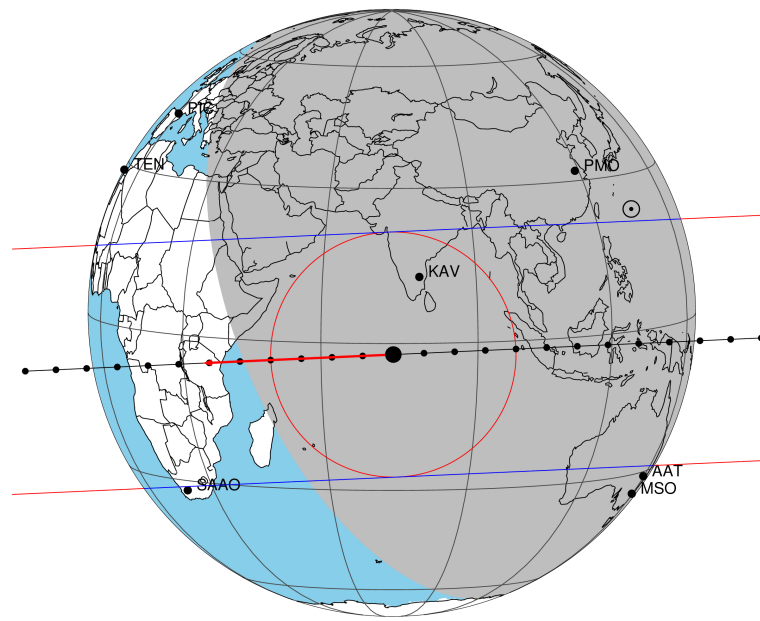


target : Titan  
 target radius (km) : 2575.15  
 C/A epoch : 2027-12-12T15:03:43.310  
 Event type : Pgt  
 : Titan occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 2564400353966267904  
 2Mass ID (if available) : 01204211+0539464

ICRS Star Coord at Epoch: 01h 20m 42.16092s +05:39:45.85592s  
 RUWE (>1.4 is poor) : 1.05  
 K magnitude : 12.083  
 G magnitude : 13.685  
 RP magnitude : 13.132  
 BP magnitude : 14.073  
 DUPflag : 0  
 Distance (au) : 8.756  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -10.74  
 Sun-Target sep (deg) : 120.77  
 Sun-Moon sep (deg) : 45.84  
 B (ring opening deg) : -11.86  
 PA of pole (deg) : 2.22  
 Pole direction: RA (deg): 39.48270  
 Dec (deg): 83.42790  
 C/A sky separation (") : 0.139  
 C/A sky separation (km) : 879.7  
 NAIF SPICE kernels : RAJobs\_U111+rgf16.spk  
 URKALLv1.spk  
 naif0012.tls  
 nep097.bsp  
 nep101.bsp  
 sat4401.bsp

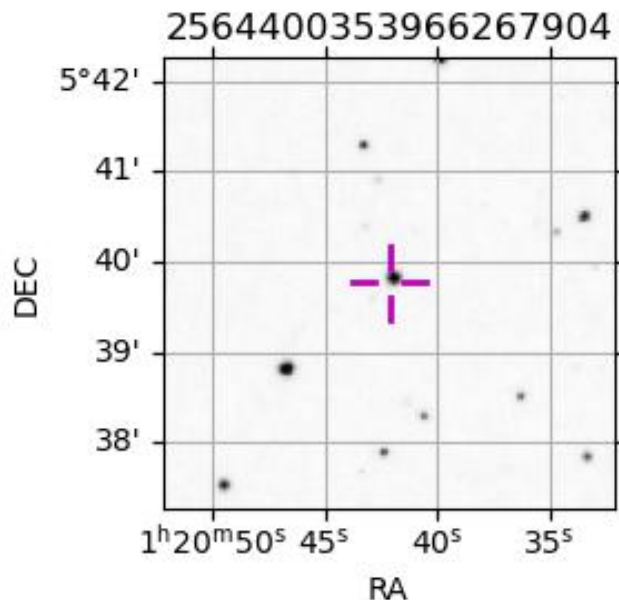
Titan 2027-12-12T15:03:43 K12.08 G13.69 dots 60.0 sec  
 Pgt



2027-12-12T15:03:43.3100 α: 01 20 42.1609 δ: +05 39 45.856 C/A 0.138" PA 177.43 deg v\_sky -10.74 km/s D 08.76 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	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	+ +	DEC 12 14:59 - DEC 12 15:05	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



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2027-12-12T15:02:49.120
Event type           : Pgt
: Titan occs: geocentric, topocentric
: 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       : 2564400353966267904
2Mass ID (if available) : 01204211+0539464
ICRS Star Coord at Epoch: 01h 20m 42.16092s +05:39:45.85592s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 12.083
G magnitude          : 13.685
RP magnitude         : 13.132
BP magnitude         : 14.073
DUPflag             : 0
Distance (au)        : 8.756
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -10.74
Sun-Target sep (deg) : 120.77
Sun-Moon sep (deg)  : 46.46
B (ring opening deg) : -11.86
PA of pole (deg)    : 2.22
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (" ) : 0.252
C/A sky separation (km) : 1599.4
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	2027-12-12T14:59:48.832	82.07	-37.21	2575.1	32.87	32.88
Titan	E	2027-12-12T15:05:49.407	81.17	-38.59	2575.2	41.98	41.99

