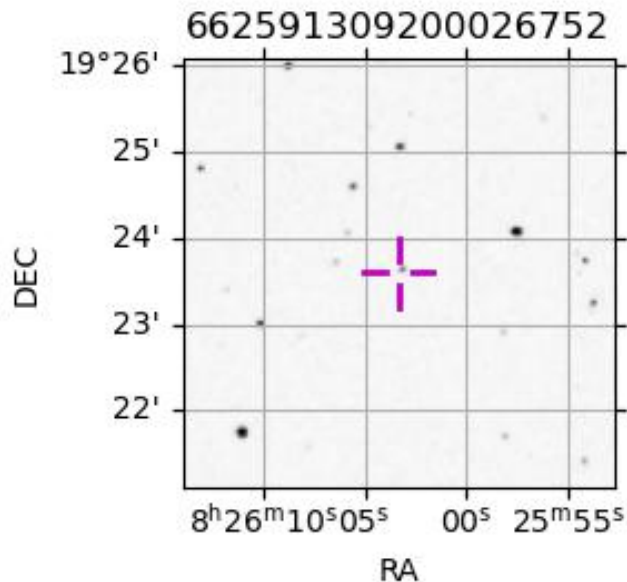
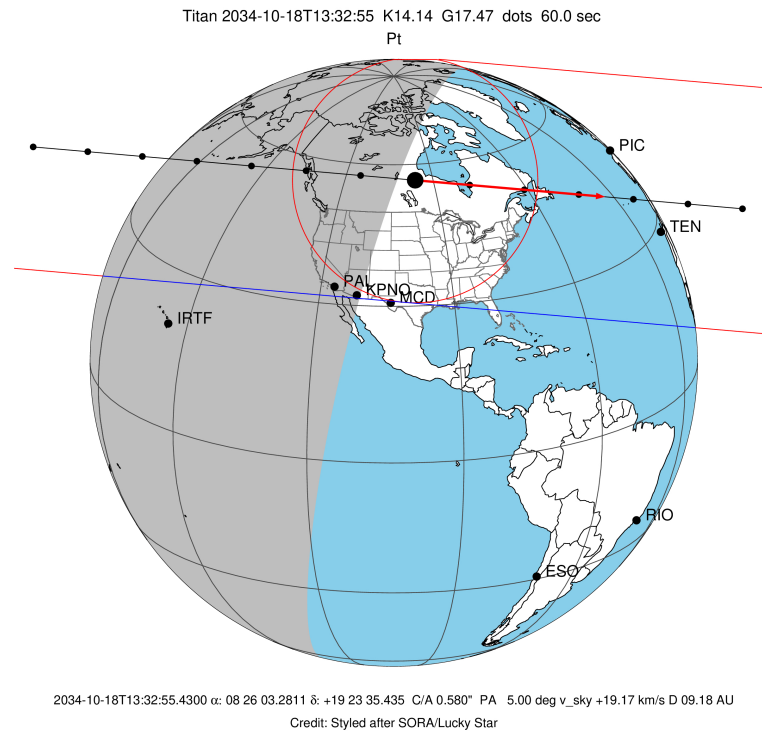


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2034-10-18T13:32:55.430
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 662591309200026752
 2Mass ID (if available) : 08260325+1923359

ICRS Star Coord at Epoch: 08h 26m 03.28107s +19:23:35.43461s
 RUWE (>1.4 is poor) : 1.07
 K magnitude : 14.142
 G magnitude : 17.474
 RP magnitude : 16.413
 BP magnitude : 18.634
 DUPflag : 0
 Distance (au) : 9.178
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 19.16
 Sun-Target sep (deg) : 80.63
 Sun-Moon sep (deg) : 148.55
 B (ring opening deg) : -19.60
 PA of pole (deg) : -6.97
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.582
 C/A sky separation (km) : 3871.1
 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	+ +	OCT 18 13:30 - OCT 18 13:32	Pie
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			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             : 2034-10-18T13:31:41.770
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : PAL
Location              : Palomar Mt (200")
Latitude (deg)        : 33.35622
E. Longitude (deg)    : 243.13601
Altitude (km)         : 1.706
Gaia source ID        : 662591309200026752
2Mass ID (if available) : 08260325+1923359
ICRS Star Coord at Epoch: 08h 26m 03.28107s +19:23:35.43461s
RUWE (>1.4 is poor)  : 1.07
K magnitude           : 14.142
G magnitude           : 17.474
RP magnitude          : 16.413
BP magnitude          : 18.634
DUPflag              : 0
Distance (au)         : 9.178
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 19.16
Sun-Target sep (deg)  : 80.63
Sun-Moon sep (deg)    : 148.83
B (ring opening deg) : -19.60
PA of pole (deg)     : -6.97
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.362
C/A sky separation (km) : 2409.4
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	2034-10-18T13:30:53.404	71.29	-5.68	2575.1	-68.63	-68.64
Titan	E	2034-10-18T13:32:30.148	71.53	-5.34	2575.2	-52.50	-52.51

