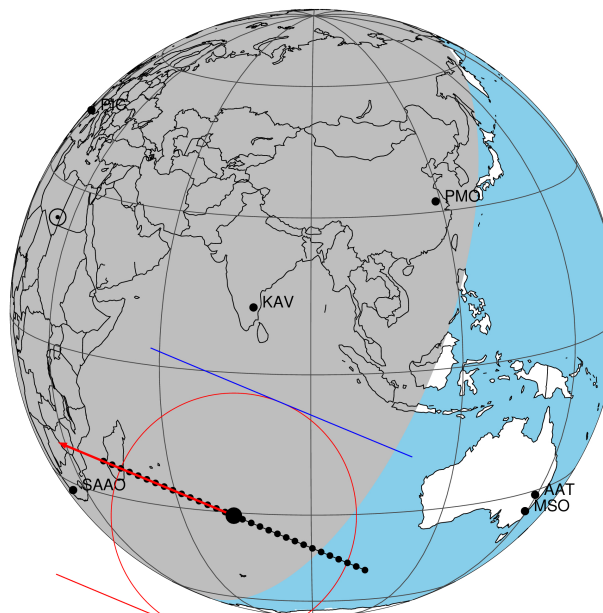


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2036-12-19T22:22:21.320
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 3883602818812479360
 2Mass ID (if available) : 10190752+1158565

ICRS Star Coord at Epoch: 10h 19m 07.51583s +11:58:56.05543s
 RUWE (>1.4 is poor) : 0.98
 K magnitude : 13.475
 G magnitude : 15.147
 RP magnitude : 14.559
 BP magnitude : 15.574
 DUPflag : 0
 Distance (au) : 8.749
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -3.31
 Sun-Target sep (deg) : 115.81
 Sun-Moon sep (deg) : 141.68
 B (ring opening deg) : -9.11
 PA of pole (deg) : -6.02
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.723
 C/A sky separation (km) : 4586.7
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

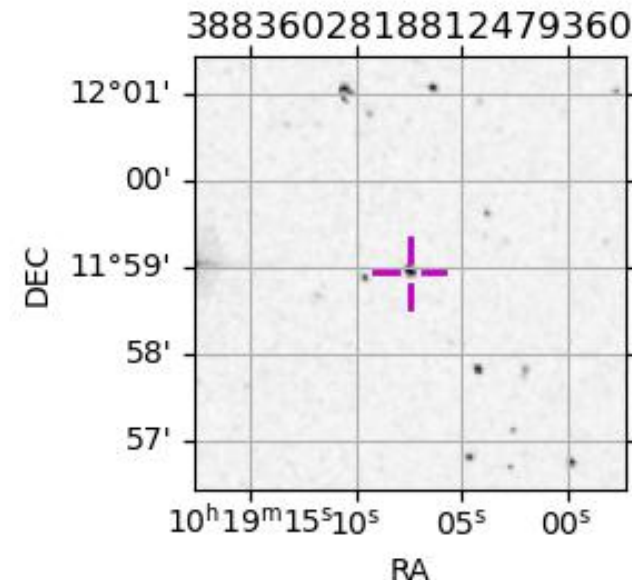
Titan 2036-12-19T22:22:21 K13.47 G15.15 dots 60.0 sec
Pt



2036-12-19T22:22:21.3200 cc: 10 19 07.5158 s: +11 58 56.055 C/A 0.722" PA 202.65 deg v_sky - 3.30 km/s D 08.75 AU
Credit: Styled after SORA/Lucky Star

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			Pnn	
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+	+	DEC 19 22:26 - DEC 19 22:49	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn	



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2036-12-19T22:37:54.380
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : SAAO
Location              : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)       : -32.37953
E. Longitude (deg)   : 20.81070
Altitude (km)        : 1.768
Gaia source ID       : 3883602818812479360
2Mass ID (if available) : 10190752+1158565
ICRS Star Coord at Epoch: 10h 19m 07.51583s +11:58:56.05543s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 13.475
G magnitude           : 15.147
RP magnitude          : 14.559
BP magnitude          : 15.574
DUPflag              : 0
Distance (au)        : 8.749
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -3.31
Sun-Target sep (deg) : 115.81
Sun-Moon sep (deg)   : 141.35
B (ring opening deg) : -9.11
PA of pole (deg)     : -6.02
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.127
C/A sky separation (km) : 803.3
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	2036-12-19T22:26:07.944	10.97	-34.34	2575.1	10.63	10.64
Titan	E	2036-12-19T22:49:39.967	15.55	-34.25	2575.1	-46.34	-46.35

