

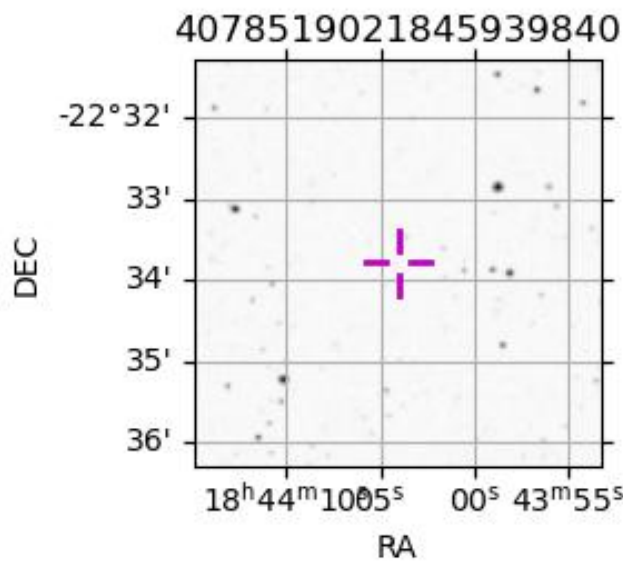
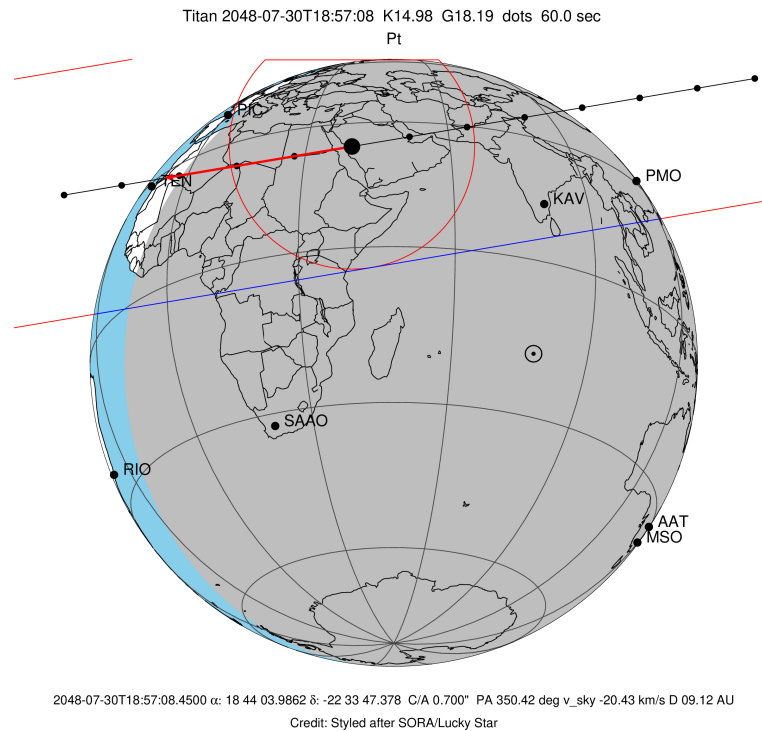
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2048-07-30T18:57:08.450
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4078519021845939840
 2Mass ID (if available) : 18440398-2233468

ICRS Star Coord at Epoch: 18h 44m 03.98624s -22:33:47.37817s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 14.981
 G magnitude : 18.188
 RP magnitude : 17.368
 BP magnitude : 18.713
 DUPflag : 0
 Distance (au) : 9.119
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -20.42
 Sun-Target sep (deg) : 152.55
 Sun-Moon sep (deg) : 96.61
 B (ring opening deg) : 25.57
 PA of pole (deg) : 6.40
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.698
 C/A sky separation (km) : 4617.1
 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

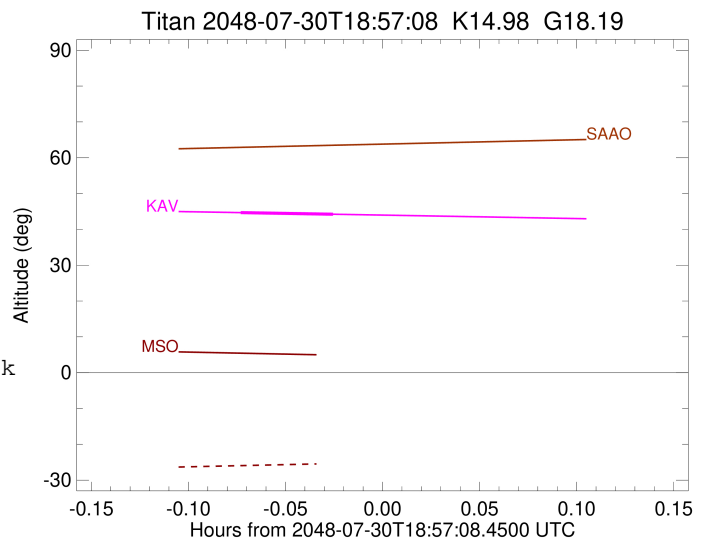
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+ +	JUL 30 18:52 - JUL 30 18:55	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



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2048-07-30T18:54:10.720
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      : 4078519021845939840
2Mass ID (if available) : 18440398-2233468
ICRS Star Coord at Epoch: 18h 44m 03.98624s -22:33:47.37817s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 14.981
G magnitude          : 18.188
RP magnitude         : 17.368
BP magnitude         : 18.713
DUPflag             : 0
Distance (au)       : 9.119
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -20.42
Sun-Target sep (deg) : 152.55
Sun-Moon sep (deg)  : 97.32
B (ring opening deg) : 25.57
PA of pole (deg)    : 6.40
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.280
C/A sky separation (km) : 1852.2
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	2048-07-30T18:52:44.716	44.67	-59.32	2575.1	-52.50	-52.51
Titan	E	2048-07-30T18:55:36.728	44.22	-59.30	2575.1	-27.18	-27.19