

target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-07-30T02:28:25.950
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4070418885389611520
 2Mass ID (if available) : 17521906-2226365

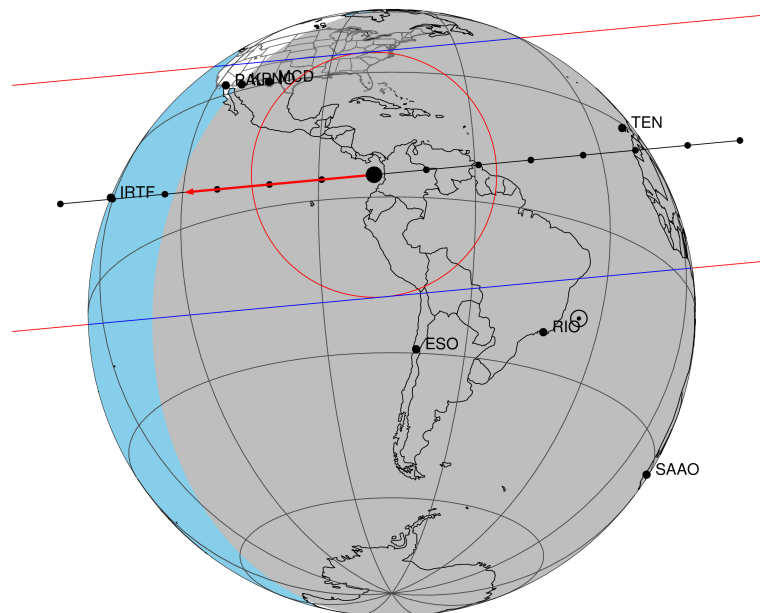
ICRS Star Coord at Epoch: 17h 52m 19.03850s -22:26:36.72706s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 13.726
 G magnitude : 18.108
 RP magnitude : 16.930
 BP magnitude : 19.723
 DUPflag : 0
 Distance (au) : 9.222
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -18.37
 Sun-Target sep (deg) : 141.97
 Sun-Moon sep (deg) : 49.82
 B (ring opening deg) : 26.69
 PA of pole (deg) : 5.51
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.436
 C/A sky separation (km) : 2913.0
 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

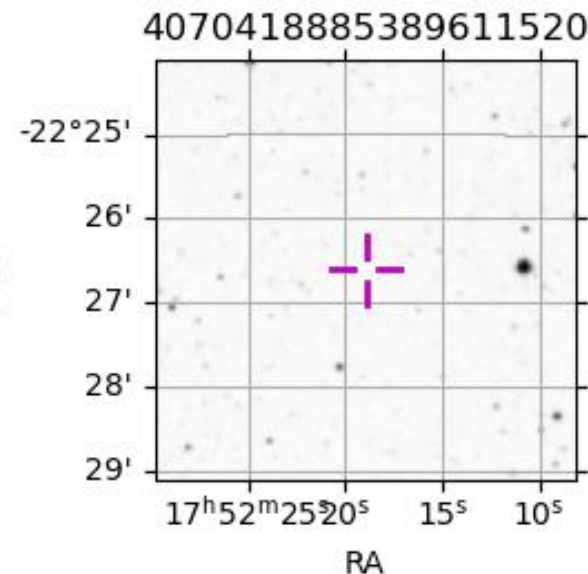
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	JUL 30 02:29 - JUL 30 02:31	Pie
TEN	Teide Obs./Tenerife	28.3	343.5	+ +	JUL 30 02:21 - JUL 30 02:26	Pie
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

Titan 2047-07-30T02:28:25 K13.73 G18.11 dots 60.0 sec
 Pt



2047-07-30T02:28:25.9500 ra: 17 52 19.0385 d: -22 26 36.727 C/A 0.437" PA 354.66 deg v_sky -18.37 km/s D 09.22 AU

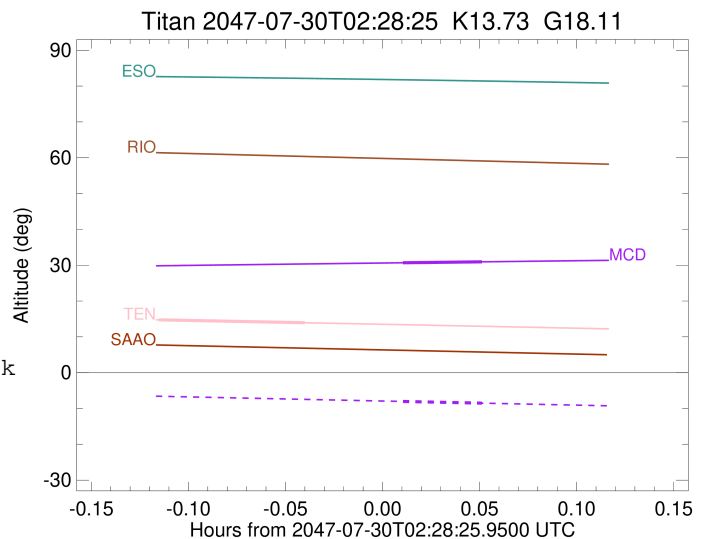
Credit: Styled after SORA/Lucky Star



target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-07-30T02:30:17.440
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Observer code : MCD
 Location : McDonald Obs. 2.7m
 Latitude (deg) : 30.67158
 E. Longitude (deg) : 255.97844
 Altitude (km) : 2.075
 Gaia source ID : 4070418885389611520
 2Mass ID (if available) : 17521906-2226365
 ICRS Star Coord at Epoch: 17h 52m 19.03850s -22:26:36.72706s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 13.726
 G magnitude : 18.108
 RP magnitude : 16.930
 BP magnitude : 19.723
 DUPflag : 0
 Distance (au) : 9.222
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -18.37
 Sun-Target sep (deg) : 141.97
 Sun-Moon sep (deg) : 50.02
 B (ring opening deg) : 26.69
 PA of pole (deg) : 5.51
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.323
 C/A sky separation (km) : 2162.9
 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	2047-07-30T02:29:02.845	30.67	-8.03	2575.1	40.13	40.14
Titan	E	2047-07-30T02:31:32.033	30.94	-8.51	2575.0	55.99	56.00



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-07-30T02:23:46.080
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)  : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 4070418885389611520
2Mass ID (if available) : 17521906-2226365
ICRS Star Coord at Epoch: 17h 52m 19.03850s -22:26:36.72706s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 13.726
G magnitude           : 18.108
RP magnitude         : 16.930
BP magnitude         : 19.723
DUPflag              : 0
Distance (au)        : 9.222
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -18.37
Sun-Target sep (deg) : 141.97
Sun-Moon sep (deg)  : 50.52
B (ring opening deg) : 26.69
PA of pole (deg)    : 5.51
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.075
C/A sky separation (km): 503.8
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

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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	2047-07-30T02:21:30.099	14.75	-40.43	2575.2	0.79	0.79
Titan	E	2047-07-30T02:26:02.067	13.94	-40.05	2575.1	19.26	19.27

