

target : Titan  
 target radius (km) : 2575.15  
 C/A epoch : 2046-02-06T11:10:38.090  
 Event type : Pgt  
 : Titan occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4115015450567734784  
 2Mass ID (if available) : 17175465-2138142

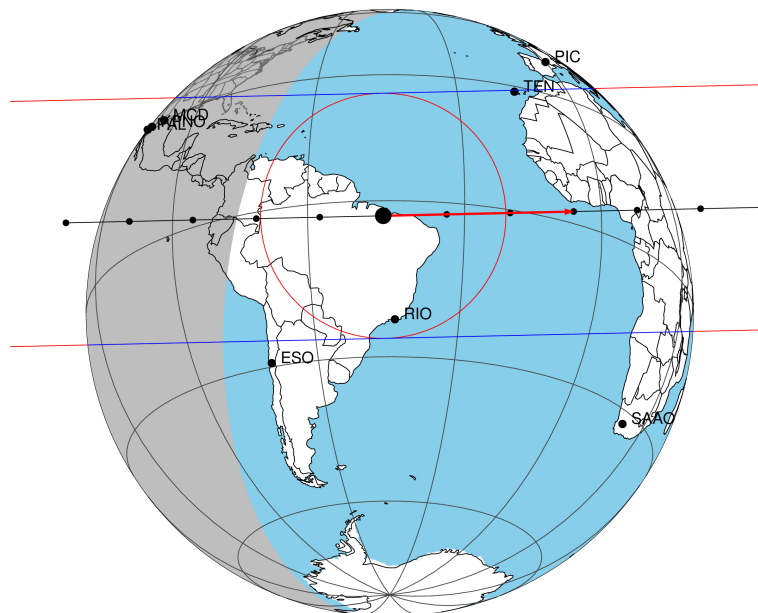
ICRS Star Coord at Epoch: 17h 17m 54.64212s -21:38:14.45738s  
 RUWE (>1.4 is poor) : 1.00  
 K magnitude : 12.799  
 G magnitude : 16.282  
 RP magnitude : 15.292  
 BP magnitude : 17.258  
 DUPflag : 0  
 Distance (au) : 10.524  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 22.22  
 Sun-Target sep (deg) : 56.96  
 Sun-Moon sep (deg) : 62.38  
 B (ring opening deg) : 26.60  
 PA of pole (deg) : 4.72  
 Pole direction: RA (deg): 39.48270  
 Dec (deg): 83.42790  
 C/A sky separation (") : 0.266  
 C/A sky separation (km) : 2032.3  
 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	+ +	FEB 06 11:05 - FEB 06 11:08	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	FEB 06 11:05 - FEB 06 11:08	Pie
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

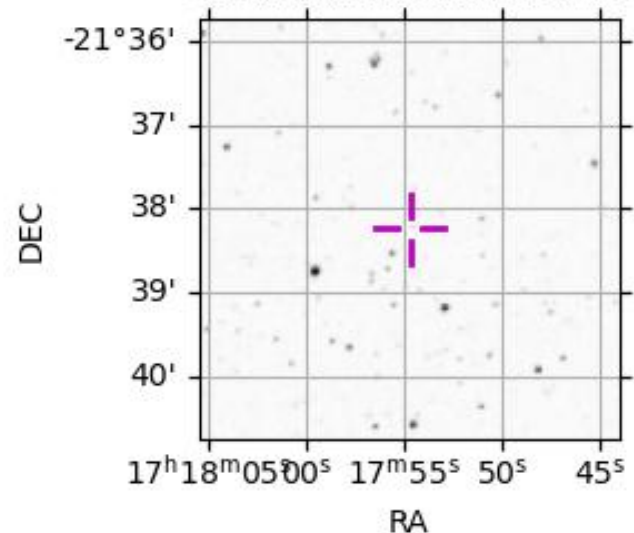
Titan 2046-02-06T11:10:38 K12.80 G16.28 dots 60.0 sec  
 Pgt



2046-02-06T11:10:38.0900 α: 17 17 54.6421 δ: -21 38 14.457 C/A 0.267" PA 358.71 deg v\_sky +22.21 km/s D 10.52 AU

Credit: Styled after SORA/Lucky Star

4115015450567734784



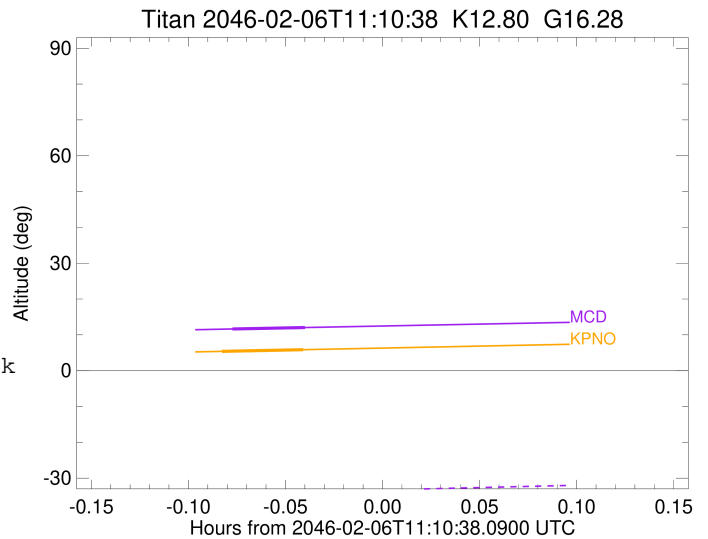
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target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2046-02-06T11:06:55.790
Event type           : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code        : KPNO
Location             : Kitt Peak Natl Obs
Latitude (deg)       : 31.96333
E. Longitude (deg)   : 248.40000
Altitude (km)        : 2.120
Gaia source ID       : 4115015450567734784
2Mass ID (if available) : 17175465-2138142
ICRS Star Coord at Epoch: 17h 17m 54.64212s -21:38:14.45738s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 12.799
G magnitude           : 16.282
RP magnitude          : 15.292
BP magnitude          : 17.258
DUPflag              : 0
Distance (au)        : 10.524
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.22
Sun-Target sep (deg) : 56.96
Sun-Moon sep (deg)   : 62.80
B (ring opening deg) : 26.60
PA of pole (deg)     : 4.72
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.257
C/A sky separation (km) : 1964.7
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	2046-02-06T11:05:40.333	5.39	-40.72	2575.0	47.38	47.39
Titan	E	2046-02-06T11:08:11.246	5.85	-40.19	2575.1	38.46	38.47



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2046-02-06T11:07:07.030
Event type          : Pgt
: Titan occs: geocentric, topocentric
: 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     : 4115015450567734784
2Mass ID (if available) : 17175465-2138142
ICRS Star Coord at Epoch: 17h 17m 54.64212s -21:38:14.45738s
RUWE (>1.4 is poor) : 1.00
K magnitude         : 12.799
G magnitude         : 16.282
RP magnitude        : 15.292
BP magnitude        : 17.258
DUPflag            : 0
Distance (au)      : 10.524
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 22.22
Sun-Target sep (deg) : 56.96
Sun-Moon sep (deg)  : 62.87
B (ring opening deg) : 26.60
PA of pole (deg)   : 4.72
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.275
C/A sky separation (km) : 2097.9
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	2046-02-06T11:05:59.187	11.64	-34.28	2575.1	50.91	50.92
Titan	E	2046-02-06T11:08:14.868	12.04	-33.79	2575.1	42.35	42.36

