

target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2033-02-10T21:02:02.740
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3424458514083681664
 2Mass ID (if available) : 06000945+2236071

ICRS Star Coord at Epoch: 06h 00m 09.45629s +22:36:07.11746s
 RUWE (>1.4 is poor) : 0.96
 K magnitude : 14.682
 G magnitude : 17.660
 RP magnitude : 16.719
 BP magnitude : 18.563
 DUPflag : 0
 Distance (au) : 8.368
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -13.06
 Sun-Target sep (deg) : 128.05
 Sun-Moon sep (deg) : 14.15
 B (ring opening deg) : -26.68
 PA of pole (deg) : -5.68
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.107
 C/A sky separation (km) : 647.5
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

Titan 2033-02-10T21:02:02 K14.68 G17.66 dots 60.0 sec
 Pgt



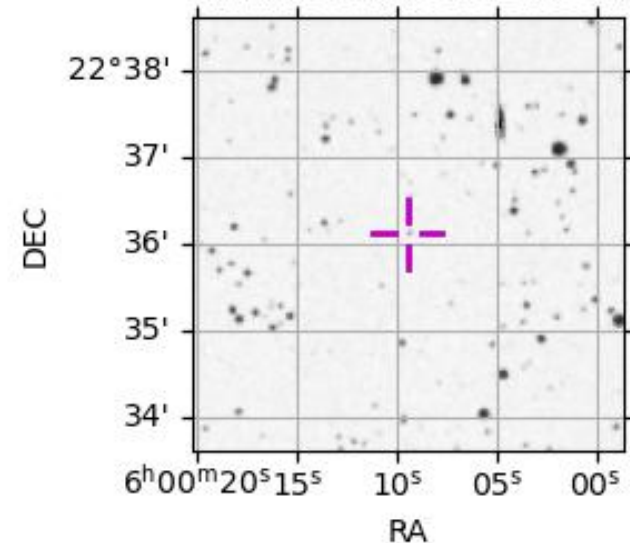
2033-02-10T21:02:02.7400 α: 06 00 09.4563 δ: +22 36 07.117 C/A 0.107" PA 174.57 deg v_sky -13.06 km/s D 08.37 AU
 Credit: Styled after SORA/Lucky Star

URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

Observable events with sun below -5 deg and altitude above 5 deg

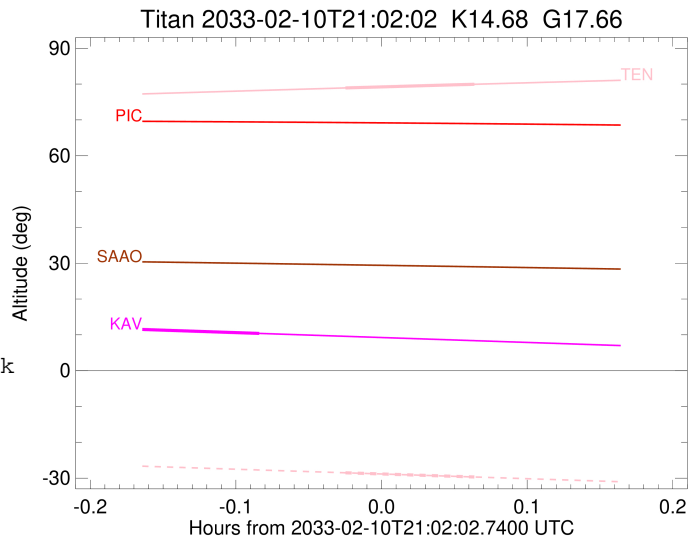
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5	+ +	FEB 10 21:00 - FEB 10 21:05	Pie
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+ +	FEB 10 20:51 - FEB 10 20:57	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

3424458514083681664



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2033-02-10T21:03:12.960
Event type          : Pgt
: Titan occs: geocentric, topocentric
: 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      : 3424458514083681664
2Mass ID (if available) : 06000945+2236071
ICRS Star Coord at Epoch: 06h 00m 09.45629s +22:36:07.11746s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 14.682
G magnitude          : 17.660
RP magnitude         : 16.719
BP magnitude         : 18.563
DUPflag             : 0
Distance (au)       : 8.368
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -13.06
Sun-Target sep (deg) : 128.05
Sun-Moon sep (deg)  : 14.54
B (ring opening deg) : -26.68
PA of pole (deg)    : -5.68
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.228
C/A sky separation (km) : 1381.1
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
    
```



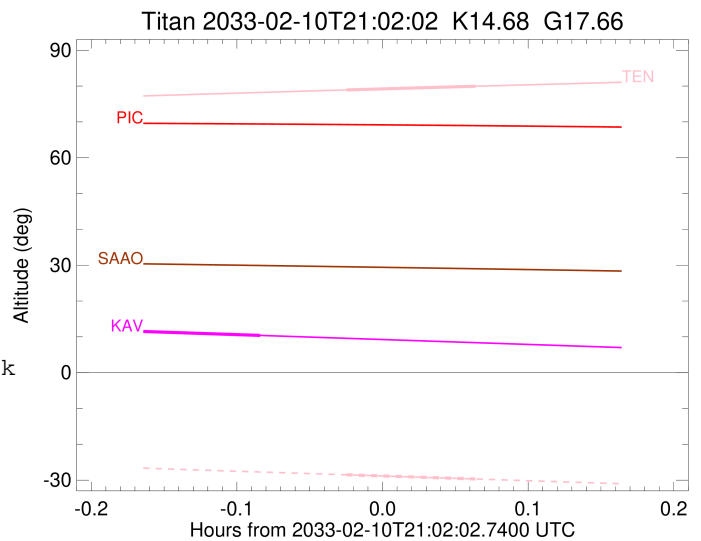
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2033-02-10T21:00:31.544	78.91	-28.50	2575.1	29.08	29.09
Titan	E	2033-02-10T21:05:54.401	79.95	-29.68	2575.1	28.20	28.22

```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2033-02-10T20:54:03.870
Event type            : Pgt
: Titan occs: geocentric, topocentric
: 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       : 3424458514083681664
2Mass ID (if available) : 06000945+2236071
ICRS Star Coord at Epoch: 06h 00m 09.45629s +22:36:07.11746s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 14.682
G magnitude           : 17.660
RP magnitude          : 16.719
BP magnitude          : 18.563
DUPflag              : 0
Distance (au)         : 8.367
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -13.06
Sun-Target sep (deg) : 128.05
Sun-Moon sep (deg)   : 13.41
B (ring opening deg) : -26.68
PA of pole (deg)     : -5.68
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.176
C/A sky separation (km) : 1065.5
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	2033-02-10T20:51:05.603	11.75	-62.66	2575.1	21.29	21.30
Titan	E	2033-02-10T20:57:02.264	10.39	-61.22	2575.1	22.11	22.12