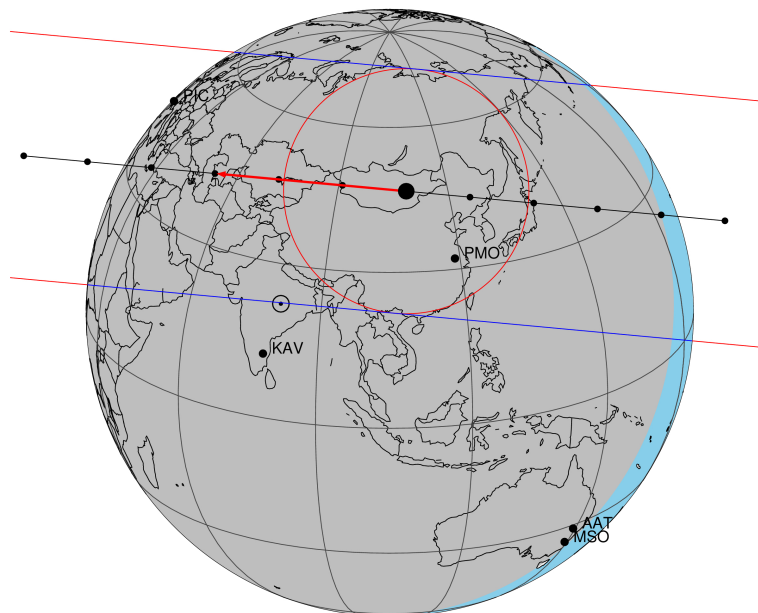


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2032-12-05T18:25:35.190
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3376832862987454208
 2Mass ID (if available) : 06204440+2222457

ICRS Star Coord at Epoch: 06h 20m 44.40370s +22:22:45.54607s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 13.387
 G magnitude : 15.769
 RP magnitude : 14.982
 BP magnitude : 16.406
 DUPflag : 0
 Distance (au) : 8.083
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -22.40
 Sun-Target sep (deg) : 158.90
 Sun-Moon sep (deg) : 163.55
 B (ring opening deg) : -25.97
 PA of pole (deg) : -6.04
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.437
 C/A sky separation (km) : 2562.6
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

Titan 2032-12-05T18:25:35 K13.39 G15.77 dots 60.0 sec
 Pgt



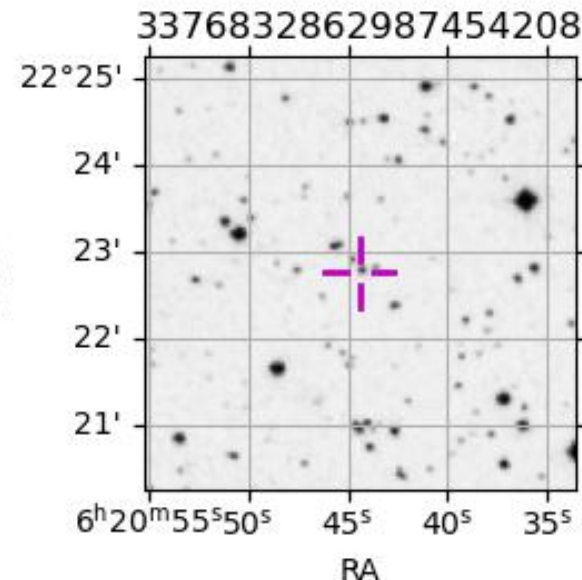
2032-12-05T18:25:35.1900 α: 06 20 44.4037 δ: +22 22 45.546 C/A 0.439" PA 5.30 deg v_sky -22.40 km/s D 08.08 AU

Credit: Styled after SORA/Lucky Star

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

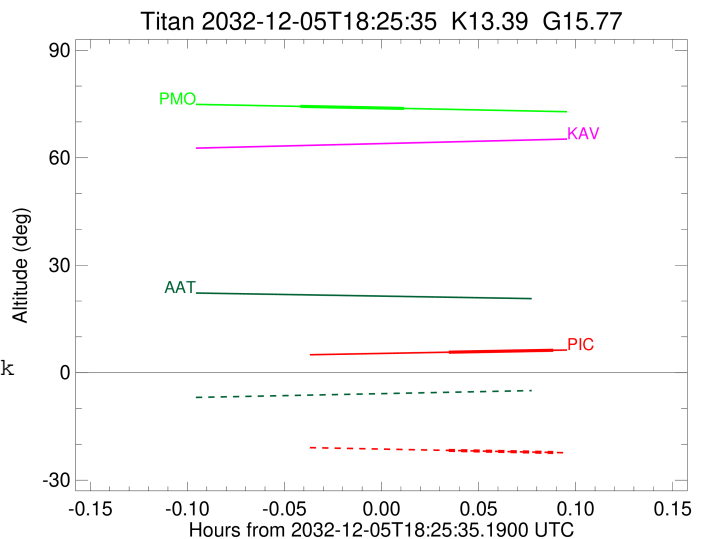
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+ +	DEC 05 18:27 - DEC 05 18:30	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	DEC 05 18:23 - DEC 05 18:26	Pie
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			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2032-12-05T18:29:16.840
Event type          : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code       : PIC
Location           : Pic du Midi
Latitude (deg)     : 42.93656
E. Longitude (deg) : 0.14231
Altitude (km)     : 2.890
Gaia source ID     : 3376832862987454208
2Mass ID (if available) : 06204440+2222457
ICRS Star Coord at Epoch: 06h 20m 44.40370s +22:22:45.54607s
RUWE (>1.4 is poor) : 0.99
K magnitude        : 13.387
G magnitude        : 15.769
RP magnitude       : 14.982
BP magnitude       : 16.406
DUPflag           : 0
Distance (au)     : 8.083
f0 (km)           : 0.00
g0 (km)           : 0.00
skyplane vel. (km/s) : -22.40
Sun-Target sep (deg) : 158.90
Sun-Moon sep (deg) : 164.41
B (ring opening deg) : -25.97
PA of pole (deg)   : -6.04
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.236
C/A sky separation (km) : 1383.7
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
    
```



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	2032-12-05T18:27:39.625	5.71	-21.70	2575.1	38.79	38.81
Titan	E	2032-12-05T18:30:54.040	6.25	-22.28	2575.2	18.64	18.65

```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2032-12-05T18:24:40.310
Event type            : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)   : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 3376832862987454208
2Mass ID (if available) : 06204440+2222457
ICRS Star Coord at Epoch: 06h 20m 44.40370s +22:22:45.54607s
RUWE (>1.4 is poor) : 0.99
K magnitude           : 13.387
G magnitude           : 15.769
RP magnitude          : 14.982
BP magnitude          : 16.406
DUPflag              : 0
Distance (au)        : 8.083
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -22.40
Sun-Target sep (deg) : 158.90
Sun-Moon sep (deg)   : 163.67
B (ring opening deg) : -25.97
PA of pole (deg)     : -6.04
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.225
C/A sky separation (km) : 1318.4
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	2032-12-05T18:23:03.193	74.33	-56.08	2575.1	-17.59	-17.60
Titan	E	2032-12-05T18:26:17.422	73.75	-55.40	2575.1	-36.94	-36.95

