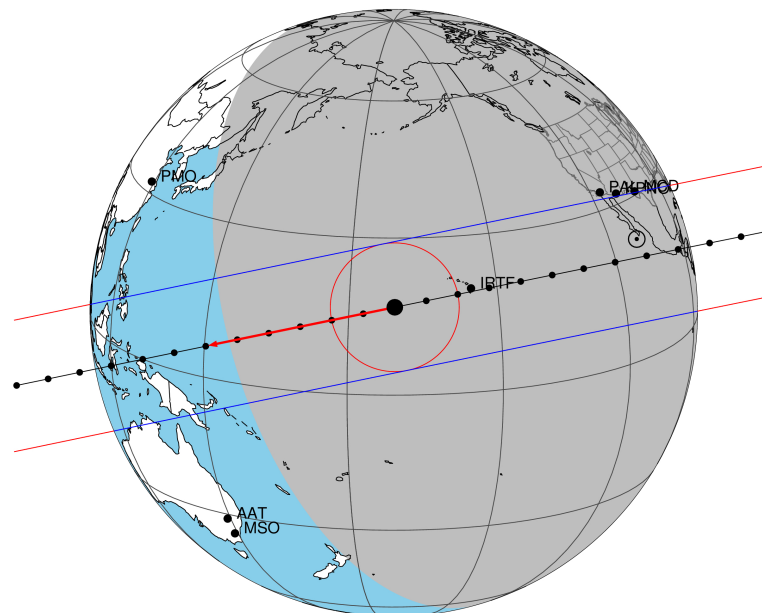


target : Triton  
 target radius (km) : 1352.60  
 C/A epoch : 2048-01-06T07:30:10.460  
 Event type : Pgt  
 : Triton occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 30958747040513152  
 2Mass ID (if available) : 03052025+1533348

Triton 2048-01-06T07:30:10 K11.67 G14.92 dots 60.0 sec  
 Pgt

ICRS Star Coord at Epoch: 03h 05m 20.15502s +15:33:34.13969s  
 RUWE (>1.4 is poor) : 1.07  
 K magnitude : 11.666  
 G magnitude : 14.919  
 RP magnitude : 13.891  
 BP magnitude : 15.988  
 DUPflag : 0  
 Distance (au) : 29.265  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -11.25  
 Sun-Target sep (deg) : 123.30  
 Sun-Moon sep (deg) : 115.26  
 B (ring opening deg) : 0.98  
 PA of pole (deg) : -67.15  
 Pole direction: RA (deg): 308.87224  
 Dec (deg): 21.68068  
 C/A sky separation (") : 0.005  
 C/A sky separation (km) : 109.2  
 NAIF SPICE kernels : RAJobs\_U111+rgf16.spk

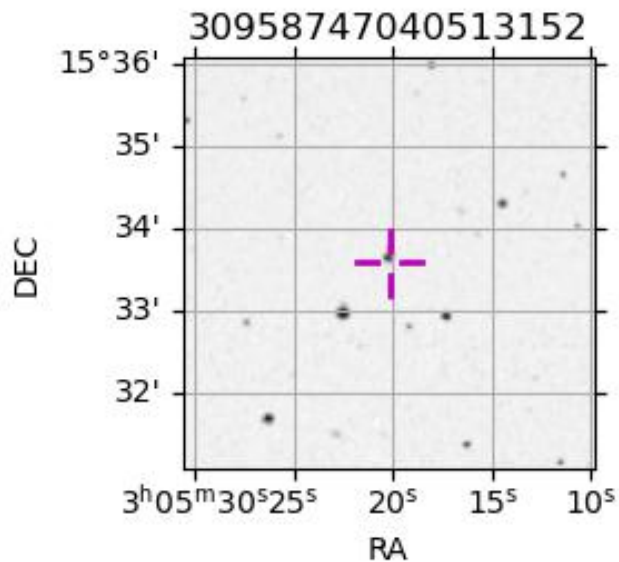


2048-01-06T07:30:10.4600 α: 03 05 20.1550 δ: +15 33 34.140 C/A 0.005" PA 348.44 deg v\_sky -11.25 km/s D 29.27 AU  
 Credit: Styled after SORA/Lucky Star

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

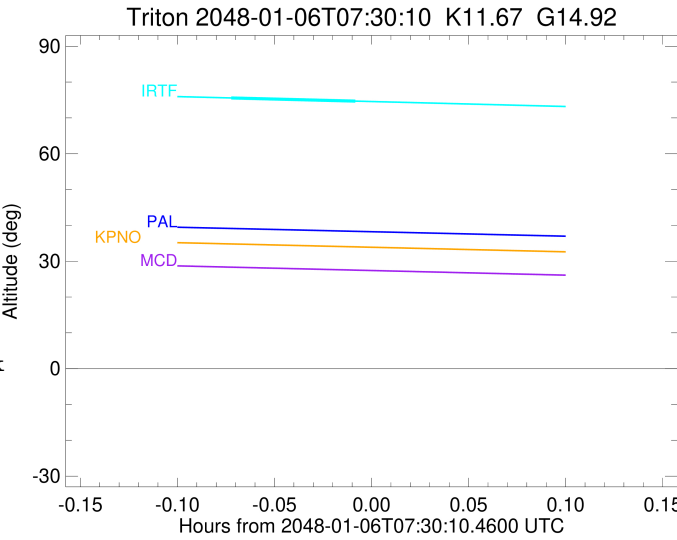
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	JAN 06 07:22 - JAN 06 07:22	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	JAN 06 07:25 - JAN 06 07:29	Pie
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                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2048-01-06T07:22:11.950
Event type           : Pgt
: Triton 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       : 30958747040513152
2Mass ID (if available) : 03052025+1533348
ICRS Star Coord at Epoch: 03h 05m 20.15502s +15:33:34.13969s
RUWE (>1.4 is poor) : 1.07
K magnitude           : 11.666
G magnitude           : 14.919
RP magnitude          : 13.891
BP magnitude          : 15.988
DUPflag              : 0
Distance (au)         : 29.265
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -11.25
Sun-Target sep (deg) : 123.30
Sun-Moon sep (deg)   : 116.01
B (ring opening deg) : 0.98
PA of pole (deg)     : -67.15
Pole direction: RA (deg): 308.87223
Dec (deg): 21.68067
C/A sky separation (") : 0.064
C/A sky separation (km) : 1348.8
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
    
```



```

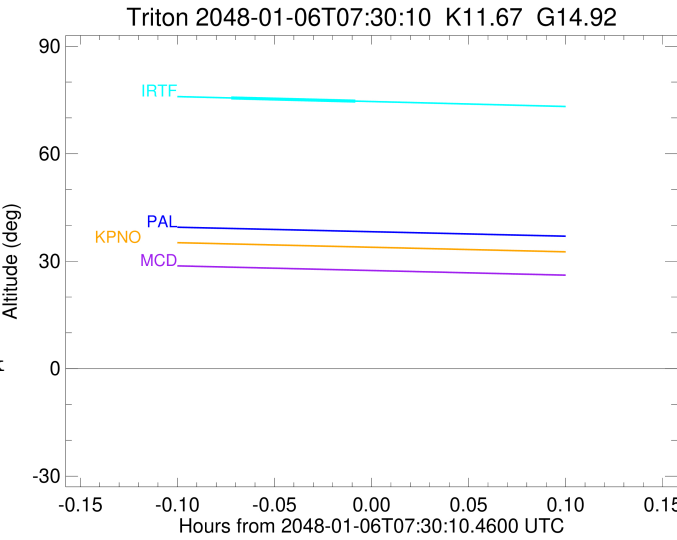
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2048-01-06T07:22:02.980	29.15	-80.79	1352.6	39.01	39.01
Triton	E	2048-01-06T07:22:20.929	29.08	-80.76	1352.7	30.31	30.31

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2048-01-06T07:27:45.720
Event type           : Pgt
: Triton occs: geocentric, topocentric
: Not a ringed target
Observer code        : IRTF
Location             : Mauna Kea/IRTF
Latitude (deg)       : 19.82622
E. Longitude (deg)   : 204.52800
Altitude (km)        : 4.168
Gaia source ID       : 30958747040513152
2Mass ID (if available) : 03052025+1533348
ICRS Star Coord at Epoch: 03h 05m 20.15502s +15:33:34.13969s
RUWE (>1.4 is poor) : 1.07
K magnitude          : 11.666
G magnitude          : 14.919
RP magnitude         : 13.891
BP magnitude         : 15.988
DUPflag             : 0
Distance (au)        : 29.265
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -11.25
Sun-Target sep (deg) : 123.30
Sun-Moon sep (deg)   : 116.19
B (ring opening deg) : 0.98
PA of pole (deg)     : -67.15
Pole direction: RA (deg): 308.87224
Dec (deg): 21.68067
C/A sky separation (") : 0.003
C/A sky separation (km) : 69.3
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
-----
Triton I 2048-01-06T07:25:49.948 75.56 -47.74 1352.6 58.77 58.77
Triton E 2048-01-06T07:29:41.470 74.67 -48.62 1352.6 -52.88 -52.88
    
```