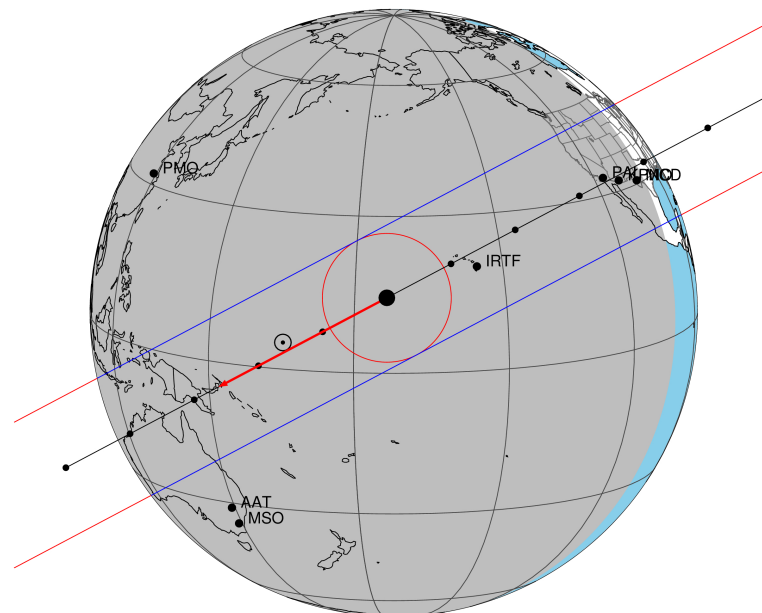


target : Triton  
 target radius (km) : 1352.60  
 C/A epoch : 2040-10-05T12:43:39.560  
 Event type : Pgt  
 : Triton occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 73222698406292608  
 2Mass ID (if available) : 02111745+1118171

ICRS Star Coord at Epoch: 02h 11m 17.56768s +11:18:16.80792s  
 RUWE (>1.4 is poor) : 0.98  
 K magnitude : 14.330  
 G magnitude : 18.364  
 RP magnitude : 17.156  
 BP magnitude : 19.834  
 DUPflag : 0  
 Distance (au) : 28.884  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -25.39  
 Sun-Target sep (deg) : 157.79  
 Sun-Moon sep (deg) : 149.57  
 B (ring opening deg) : -8.23  
 PA of pole (deg) : -69.83  
 Pole direction: RA (deg): 307.34481  
 Dec (deg): 21.26306  
 C/A sky separation (") : 0.017  
 C/A sky separation (km) : 349.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf16.spk

Triton 2040-10-05T12:43:39 K14.33 G18.36 dots 60.0 sec  
 Pgt

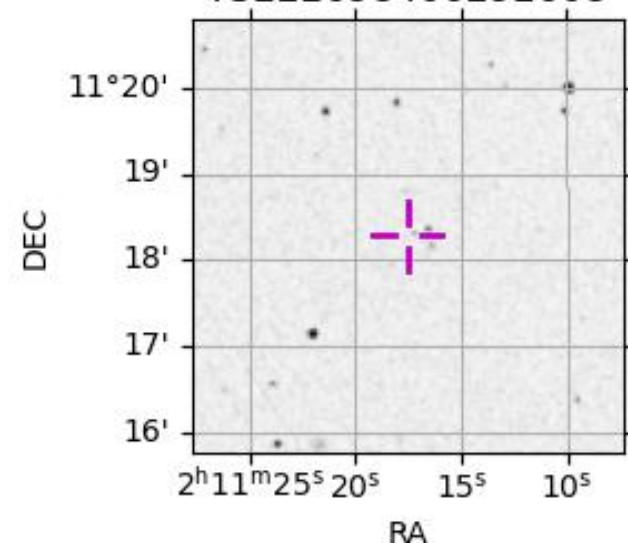


2040-10-05T12:43:39.5600 α: 02 11 17.5677 δ: +11 18 16.808 C/A 0.017" PA 332.05 deg v\_sky -25.42 km/s D 28.88 AU  
 Credit: Styled after SORA/Lucky Star

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

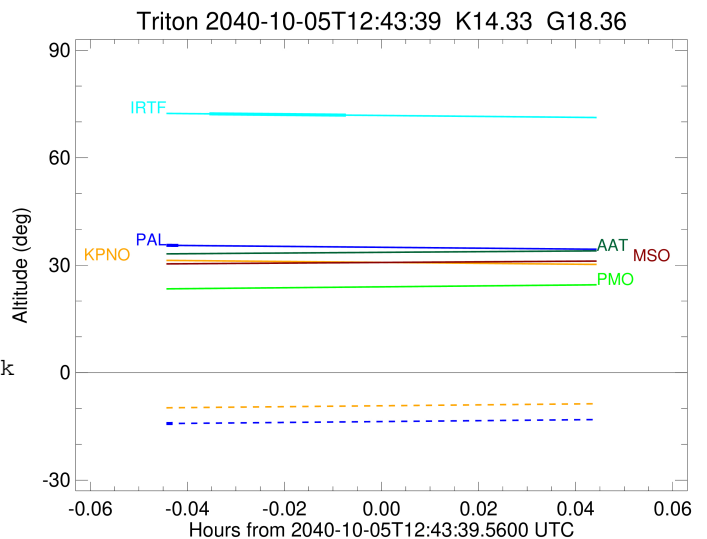
Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+ +	OCT 05 12:39 - OCT 05 12:41	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	OCT 05 12:39 - OCT 05 12:40	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	OCT 05 12:41 - OCT 05 12:43	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

73222698406292608



```

target                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2040-10-05T12:40:16.700
Event type           : Pgt
: Triton occs: geocentric, topocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)   : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 73222698406292608
2Mass ID (if available) : 02111745+1118171
ICRS Star Coord at Epoch: 02h 11m 17.56768s +11:18:16.80792s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 14.330
G magnitude           : 18.364
RP magnitude          : 17.156
BP magnitude          : 19.834
DUPflag              : 0
Distance (au)        : 28.884
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -25.39
Sun-Target sep (deg) : 157.79
Sun-Moon sep (deg)   : 150.49
B (ring opening deg) : -8.23
PA of pole (deg)     : -69.83
Pole direction: RA (deg): 307.34481
Dec (deg): 21.26306
C/A sky separation (") : 0.005
C/A sky separation (km) : 102.5
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
    
```



```

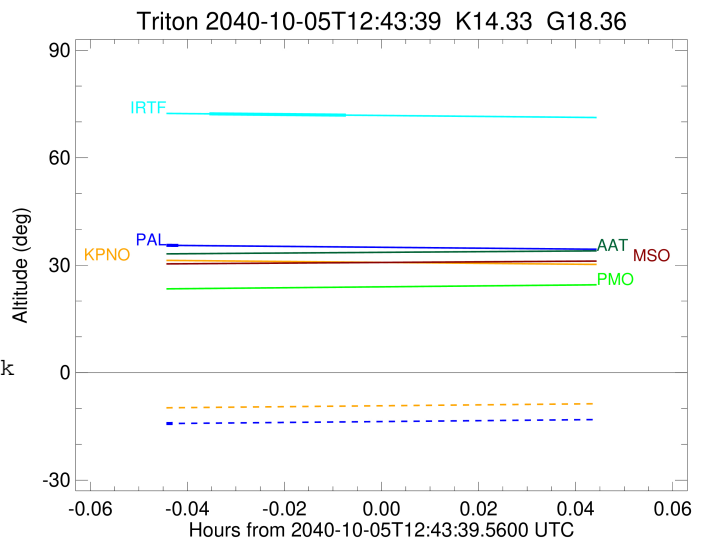
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2040-10-05T12:39:24.110	35.87	-14.54	1352.6	45.73	45.73
Triton	E	2040-10-05T12:41:09.291	35.51	-14.17	1352.6	-37.25	-37.25

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2040-10-05T12:40:06.020
Event type           : Pgt
: Triton 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       : 73222698406292608
2Mass ID (if available) : 02111745+1118171
ICRS Star Coord at Epoch: 02h 11m 17.56768s +11:18:16.80792s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 14.330
G magnitude           : 18.364
RP magnitude          : 17.156
BP magnitude          : 19.834
DUPflag              : 0
Distance (au)        : 28.884
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -25.39
Sun-Target sep (deg) : 157.79
Sun-Moon sep (deg)   : 150.50
B (ring opening deg) : -8.23
PA of pole (deg)     : -69.83
Pole direction: RA (deg): 307.34481
Dec (deg): 21.26306
C/A sky separation (") : 0.005
C/A sky separation (km) : 102.4
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
    
```



```

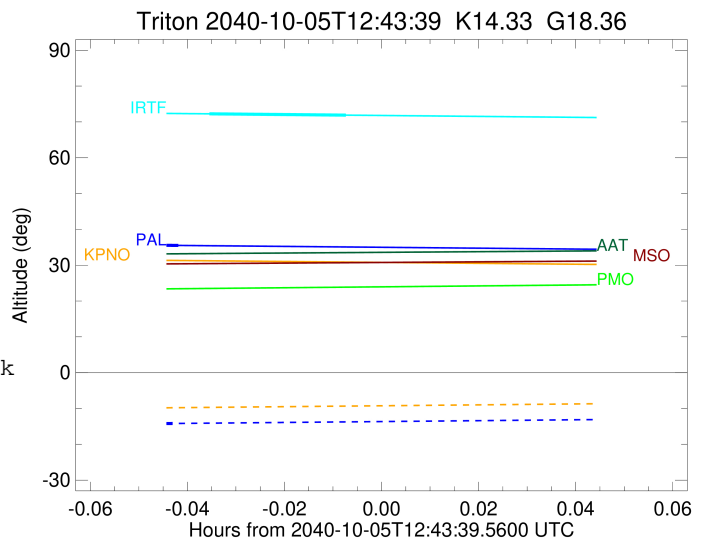
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2040-10-05T12:39:13.388	31.72	-10.18	1352.6	37.19	37.19
Triton	E	2040-10-05T12:40:58.654	31.34	-9.81	1352.6	-45.71	-45.71

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch             : 2040-10-05T12:42:22.210
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       : 73222698406292608
2Mass ID (if available) : 02111745+1118171
ICRS Star Coord at Epoch: 02h 11m 17.56768s +11:18:16.80792s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 14.330
G magnitude           : 18.364
RP magnitude          : 17.156
BP magnitude          : 19.834
DUPflag              : 0
Distance (au)        : 28.884
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -25.39
Sun-Target sep (deg) : 157.79
Sun-Moon sep (deg)   : 150.26
B (ring opening deg) : -8.23
PA of pole (deg)     : -69.83
Pole direction: RA (deg): 307.34481
Dec (deg): 21.26306
C/A sky separation (") : 0.014
C/A sky separation (km) : 298.3
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	2040-10-05T12:41:31.082	72.25	-50.37	1352.6	29.23	29.23
Triton	E	2040-10-05T12:43:13.347	71.88	-49.99	1352.6	-54.21	-54.21