

target : Triton  
 target radius (km) : 1352.60  
 C/A epoch : 2045-10-24T10:18:54.480  
 Event type : Pgt  
 : Triton occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 32518438644356608  
 2Mass ID (if available) : 02540614+1443049

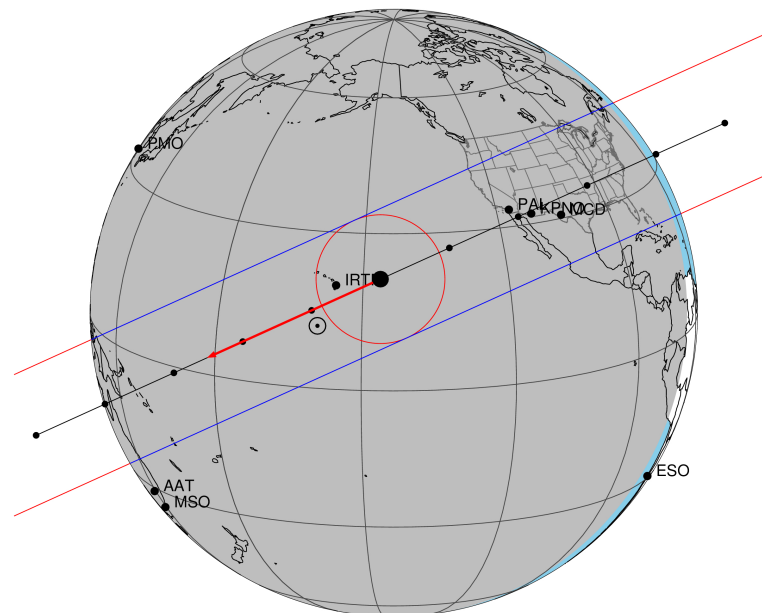
ICRS Star Coord at Epoch: 02h 54m 06.15989s +14:43:04.64022s  
 RUWE (>1.4 is poor) : 1.01  
 K magnitude : 12.768  
 G magnitude : 14.121  
 RP magnitude : 13.647  
 BP magnitude : 14.431  
 DUPflag : 0  
 Distance (au) : 28.851  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -26.44  
 Sun-Target sep (deg) : 165.23  
 Sun-Moon sep (deg) : 32.28  
 B (ring opening deg) : -0.75  
 PA of pole (deg) : -67.90  
 Pole direction: RA (deg): 308.41087  
 Dec (deg): 21.54631  
 C/A sky separation (") : 0.037  
 C/A sky separation (km) : 766.4  
 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

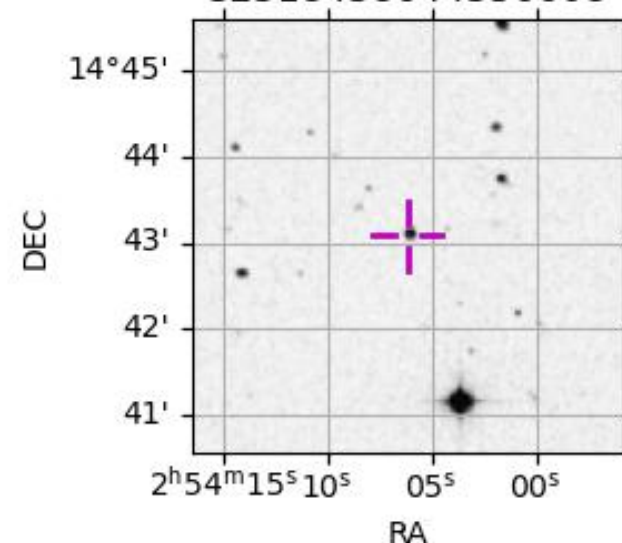
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+ +	OCT 24 10:16 - OCT 24 10:17	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	OCT 24 10:15 - OCT 24 10:17	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	OCT 24 10:15 - OCT 24 10:17	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	OCT 24 10:18 - OCT 24 10:20	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

Triton 2045-10-24T10:18:54 K12.77 G14.12 dots 60.0 sec  
 Pgt



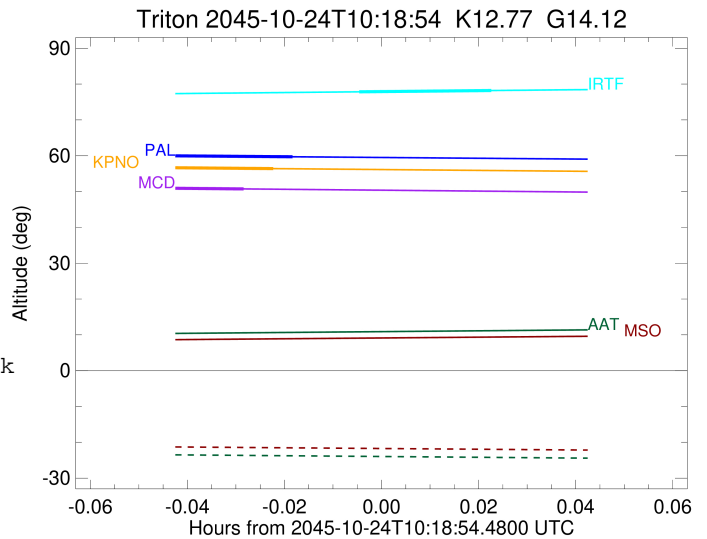
2045-10-24T10:18:54.4800 α: 02 54 06.1599 δ: +14 43 04.640 C/A 0.036" PA 335.56 deg v\_sky -26.47 km/s D 28.85 AU  
 Credit: Styled after SORA/Lucky Star

32518438644356608



```

target                : Triton
target radius (km)   : 1352.60
C/A epoch             : 2045-10-24T10:16:59.330
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        : 32518438644356608
2Mass ID (if available) : 02540614+1443049
ICRS Star Coord at Epoch: 02h 54m 06.15989s +14:43:04.64022s
RUWE (>1.4 is poor) : 1.01
K magnitude           : 12.768
G magnitude           : 14.121
RP magnitude          : 13.647
BP magnitude          : 14.431
DUPflag              : 0
Distance (au)         : 28.851
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -26.44
Sun-Target sep (deg)  : 165.23
Sun-Moon sep (deg)    : 33.04
B (ring opening deg) : -0.75
PA of pole (deg)     : -67.90
Pole direction: RA (deg): 308.41087
Dec (deg): 21.54631
C/A sky separation (" ) : 0.010
C/A sky separation (km) : 211.9
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
    
```



```

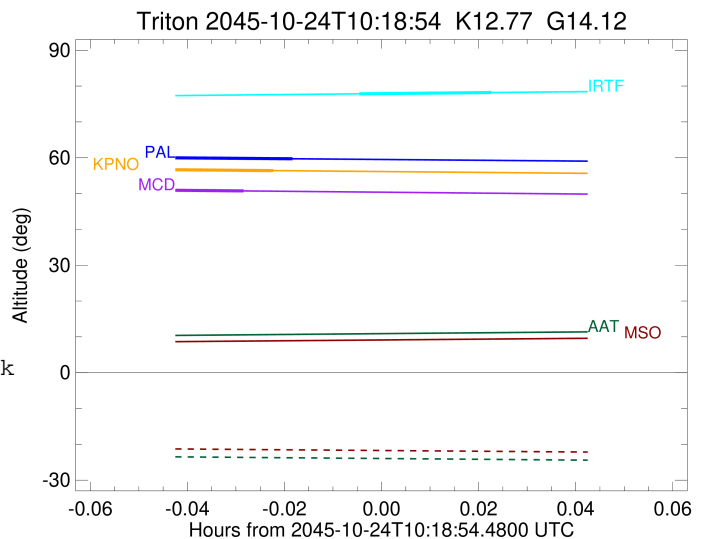
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2045-10-24T10:16:09.480	60.00	-46.88	1352.6	52.71	52.71
Triton	E	2045-10-24T10:17:49.179	59.70	-46.55	1352.6	-34.70	-34.70

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch             : 2045-10-24T10:16:44.490
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        : 32518438644356608
2Mass ID (if available) : 02540614+1443049
ICRS Star Coord at Epoch: 02h 54m 06.15989s +14:43:04.64022s
RUWE (>1.4 is poor) : 1.01
K magnitude           : 12.768
G magnitude           : 14.121
RP magnitude          : 13.647
BP magnitude          : 14.431
DUPflag              : 0
Distance (au)         : 28.851
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -26.44
Sun-Target sep (deg) : 165.23
Sun-Moon sep (deg)   : 33.08
B (ring opening deg) : -0.75
PA of pole (deg)     : -67.90
Pole direction: RA (deg): 308.41087
Dec (deg): 21.54631
C/A sky separation (") : 0.003
C/A sky separation (km) : 56.2
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
    
```



```

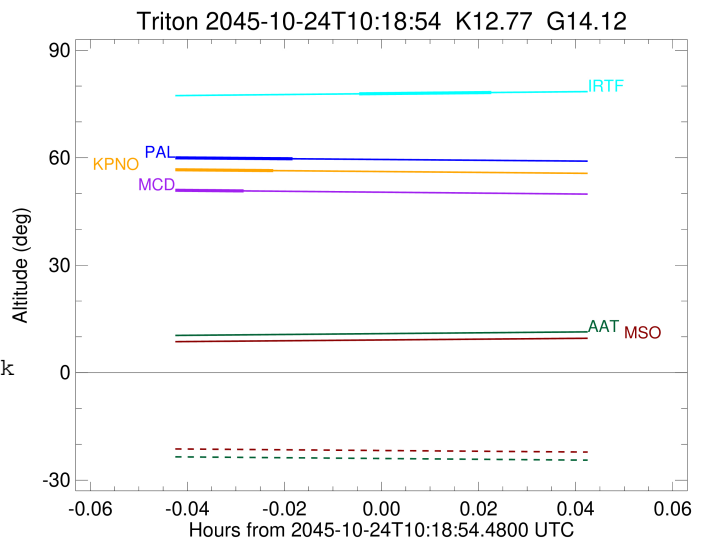
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2045-10-24T10:15:54.045	56.73	-43.08	1352.6	41.31	41.31
Triton	E	2045-10-24T10:17:34.930	56.40	-42.74	1352.6	-46.05	-46.05

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2045-10-24T10:16:23.390
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       : 32518438644356608
2Mass ID (if available) : 02540614+1443049
ICRS Star Coord at Epoch: 02h 54m 06.15989s +14:43:04.64022s
RUWE (>1.4 is poor) : 1.01
K magnitude          : 12.768
G magnitude          : 14.121
RP magnitude         : 13.647
BP magnitude         : 14.431
DUPflag             : 0
Distance (au)        : 28.851
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -26.44
Sun-Target sep (deg) : 165.23
Sun-Moon sep (deg)   : 33.12
B (ring opening deg) : -0.75
PA of pole (deg)     : -67.90
Pole direction: RA (deg): 308.41087
Dec (deg): 21.54631
C/A sky separation (") : 0.016
C/A sky separation (km) : 337.2
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
    
```



```

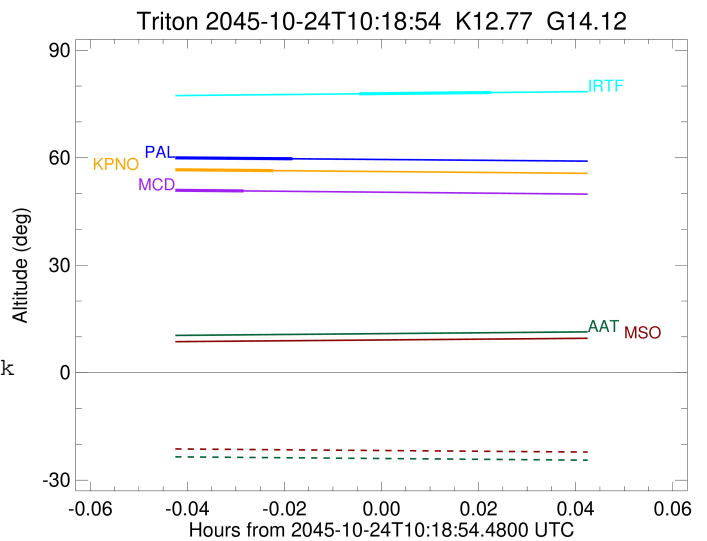
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Triton	I	2045-10-24T10:15:34.466	51.07	-37.04	1352.6	29.20	29.20
Triton	E	2045-10-24T10:17:12.322	50.73	-36.69	1352.6	-58.06	-58.06

```

target                : Triton
target radius (km)   : 1352.60
C/A epoch            : 2045-10-24T10:19:27.090
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       : 32518438644356608
2Mass ID (if available) : 02540614+1443049
ICRS Star Coord at Epoch: 02h 54m 06.15989s +14:43:04.64022s
RUWE (>1.4 is poor) : 1.01
K magnitude           : 12.768
G magnitude           : 14.121
RP magnitude         : 13.647
BP magnitude         : 14.431
DUPflag              : 0
Distance (au)        : 28.851
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -26.44
Sun-Target sep (deg) : 165.23
Sun-Moon sep (deg)   : 32.63
B (ring opening deg) : -0.75
PA of pole (deg)     : -67.90
Pole direction: RA (deg): 308.41087
Dec (deg): 21.54631
C/A sky separation (") : 0.012
C/A sky separation (km) : 240.9
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
Triton	I	2045-10-24T10:18:37.513	77.83	-81.68	1352.6	54.15	54.15
Triton	E	2045-10-24T10:20:16.665	78.19	-81.53	1352.6	-33.65	-33.65