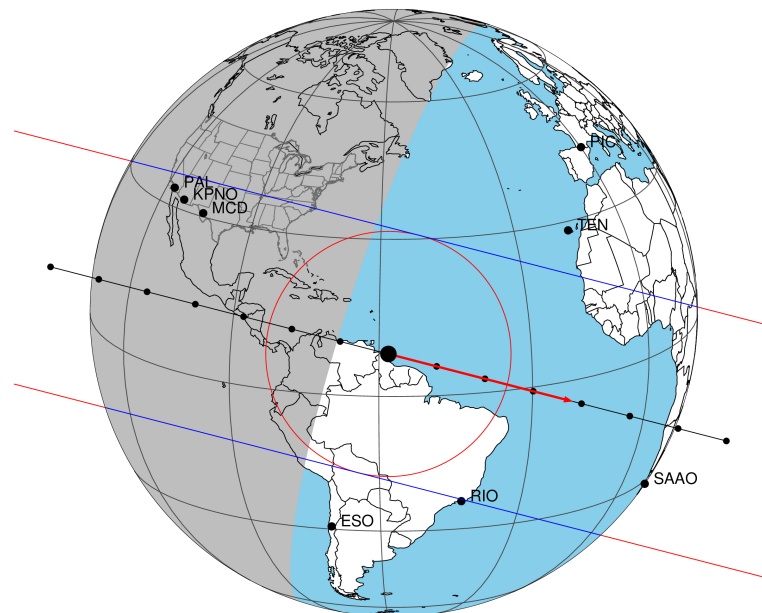


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2035-11-02T10:27:10.270
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 630955851406340480
 2Mass ID (if available) : 09224164+1609037

ICRS Star Coord at Epoch: 09h 22m 41.63863s +16:09:03.71639s
 RUWE (>1.4 is poor) : 0.98
 K magnitude : 11.811
 G magnitude : 13.122
 RP magnitude : 12.667
 BP magnitude : 13.417
 DUPflag : 1
 Distance (au) : 9.227
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 17.44
 Sun-Target sep (deg) : 81.34
 Sun-Moon sep (deg) : 107.73
 B (ring opening deg) : -14.77
 PA of pole (deg) : -6.67
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.129
 C/A sky separation (km) : 864.4
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

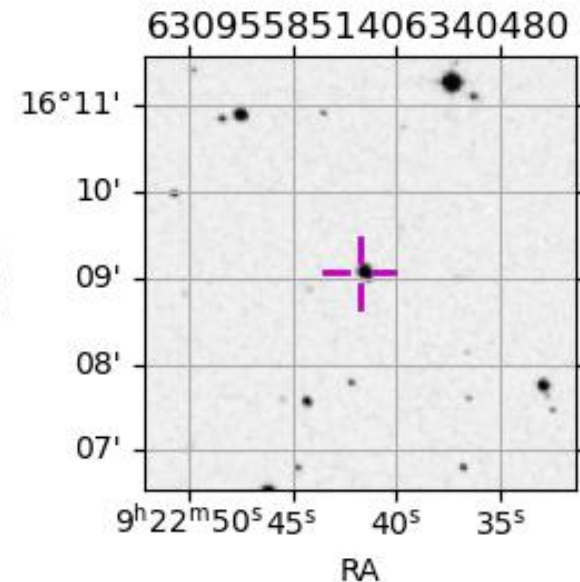
Titan 2035-11-02T10:27:10 K11.81 G13.12 dots 60.0 sec
 Pgt



2035-11-02T10:27:10.2700 α: 09 22 41.6386 δ: +16 09 03.716 C/A 0.129" PA 194.45 deg v_sky +17.44 km/s D 09.23 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	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+ +	NOV 02 10:21 - NOV 02 10:23	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	NOV 02 10:20 - NOV 02 10:23	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	NOV 02 10:21 - NOV 02 10:24	Pie
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



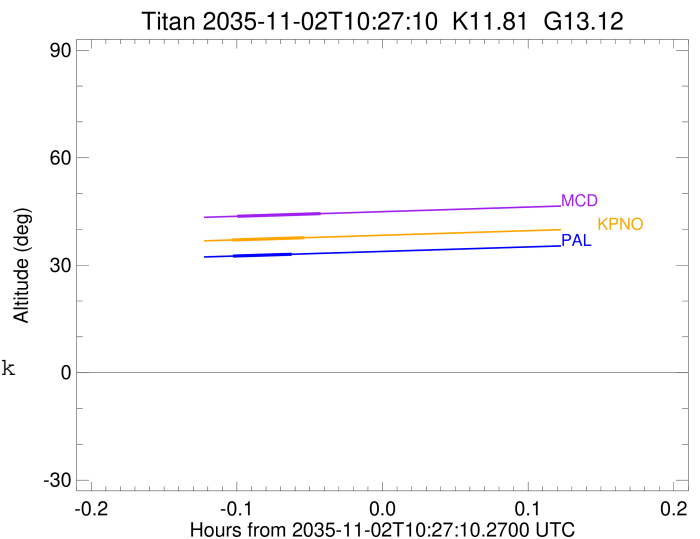
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2035-11-02T10:22:13.800
Event type           : Pgt
: Titan 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       : 630955851406340480
2Mass ID (if available) : 09224164+1609037
ICRS Star Coord at Epoch: 09h 22m 41.63863s +16:09:03.71639s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 11.811
G magnitude           : 13.122
RP magnitude          : 12.667
BP magnitude          : 13.417
DUPflag              : 1
Distance (au)        : 9.228
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.44
Sun-Target sep (deg) : 81.34
Sun-Moon sep (deg)   : 107.99
B (ring opening deg) : -14.77
PA of pole (deg)     : -6.67
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.335
C/A sky separation (km): 2243.7
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

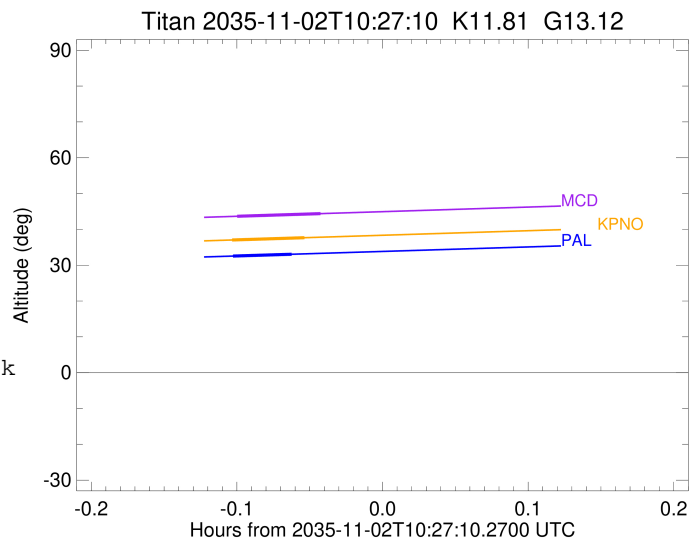
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2035-11-02T10:21:00.485	32.54	-47.40	2575.1	38.07	38.09
Titan	E	2035-11-02T10:23:27.120	33.06	-46.90	2575.2	73.05	73.06



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2035-11-02T10:22:27.980
Event type           : Pgt
: Titan 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       : 630955851406340480
2Mass ID (if available) : 09224164+1609037
ICRS Star Coord at Epoch: 09h 22m 41.63863s +16:09:03.71639s
RUWE (>1.4 is poor) : 0.98
K magnitude          : 11.811
G magnitude          : 13.122
RP magnitude         : 12.667
BP magnitude         : 13.417
DUPflag             : 1
Distance (au)        : 9.228
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.44
Sun-Target sep (deg) : 81.34
Sun-Moon sep (deg)   : 108.06
B (ring opening deg) : -14.77
PA of pole (deg)     : -6.67
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.306
C/A sky separation (km) : 2046.2
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
Titan	I	2035-11-02T10:20:57.100	37.03	-43.38	2575.2	30.43	30.44
Titan	E	2035-11-02T10:23:58.862	37.67	-42.74	2575.1	68.10	68.11

```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2035-11-02T10:22:53.890
Event type           : Pgt
: Titan 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       : 630955851406340480
2Mass ID (if available) : 09224164+1609037
ICRS Star Coord at Epoch: 09h 22m 41.63863s +16:09:03.71639s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 11.811
G magnitude           : 13.122
RP magnitude         : 12.667
BP magnitude         : 13.417
DUPflag              : 1
Distance (au)        : 9.228
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.44
Sun-Target sep (deg) : 81.34
Sun-Moon sep (deg)   : 108.15
B (ring opening deg) : -14.77
PA of pole (deg)     : -6.67
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.279
C/A sky separation (km) : 1866.2
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
Titan	I	2035-11-02T10:21:10.497	43.65	-37.05	2575.2	24.46	24.47
Titan	E	2035-11-02T10:24:37.283	44.39	-36.31	2575.1	63.33	63.34

