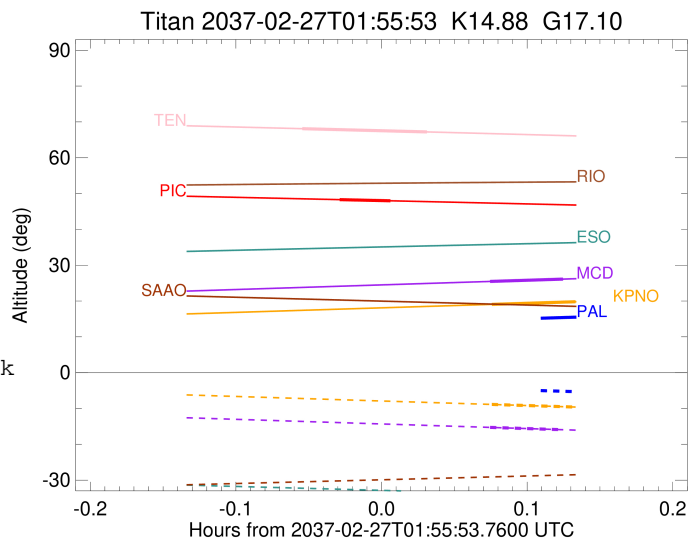



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2037-02-27T01:55:13.070
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       : 3881951627225659392
2Mass ID (if available) : 10035562+1336497
ICRS Star Coord at Epoch: 10h 03m 55.60227s +13:36:49.92008s
RUWE (>1.4 is poor) : 0.99
K magnitude          : 14.879
G magnitude          : 17.096
RP magnitude         : 16.404
BP magnitude         : 17.642
DUPflag             : 0
Distance (au)        : 8.268
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.96
Sun-Target sep (deg) : 169.81
Sun-Moon sep (deg)  : 31.97
B (ring opening deg) : -11.13
PA of pole (deg)    : -6.23
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.395
C/A sky separation (km) : 2366.1
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
    
```



```

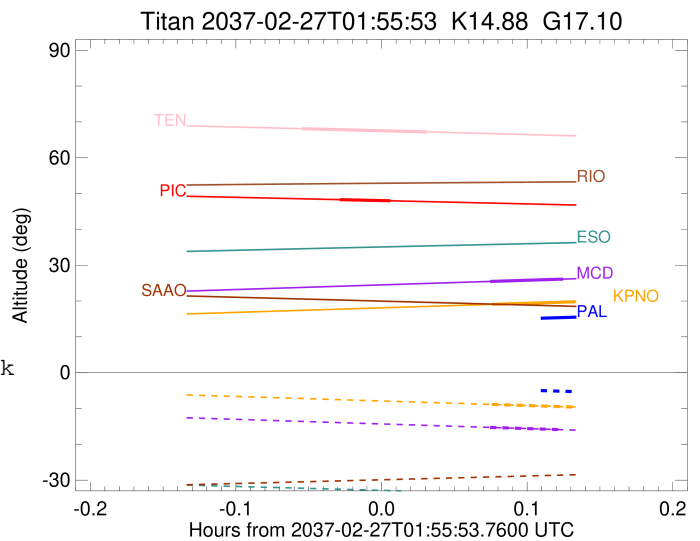
x: target alt < 5.0 deg or sun > -5.0 deg

```

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2037-02-27T01:54:10.254	48.29	-48.89	2575.1	73.22	73.23
Titan	E	2037-02-27T01:56:15.895	47.97	-48.63	2575.2	30.22	30.23

```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2037-02-27T02:02:18.780
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        : 3881951627225659392
2Mass ID (if available) : 10035562+1336497
ICRS Star Coord at Epoch: 10h 03m 55.60227s +13:36:49.92008s
RUWE (>1.4 is poor) : 0.99
K magnitude           : 14.879
G magnitude           : 17.096
RP magnitude          : 16.404
BP magnitude          : 17.642
DUPflag              : 0
Distance (au)         : 8.268
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.96
Sun-Target sep (deg)  : 169.81
Sun-Moon sep (deg)    : 30.67
B (ring opening deg) : -11.13
PA of pole (deg)      : -6.23
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (" ) : 0.292
C/A sky separation (km) : 1752.1
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   2037-02-27T02:00:21.297  14.75  -4.57x  2575.2  -6.07   -6.08
Titan   E   2037-02-27T02:04:16.242  15.57  -5.38  2575.2  -74.78  -74.78
    
```

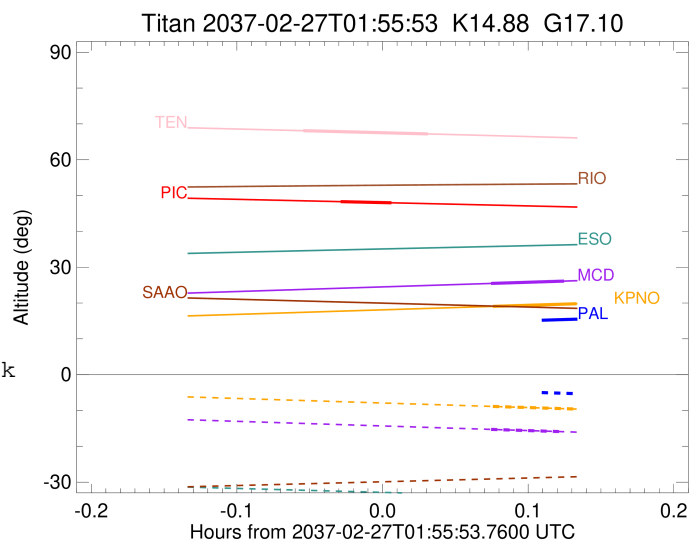
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2037-02-27T02:02:10.090
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       : 3881951627225659392
2Mass ID (if available) : 10035562+1336497
ICRS Star Coord at Epoch: 10h 03m 55.60227s +13:36:49.92008s
RUWE (>1.4 is poor) : 0.99
K magnitude          : 14.879
G magnitude          : 17.096
RP magnitude         : 16.404
BP magnitude         : 17.642
DUPflag             : 0
Distance (au)        : 8.268
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.96
Sun-Target sep (deg) : 169.81
Sun-Moon sep (deg)   : 30.71
B (ring opening deg) : -11.13
PA of pole (deg)     : -6.23
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.325
C/A sky separation (km) : 1949.9
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
Titan	I	2037-02-27T02:00:25.579	19.06	-8.87	2575.2	-12.36	-12.37
Titan	E	2037-02-27T02:03:54.577	19.80	-9.60	2575.2	-78.12	-78.13



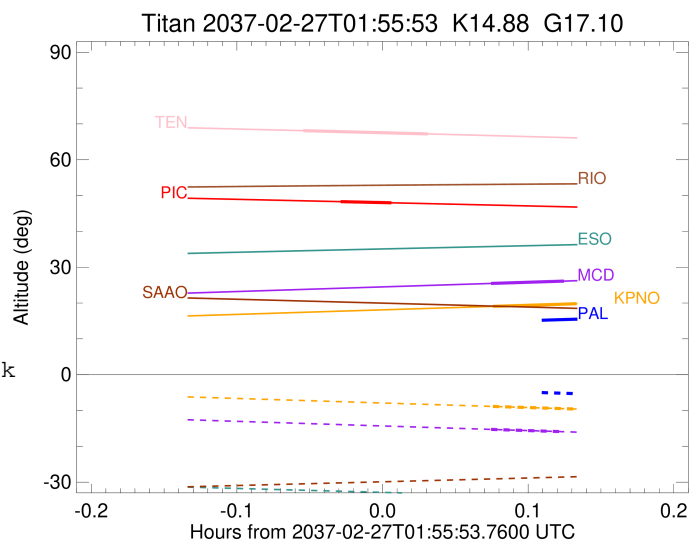
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2037-02-27T02:01:52.940
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     : 3881951627225659392
2Mass ID (if available) : 10035562+1336497
ICRS Star Coord at Epoch: 10h 03m 55.60227s +13:36:49.92008s
RUWE (>1.4 is poor) : 0.99
K magnitude        : 14.879
G magnitude        : 17.096
RP magnitude       : 16.404
BP magnitude       : 17.642
DUPflag           : 0
Distance (au)     : 8.268
f0 (km)           : 0.00
g0 (km)           : 0.00
skyplane vel. (km/s) : -15.96
Sun-Target sep (deg) : 169.81
Sun-Moon sep (deg) : 30.80
B (ring opening deg) : -11.13
PA of pole (deg)  : -6.23
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.353
C/A sky separation (km) : 2114.2
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	2037-02-27T02:00:21.837	25.46	-15.28	2575.1	-18.31	-18.32
Titan	E	2037-02-27T02:03:24.037	26.12	-15.93	2575.2	-78.74	-78.75



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2037-02-27T01:55:12.330
Event type           : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)  : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 3881951627225659392
2Mass ID (if available) : 10035562+1336497
ICRS Star Coord at Epoch: 10h 03m 55.60227s +13:36:49.92008s
RUWE (>1.4 is poor) : 0.99
K magnitude           : 14.879
G magnitude           : 17.096
RP magnitude          : 16.404
BP magnitude          : 17.642
DUPflag              : 0
Distance (au)         : 8.268
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.96
Sun-Target sep (deg) : 169.81
Sun-Moon sep (deg)   : 32.01
B (ring opening deg) : -11.13
PA of pole (deg)     : -6.23
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.082
C/A sky separation (km) : 494.1
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	2037-02-27T01:52:37.127	68.10	-68.58	2575.1	45.67	45.68
Titan	E	2037-02-27T01:57:47.536	67.19	-68.09	2575.1	-24.18	-24.20

