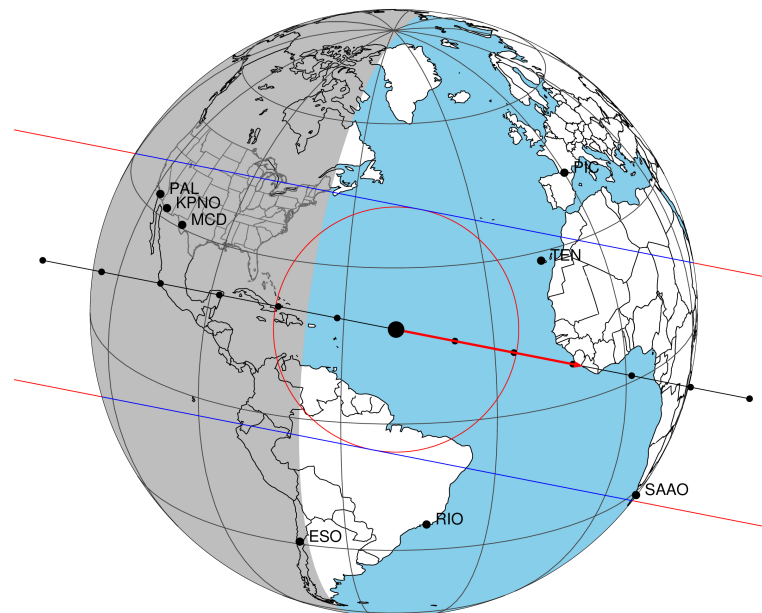


target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2033-09-26T10:24:02.360
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 865926365347524608
 2Mass ID (if available) : 07243018+2134125

ICRS Star Coord at Epoch: 07h 24m 30.25028s +21:34:11.52090s
 RUWE (>1.4 is poor) : 1.00
 K magnitude : 14.307
 G magnitude : 17.239
 RP magnitude : 16.322
 BP magnitude : 18.050
 DUPflag : 0
 Distance (au) : 9.260
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 21.00
 Sun-Target sep (deg) : 73.60
 Sun-Moon sep (deg) : 104.57
 B (ring opening deg) : -23.50
 PA of pole (deg) : -6.80
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.052
 C/A sky separation (km) : 348.6
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

Titan 2033-09-26T10:24:02 K14.31 G17.24 dots 60.0 sec
 Pgt

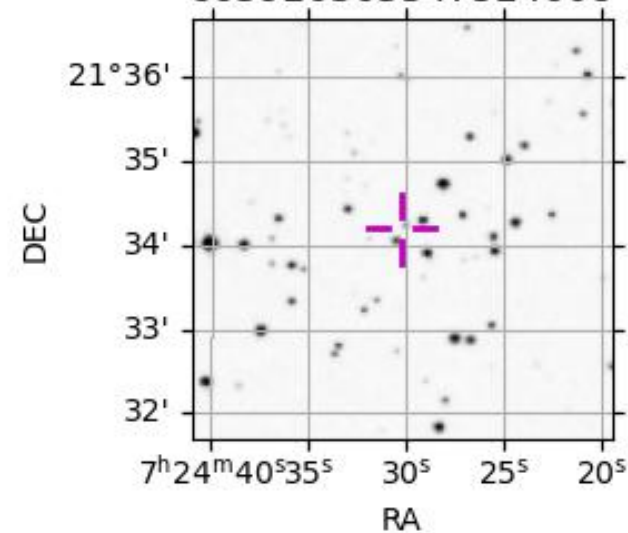


2033-09-26T10:24:02.3600 α: 07 24 30.2503 δ: +21 34 11.521 C/A 0.050" PA 191.15 deg v_sky +21.00 km/s D 09.26 AU
 Credit: Styled after SORA/Lucky Star

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

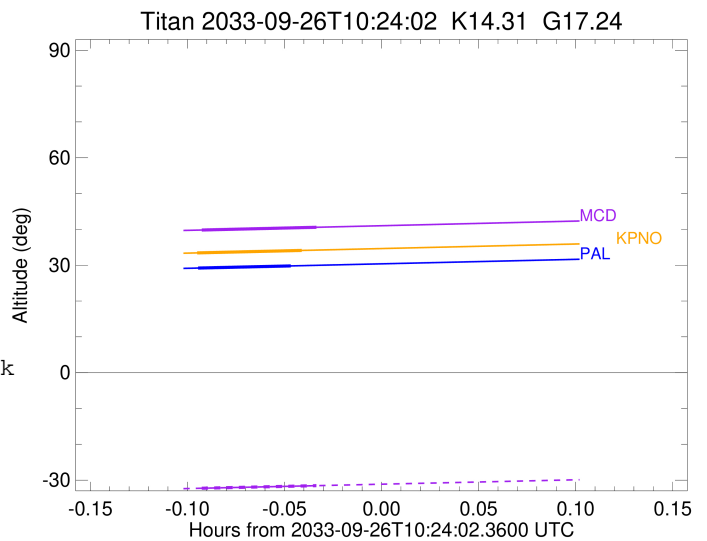
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+ +	SEP 26 10:18 - SEP 26 10:21	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	SEP 26 10:18 - SEP 26 10:21	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	SEP 26 10:18 - SEP 26 10:22	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

865926365347524608



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2033-09-26T10:19:48.430
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        : 865926365347524608
2Mass ID (if available) : 07243018+2134125
ICRS Star Coord at Epoch: 07h 24m 30.25028s +21:34:11.52090s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 14.307
G magnitude           : 17.239
RP magnitude          : 16.322
BP magnitude          : 18.050
DUPflag              : 0
Distance (au)         : 9.260
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 21.00
Sun-Target sep (deg) : 73.60
Sun-Moon sep (deg)   : 104.82
B (ring opening deg) : -23.50
PA of pole (deg)     : -6.80
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.275
C/A sky separation (km): 1845.8
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
Titan	I	2033-09-26T10:18:22.229	29.20	-40.96	2575.1	25.65	25.67
Titan	E	2033-09-26T10:21:14.632	29.80	-40.45	2575.1	55.09	55.10

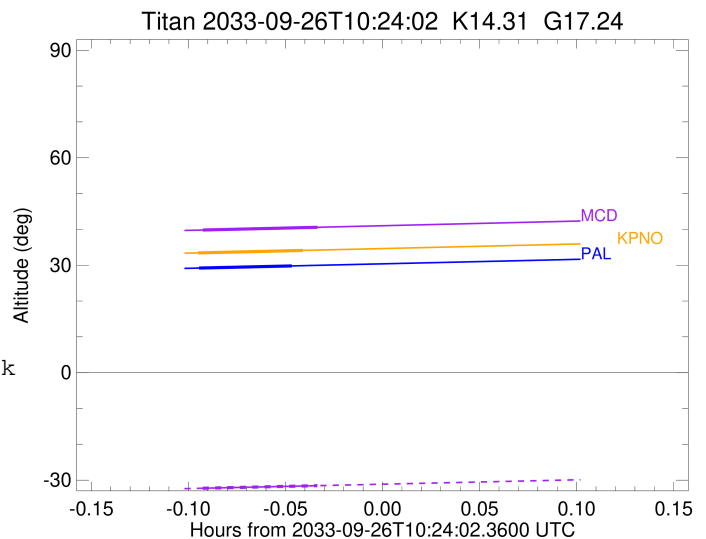
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2033-09-26T10:19:57.260
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        : 865926365347524608
2Mass ID (if available) : 07243018+2134125
ICRS Star Coord at Epoch: 07h 24m 30.25028s +21:34:11.52090s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 14.307
G magnitude           : 17.239
RP magnitude          : 16.322
BP magnitude          : 18.050
DUPflag              : 0
Distance (au)         : 9.260
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 21.00
Sun-Target sep (deg)  : 73.60
Sun-Moon sep (deg)    : 104.88
B (ring opening deg) : -23.50
PA of pole (deg)      : -6.80
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.235
C/A sky separation (km) : 1578.0
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	2033-09-26T10:18:19.405	33.43	-37.76	2575.2	18.41	18.42
Titan	E	2033-09-26T10:21:35.107	34.12	-37.14	2575.1	49.04	49.06



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2033-09-26T10:20:15.080
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       : 865926365347524608
2Mass ID (if available) : 07243018+2134125
ICRS Star Coord at Epoch: 07h 24m 30.25028s +21:34:11.52090s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 14.307
G magnitude           : 17.239
RP magnitude          : 16.322
BP magnitude          : 18.050
DUPflag              : 0
Distance (au)        : 9.260
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 21.00
Sun-Target sep (deg) : 73.60
Sun-Moon sep (deg)   : 104.97
B (ring opening deg) : -23.50
PA of pole (deg)     : -6.80
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.192
C/A sky separation (km): 1289.8
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
Titan	I	2033-09-26T10:18:27.667	39.81	-32.27	2575.2	11.32	11.33
Titan	E	2033-09-26T10:22:02.487	40.58	-31.54	2575.1	42.75	42.77

