

target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2032-04-10T03:05:16.870
 Event type : Pgt
 : Titan occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3414981651565693312
 2Mass ID (if available) : 05090659+2145218

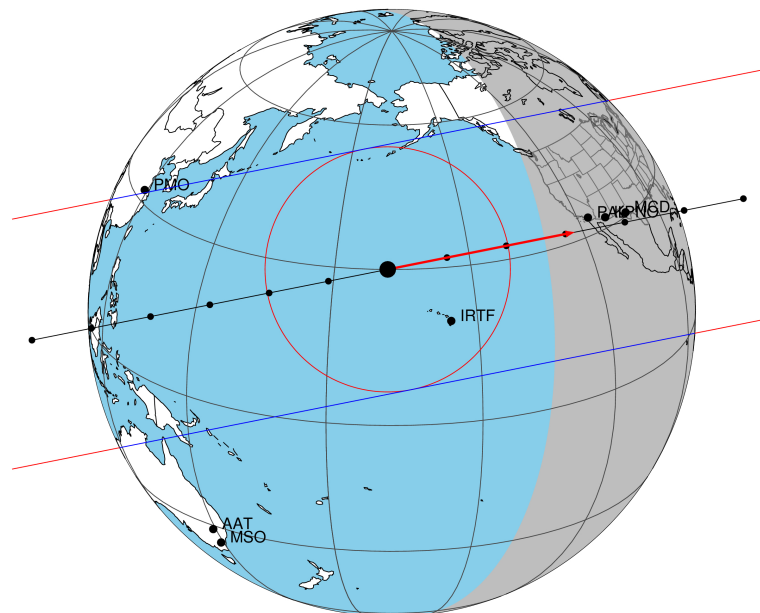
ICRS Star Coord at Epoch: 05h 09m 06.59594s +21:45:21.60025s
 RUWE (>1.4 is poor) : 1.13
 K magnitude : 14.749
 G magnitude : 17.423
 RP magnitude : 16.623
 BP magnitude : 18.042
 DUPflag : 0
 Distance (au) : 9.508
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 21.16
 Sun-Target sep (deg) : 57.84
 Sun-Moon sep (deg) : 57.66
 B (ring opening deg) : -26.89
 PA of pole (deg) : -4.51
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.133
 C/A sky separation (km) : 915.7
 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

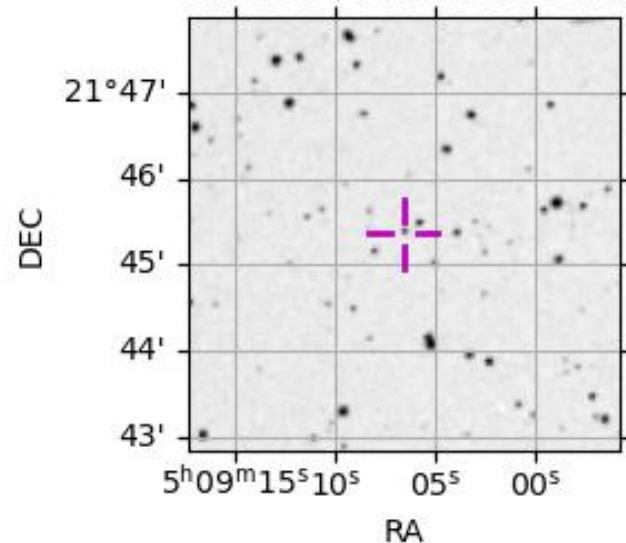
Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+ +	APR 10 03:06 - APR 10 03:10	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	APR 10 03:07 - APR 10 03:11	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	APR 10 03:07 - APR 10 03:11	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

Titan 2032-04-10T03:05:16 K14.75 G17.42 dots 60.0 sec
 Pgt



2032-04-10T03:05:16.8700 α: 05 09 06.5959 δ: +21 45 21.600 C/A 0.132" PA 348.72 deg v_sky +21.15 km/s D 09.51 AU
 Credit: Styled after SORA/Lucky Star

3414981651565693312



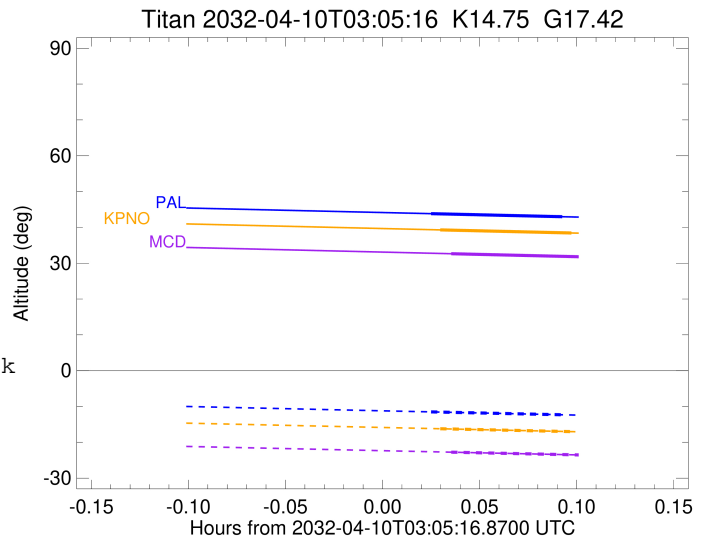
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2032-04-10T03:08:48.690
Event type           : Pgt
: Titan occs: geocentric, topocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 3414981651565693312
2Mass ID (if available) : 05090659+2145218
ICRS Star Coord at Epoch: 05h 09m 06.59594s +21:45:21.60025s
RUWE (>1.4 is poor) : 1.13
K magnitude           : 14.749
G magnitude           : 17.423
RP magnitude         : 16.623
BP magnitude         : 18.042
DUPflag              : 0
Distance (au)        : 9.508
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 21.16
Sun-Target sep (deg) : 57.84
Sun-Moon sep (deg)   : 58.58
B (ring opening deg) : -26.89
PA of pole (deg)     : -4.51
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.037
C/A sky separation (km) : 251.8
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	2032-04-10T03:06:46.021	43.83	-11.50	2575.1	10.84	10.85
Titan	E	2032-04-10T03:10:51.359	42.97	-12.32	2575.2	-0.86	-0.86



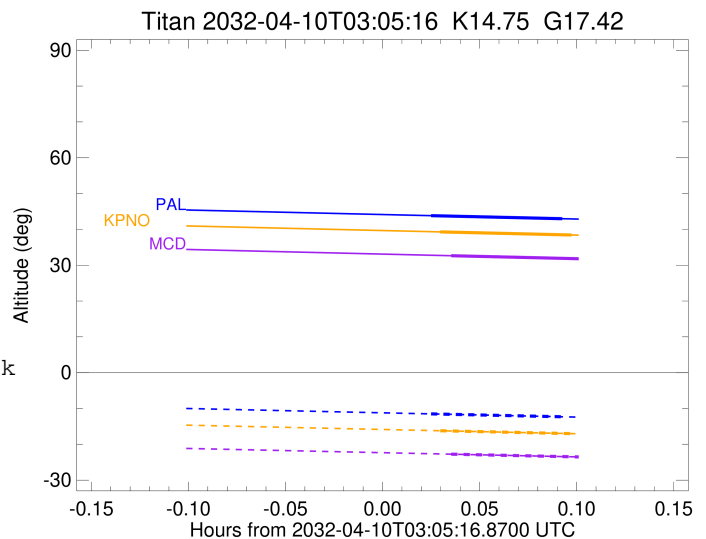
```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2032-04-10T03:09:05.540
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        : 3414981651565693312
2Mass ID (if available) : 05090659+2145218
ICRS Star Coord at Epoch: 05h 09m 06.59594s +21:45:21.60025s
RUWE (>1.4 is poor) : 1.13
K magnitude           : 14.749
G magnitude           : 17.423
RP magnitude          : 16.623
BP magnitude          : 18.042
DUPflag              : 0
Distance (au)         : 9.508
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 21.16
Sun-Target sep (deg) : 57.84
Sun-Moon sep (deg)   : 58.56
B (ring opening deg) : -26.89
PA of pole (deg)     : -4.51
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.028
C/A sky separation (km) : 194.6
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	2032-04-10T03:07:02.769	39.30	-16.21	2575.1	9.66	9.67
Titan	E	2032-04-10T03:11:08.309	38.43	-17.02	2575.2	-1.97	-1.97



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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2032-04-10T03:09:26.100
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       : 3414981651565693312
2Mass ID (if available) : 05090659+2145218
ICRS Star Coord at Epoch: 05h 09m 06.59594s +21:45:21.60025s
RUWE (>1.4 is poor) : 1.13
K magnitude          : 14.749
G magnitude          : 17.423
RP magnitude         : 16.623
BP magnitude         : 18.042
DUPflag             : 0
Distance (au)        : 9.508
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 21.16
Sun-Target sep (deg) : 57.84
Sun-Moon sep (deg)   : 58.52
B (ring opening deg) : -26.89
PA of pole (deg)     : -4.51
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.032
C/A sky separation (km) : 220.1
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	2032-04-10T03:07:23.661	32.64	-22.75	2575.1	10.13	10.13
Titan	E	2032-04-10T03:11:28.528	31.77	-23.54	2575.2	-1.41	-1.41

