

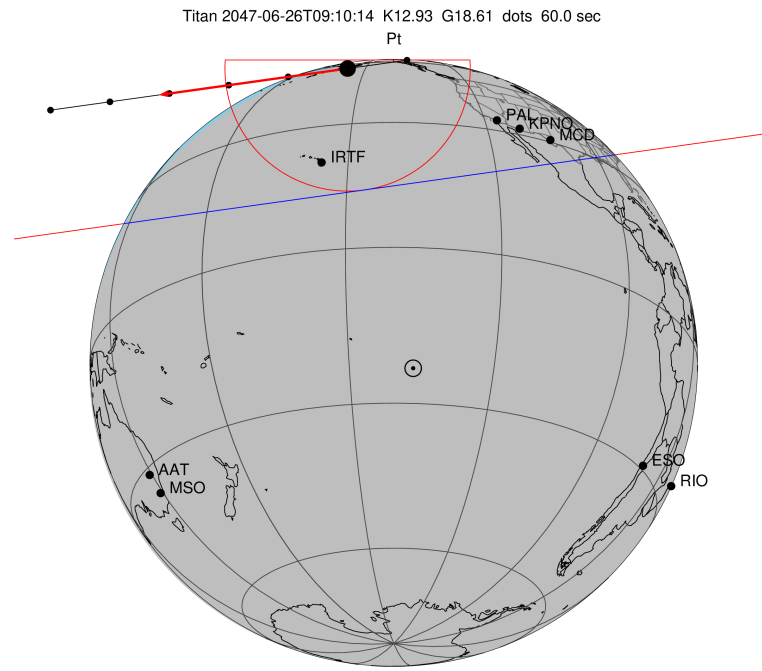
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-06-26T09:10:14.170
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4069868923325369344
 2Mass ID (if available) : 18015093-2222313

ICRS Star Coord at Epoch: 18h 01m 50.98667s -22:22:30.76573s
 RUWE (>1.4 is poor) : 0.00
 K magnitude : 12.934
 G magnitude : 18.612
 RP magnitude : 0.000
 BP magnitude : 0.000
 DUPflag : 0
 Distance (au) : 9.031
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -20.99
 Sun-Target sep (deg) : 176.20
 Sun-Moon sep (deg) : 141.53
 B (ring opening deg) : 26.41
 PA of pole (deg) : 5.70
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.953
 C/A sky separation (km) : 6243.8
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

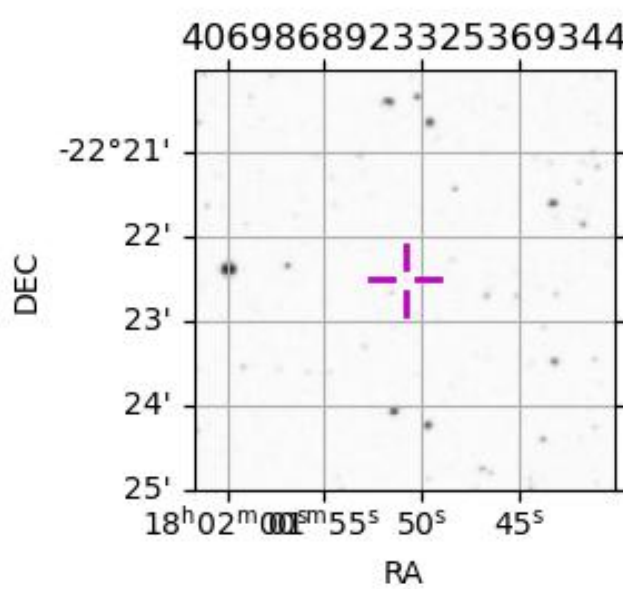
URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

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	+ +	JUN 26 09:06 - JUN 26 09:09	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	JUN 26 09:06 - JUN 26 09:09	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	JUN 26 09:05 - JUN 26 09:08	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	JUN 26 09:09 - JUN 26 09:12	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



2047-06-26T09:10:14.1700 cc: 18 01 50.98667 & -22 22 30.766 C/A 0.955" PA 352.03 deg v_sky -20.99 km/s D 09.03 AU
 Credit: Styled after SORA/Lucky Star



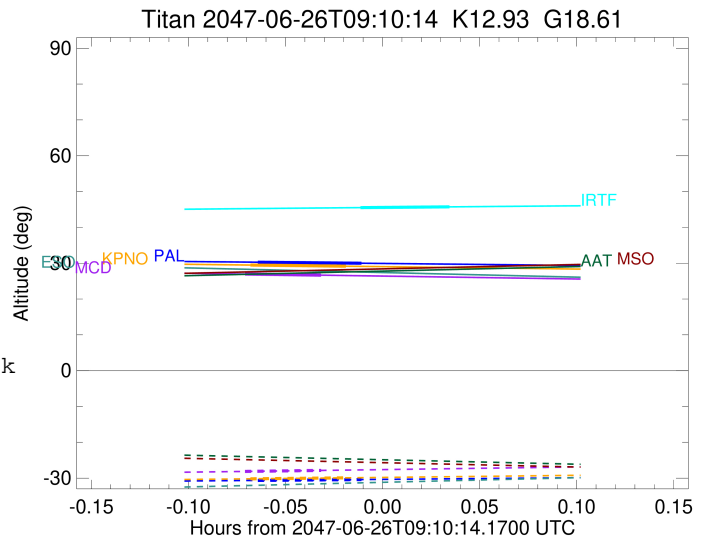
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2047-06-26T09:07:59.040
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)   : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 4069868923325369344
2Mass ID (if available) : 18015093-2222313
ICRS Star Coord at Epoch: 18h 01m 50.98667s -22:22:30.76573s
RUWE (>1.4 is poor) : 0.00
K magnitude          : 12.934
G magnitude          : 18.612
RP magnitude         : 0.000
BP magnitude         : 0.000
DUPflag             : 0
Distance (au)        : 9.031
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -20.99
Sun-Target sep (deg) : 176.20
Sun-Moon sep (deg)   : 141.54
B (ring opening deg) : 26.41
PA of pole (deg)     : 5.70
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.231
C/A sky separation (km) : 1512.8
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

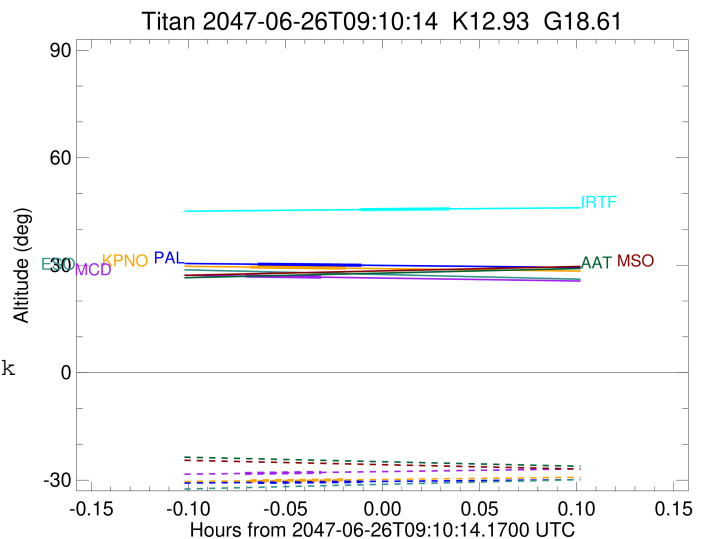
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x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2047-06-26T09:06:21.358	30.27	-30.64	2575.1	-42.82	-42.83
Titan	E	2047-06-26T09:09:36.722	29.98	-30.40	2575.1	-20.13	-20.13



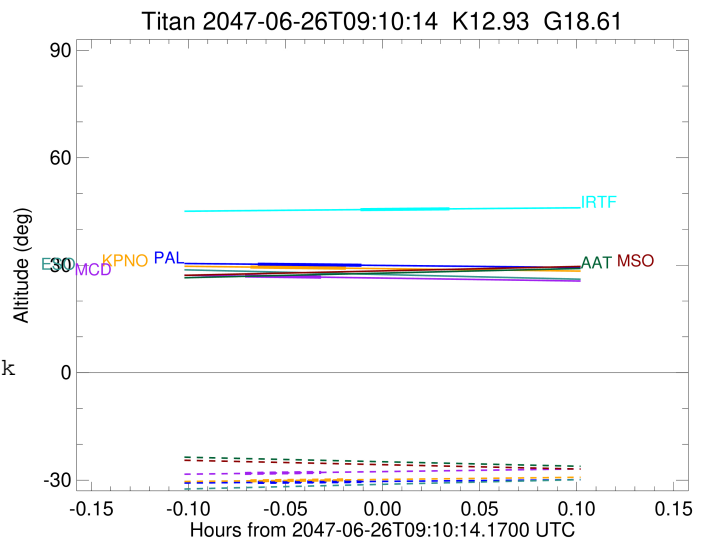
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-06-26T09:07:37.820
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Observer code : KPNO
 Location : Kitt Peak Natl Obs
 Latitude (deg) : 31.96333
 E. Longitude (deg) : 248.40000
 Altitude (km) : 2.120
 Gaia source ID : 4069868923325369344
 2Mass ID (if available) : 18015093-2222313
 ICRS Star Coord at Epoch: 18h 01m 50.98667s -22:22:30.76573s
 RUWE (>1.4 is poor) : 0.00
 K magnitude : 12.934
 G magnitude : 18.612
 RP magnitude : 0.000
 BP magnitude : 0.000
 DUPflag : 0
 Distance (au) : 9.031
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -20.99
 Sun-Target sep (deg) : 176.20
 Sun-Moon sep (deg) : 141.47
 B (ring opening deg) : 26.41
 PA of pole (deg) : 5.70
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.267
 C/A sky separation (km) : 1751.4
 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	2047-06-26T09:06:09.283	29.48	-30.19	2575.0	-48.10	-48.12
Titan	E	2047-06-26T09:09:06.354	29.16	-29.91	2575.1	-26.17	-26.18

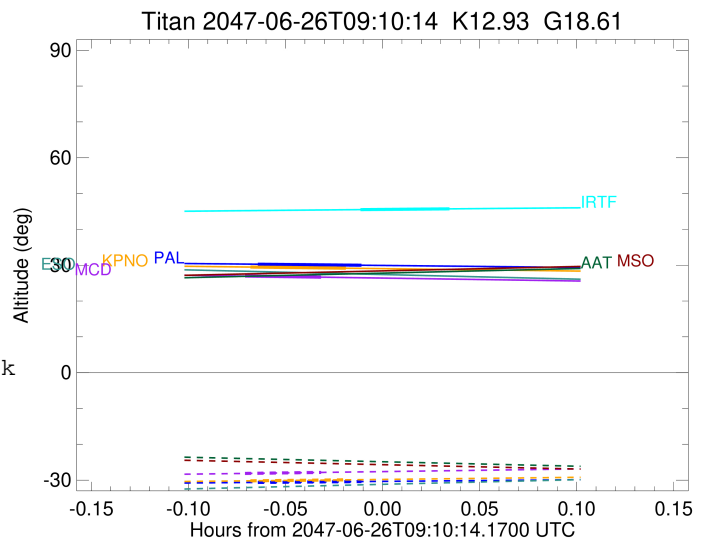
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-06-26T09:07:09.110
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Observer code : MCD
 Location : McDonald Obs. 2.7m
 Latitude (deg) : 30.67158
 E. Longitude (deg) : 255.97844
 Altitude (km) : 2.075
 Gaia source ID : 4069868923325369344
 2Mass ID (if available) : 18015093-2222313
 ICRS Star Coord at Epoch: 18h 01m 50.98667s -22:22:30.76573s
 RUWE (>1.4 is poor) : 0.00
 K magnitude : 12.934
 G magnitude : 18.612
 RP magnitude : 0.000
 BP magnitude : 0.000
 DUPflag : 0
 Distance (au) : 9.031
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -20.99
 Sun-Target sep (deg) : 176.20
 Sun-Moon sep (deg) : 141.38
 B (ring opening deg) : 26.41
 PA of pole (deg) : 5.70
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.317
 C/A sky separation (km) : 2074.7
 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	2047-06-26T09:05:57.488	26.97	-28.13	2575.0	-55.53	-55.54
Titan	E	2047-06-26T09:08:20.743	26.65	-27.84	2575.1	-35.45	-35.46

target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2047-06-26T09:10:56.020
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : 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 : 4069868923325369344
 2Mass ID (if available) : 18015093-2222313
 ICRS Star Coord at Epoch: 18h 01m 50.98667s -22:22:30.76573s
 RUWE (>1.4 is poor) : 0.00
 K magnitude : 12.934
 G magnitude : 18.612
 RP magnitude : 0.000
 BP magnitude : 0.000
 DUPflag : 0
 Distance (au) : 9.031
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -20.99
 Sun-Target sep (deg) : 176.20
 Sun-Moon sep (deg) : 142.09
 B (ring opening deg) : 26.41
 PA of pole (deg) : 5.70
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.285
 C/A sky separation (km) : 1869.0
 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	2047-06-26T09:09:33.312	45.51	-43.21	2575.0	-50.98	-50.99
Titan	E	2047-06-26T09:12:18.718	45.72	-43.47	2575.1	-29.12	-29.13