

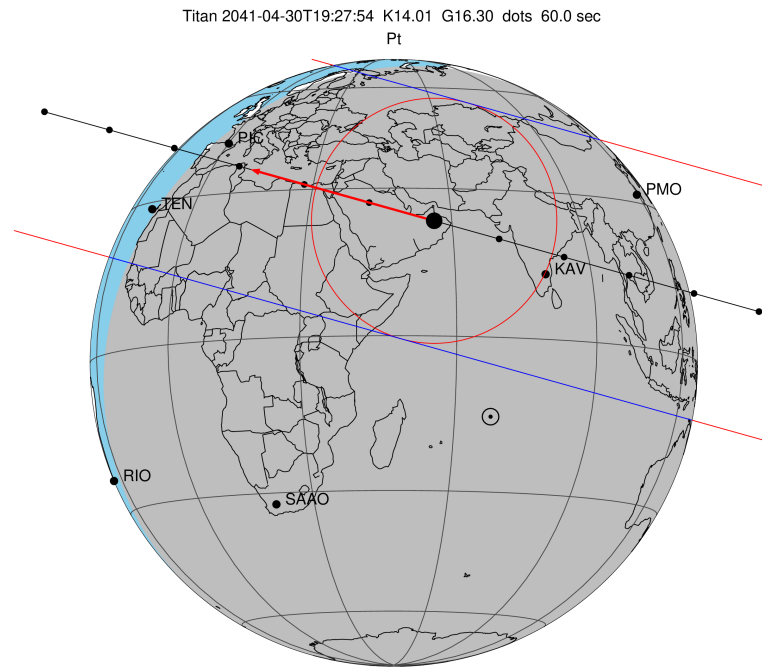
target : Titan
 target radius (km) : 2575.15
 C/A epoch : 2041-04-30T19:27:54.460
 Event type : Pt
 : Titan occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 3635747098043650048
 2Mass ID (if available) : 13142674-0455045

ICRS Star Coord at Epoch: 13h 14m 26.63236s -04:55:04.70915s
 RUWE (>1.4 is poor) : 1.02
 K magnitude : 14.010
 G magnitude : 16.301
 RP magnitude : 15.609
 BP magnitude : 16.840
 DUPflag : 0
 Distance (au) : 8.735
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -23.60
 Sun-Target sep (deg) : 158.62
 Sun-Moon sep (deg) : 154.54
 B (ring opening deg) : 11.05
 PA of pole (deg) : -2.38
 Pole direction: RA (deg): 39.48270
 Dec (deg): 83.42790
 C/A sky separation (") : 0.490
 C/A sky separation (km) : 3105.4
 NAIF SPICE kernels : RAJobs_U111+rgf16.spk

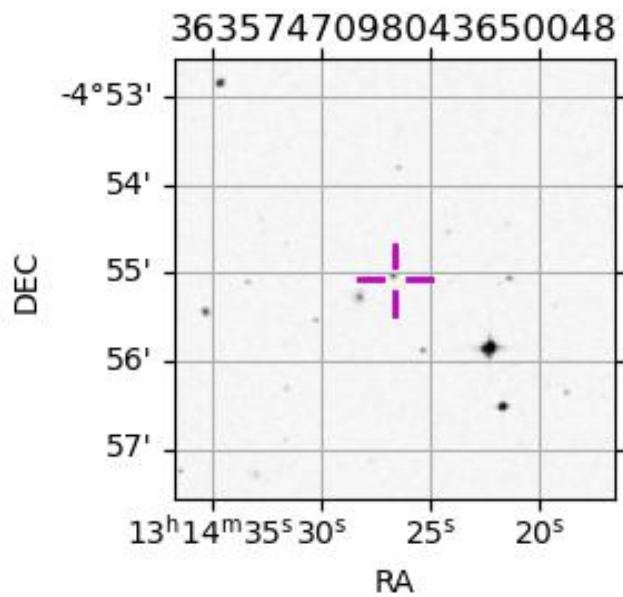
URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

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	+ +	APR 30 19:29 - APR 30 19:32	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	APR 30 19:23 - APR 30 19:26	Pie
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
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	+ +	APR 30 19:24 - APR 30 19:27	Pie
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



2041-04-30T19:27:54.4600 α: 13 14 26.6324 δ: -04 55 04.709 C/A 0.490" PA 15.64 deg v_sky -23.60 km/s D 08.74 AU
 Credit: Styled after SORA/Lucky Star



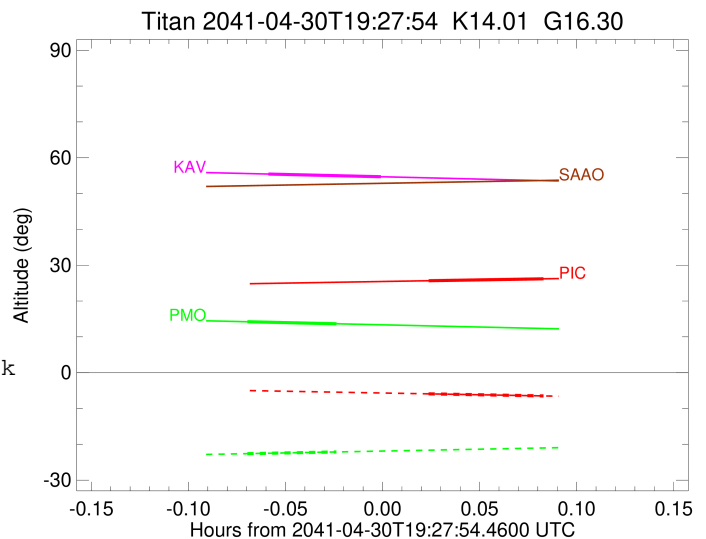
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2041-04-30T19:31:06.480
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : PIC
Location             : Pic du Midi
Latitude (deg)       : 42.93656
E. Longitude (deg)  : 0.14231
Altitude (km)        : 2.890
Gaia source ID       : 3635747098043650048
2Mass ID (if available) : 13142674-0455045
ICRS Star Coord at Epoch: 13h 14m 26.63236s -04:55:04.70915s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 14.010
G magnitude           : 16.301
RP magnitude          : 15.609
BP magnitude          : 16.840
DUPflag              : 0
Distance (au)         : 8.735
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -23.60
Sun-Target sep (deg) : 158.62
Sun-Moon sep (deg)   : 155.44
B (ring opening deg) : 11.05
PA of pole (deg)     : -2.38
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.063
C/A sky separation (km) : 398.7
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

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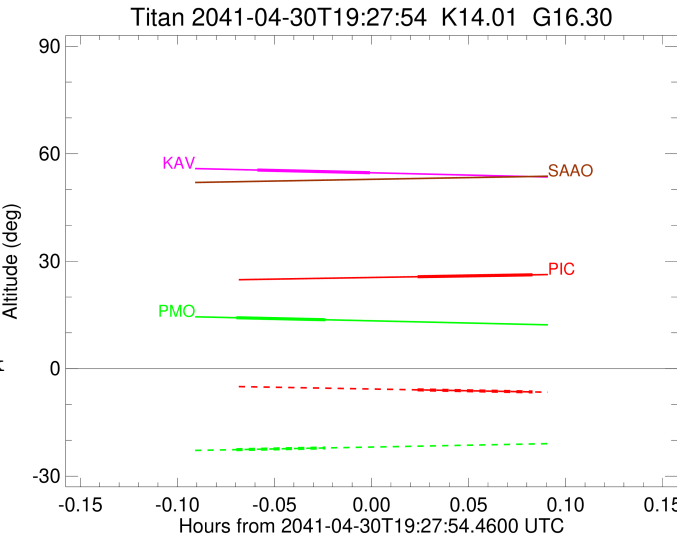
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Titan	I	2041-04-30T19:29:19.672	25.66	-5.91	2575.1	26.19	26.20
Titan	E	2041-04-30T19:32:53.284	26.19	-6.49	2575.2	-8.74	-8.75



```

target                : Titan
target radius (km)   : 2575.15
C/A epoch             : 2041-04-30T19:25:06.830
Event type            : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)   : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 3635747098043650048
2Mass ID (if available) : 13142674-0455045
ICRS Star Coord at Epoch: 13h 14m 26.63236s -04:55:04.70915s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 14.010
G magnitude           : 16.301
RP magnitude          : 15.609
BP magnitude          : 16.840
DUPflag              : 0
Distance (au)        : 8.735
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -23.60
Sun-Target sep (deg) : 158.62
Sun-Moon sep (deg)   : 154.23
B (ring opening deg) : 11.05
PA of pole (deg)     : -2.38
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation (") : 0.260
C/A sky separation (km) : 1648.8
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
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Titan I 2041-04-30T19:23:43.509 14.22 -22.60 2575.1 56.16 56.18
Titan E 2041-04-30T19:26:30.151 13.65 -22.13 2575.2 21.38 21.39
    
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target                : Titan
target radius (km)   : 2575.15
C/A epoch            : 2041-04-30T19:26:07.220
Event type           : Pt
: Titan occs: topocentric, not geocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)   : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 3635747098043650048
2Mass ID (if available) : 13142674-0455045
ICRS Star Coord at Epoch: 13h 14m 26.63236s -04:55:04.70915s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 14.010
G magnitude          : 16.301
RP magnitude         : 15.609
BP magnitude         : 16.840
DUPflag             : 0
Distance (au)        : 8.735
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -23.60
Sun-Target sep (deg) : 158.62
Sun-Moon sep (deg)   : 154.61
B (ring opening deg) : 11.05
PA of pole (deg)     : -2.38
Pole direction: RA (deg): 39.48270
Dec (deg): 83.42790
C/A sky separation ("): 0.075
C/A sky separation (km): 474.4
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	2041-04-30T19:24:21.698	55.44	-60.49	2575.2	7.07	7.07
Titan	E	2041-04-30T19:27:52.748	54.69	-60.17	2575.1	-27.85	-27.86

