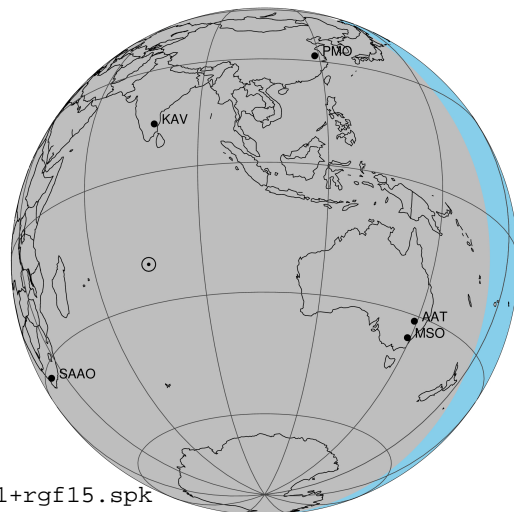


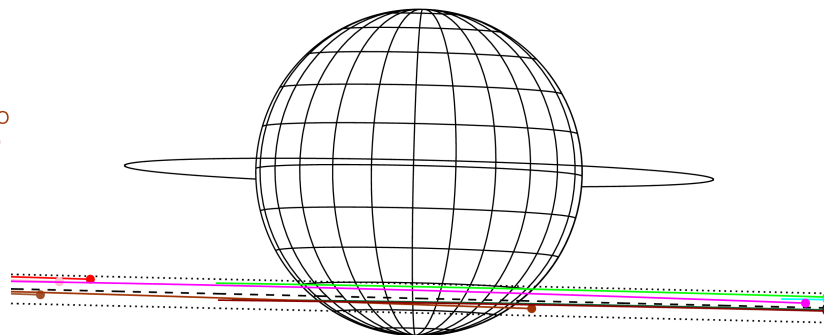
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-05-25T18:52:57.420
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4069584420376425344
 2Mass ID (if available) : 18044524-2302396

Jupiter 2043-05-25T18:52:57 K8.71 G11.21 Pgt

ICRS Star Coord at Epoch: 18h 04m 45.27215s -23°02'40.33541s
 RUWE (>1.4 is poor) : 0.80
 K magnitude : 8.714
 G magnitude : 11.211
 RP magnitude : 10.452
 BP magnitude : 11.811
 DUPflag : 0
 Distance (au) : 4.354
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -13.12
 Sun-Target sep (deg) : 152.78
 Sun-Moon sep (deg) : 9.10
 B (ring opening deg) : -2.42
 PA of pole (deg) : -1.35
 Pole direction: RA (deg): 268.05667
 Dec (deg): 64.49732
 C/A sky separation (") : 17.462
 C/A sky separation (km) : 55146.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



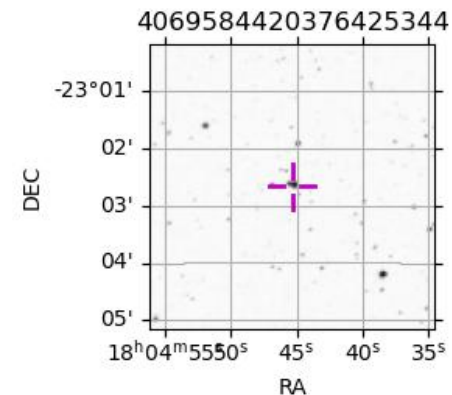
Earth
 PIC
 PMO
 TEN
 IRTF
 KAV
 RIO
 AAT
 SAAO
 MSO



2043-05-25T18:52:57.4200 a: 18 04 45.2721 s -23 02 40.335 C/A ***** PA 358.66 deg v_sky -13.12 km/s D 04.35 AU
 Credit: Styled after SORA/Lucky Star

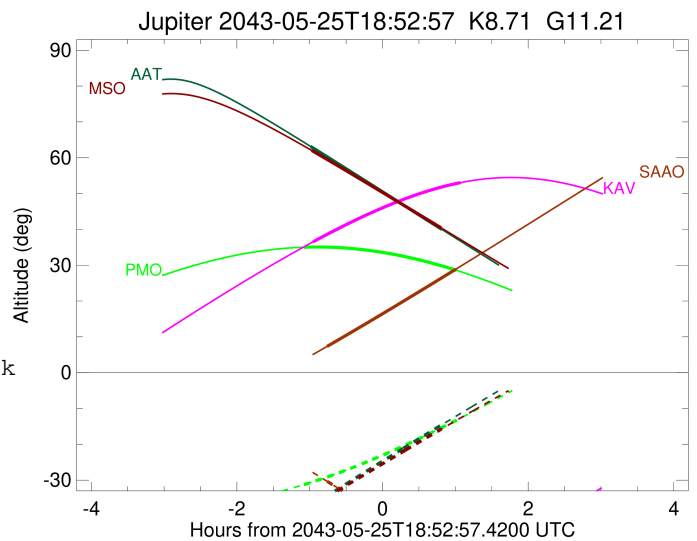
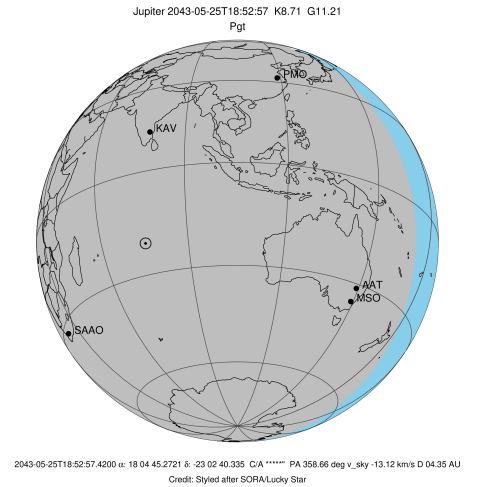
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	MAY 25 17:48 - MAY 25 19:54	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	+ +	MAY 25 17:55 - MAY 25 19:57	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	+ +	MAY 25 17:53 - MAY 25 19:41	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+ +	MAY 25 18:07 - MAY 25 19:53	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	MAY 25 17:54 - MAY 25 19:41	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-05-25T18:51:00.870
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: 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        : 4069584420376425344
2Mass ID (if available) : 18044524-2302396
ICRS Star Coord at Epoch: 18h 04m 45.27215s -23:02:40.33541s
RUWE (>1.4 is poor) : 0.80
K magnitude           : 8.714
G magnitude           : 11.211
RP magnitude          : 10.452
BP magnitude          : 11.811
DUPflag              : 0
Distance (au)         : 4.354
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -13.12
Sun-Target sep (deg)  : 152.78
Sun-Moon sep (deg)    : 9.77
B (ring opening deg) : -2.42
PA of pole (deg)     : -1.35
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 15.839
C/A sky separation (km) : 50020.7
NAIF SPICE kernels   : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

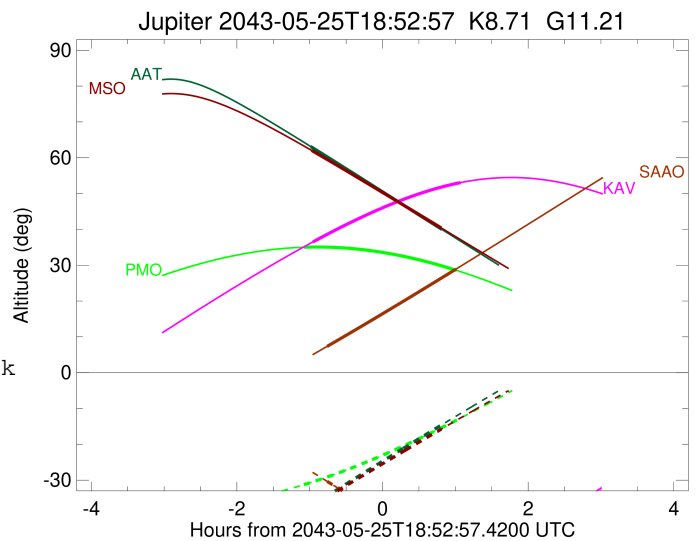
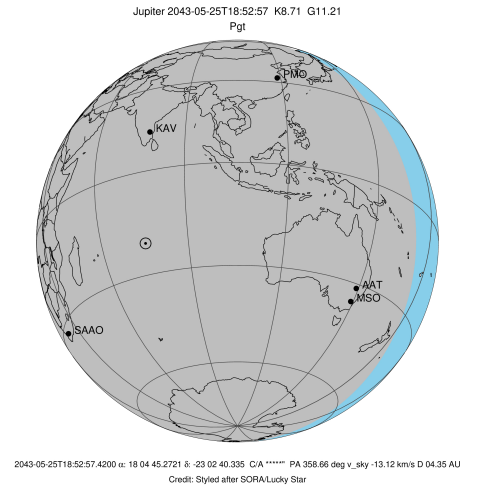


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-05-25T17:48:05.921	35.01	-31.27	71488.1	-44.24	-47.95
Jupiter	E	2043-05-25T19:54:00.423	28.55	-13.25	71488.0	-44.64	-48.35

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-25T18:56:33.920
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : 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      : 4069584420376425344
2Mass ID (if available) : 18044524-2302396
ICRS Star Coord at Epoch: 18h 04m 45.27215s -23:02:40.33541s
RUWE (>1.4 is poor) : 0.80
K magnitude         : 8.714
G magnitude         : 11.211
RP magnitude        : 10.452
BP magnitude        : 11.811
DUPflag            : 0
Distance (au)       : 4.354
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -13.12
Sun-Target sep (deg) : 152.78
Sun-Moon sep (deg)  : 9.20
B (ring opening deg) : -2.42
PA of pole (deg)    : -1.35
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 16.341
C/A sky separation (km) : 51605.2
NAIF SPICE kernels  : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

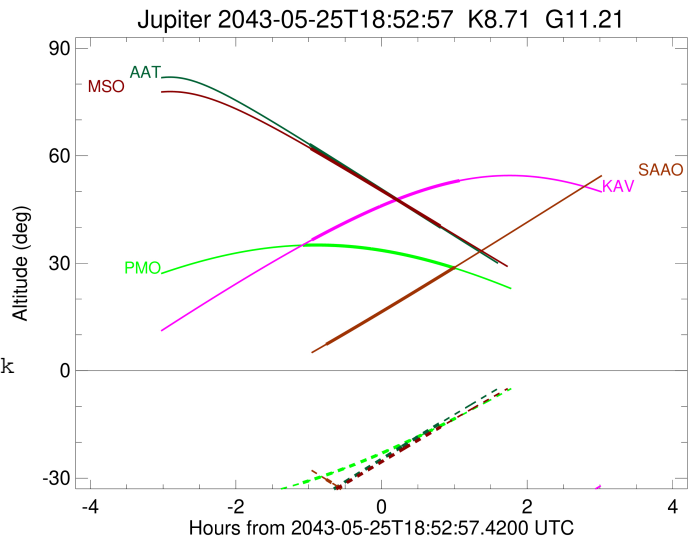
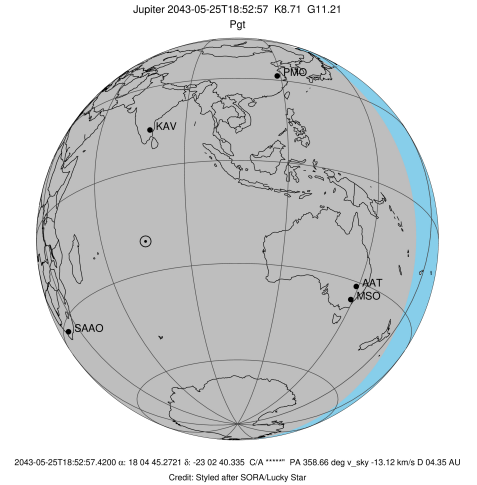


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-05-25T17:55:35.537	36.49	-54.63	71487.7	-46.51	-50.19
Jupiter	E	2043-05-25T19:57:15.731	53.05	-51.66	71487.8	-45.99	-49.67

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-05-25T18:47:43.610
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : AAT
Location              : Siding Spring (AAT)
Latitude (deg)        : -31.27703
E. Longitude (deg)    : 149.06608
Altitude (km)         : 1.164
Gaia source ID        : 4069584420376425344
2Mass ID (if available) : 18044524-2302396
ICRS Star Coord at Epoch: 18h 04m 45.27215s -23:02:40.33541s
RUWE (>1.4 is poor) : 0.80
K magnitude           : 8.714
G magnitude           : 11.211
RP magnitude          : 10.452
BP magnitude          : 11.811
DUPflag              : 0
Distance (au)         : 4.354
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -13.12
Sun-Target sep (deg) : 152.78
Sun-Moon sep (deg)   : 9.52
B (ring opening deg) : -2.42
PA of pole (deg)     : -1.35
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 17.956
C/A sky separation (km) : 56703.8
NAIF SPICE kernels   : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

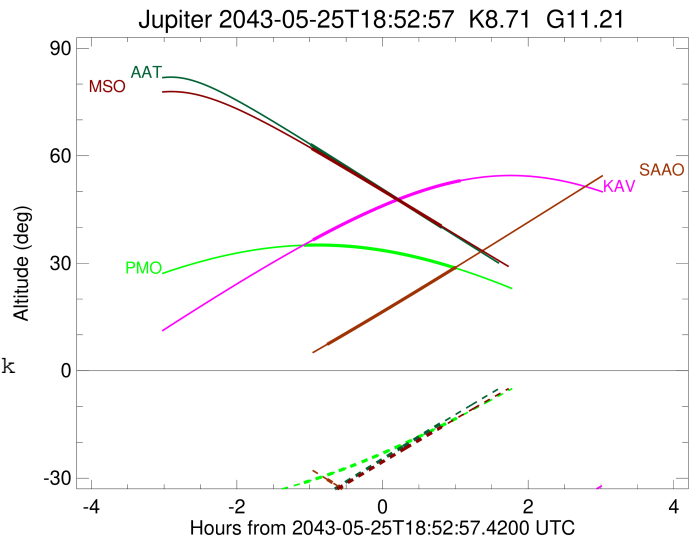
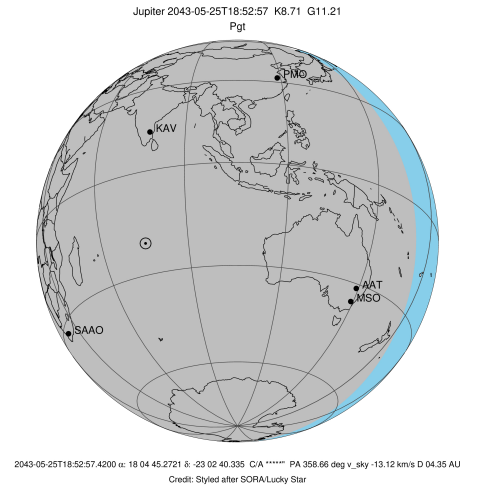


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-05-25T17:53:48.559	63.12	-37.27	71487.0	-51.99	-55.50
Jupiter	E	2043-05-25T19:41:52.615	40.00	-14.54	71486.9	-52.96	-56.43

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-25T19:00:41.410
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : SAAO
Location            : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)      : -32.37953
E. Longitude (deg)  : 20.81070
Altitude (km)       : 1.768
Gaia source ID      : 4069584420376425344
2Mass ID (if available) : 18044524-2302396
ICRS Star Coord at Epoch: 18h 04m 45.27215s -23:02:40.33541s
RUWE (>1.4 is poor) : 0.80
K magnitude          : 8.714
G magnitude          : 11.211
RP magnitude         : 10.452
BP magnitude         : 11.811
DUPflag             : 0
Distance (au)       : 4.354
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -13.12
Sun-Target sep (deg) : 152.78
Sun-Moon sep (deg)  : 8.28
B (ring opening deg) : -2.42
PA of pole (deg)    : -1.35
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 18.320
C/A sky separation (km) : 57852.7
NAIF SPICE kernels  : RAJobs_U111+rgf15.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
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

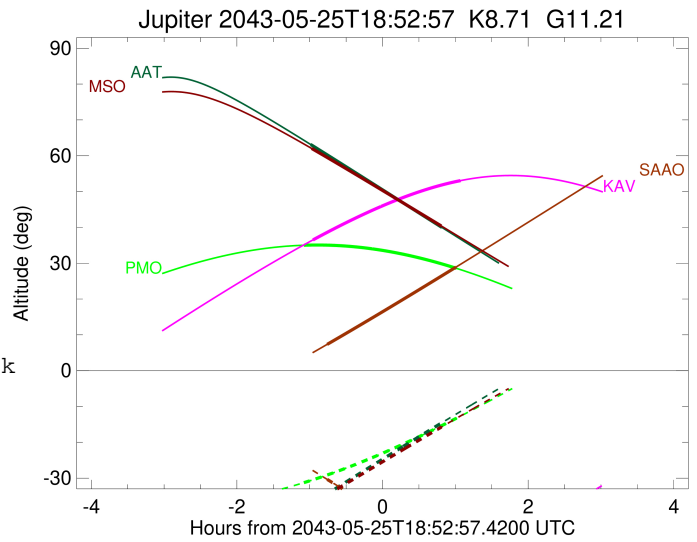
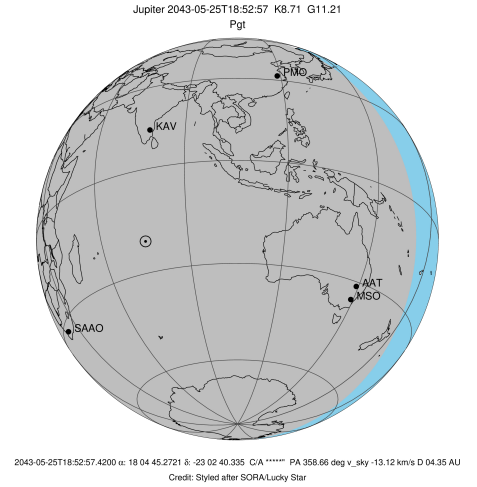


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-05-25T18:07:24.204	7.35	-30.35	71486.6	-54.61	-58.00
Jupiter	E	2043-05-25T19:53:34.005	28.92	-52.75	71486.8	-53.33	-56.79

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-25T18:47:58.500
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code       : MSO
Location            : Mt. Stromlo Observatory
Latitude (deg)      : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)       : 0.770
Gaia source ID      : 4069584420376425344
2Mass ID (if available) : 18044524-2302396
ICRS Star Coord at Epoch: 18h 04m 45.27215s -23:02:40.33541s
RUWE (>1.4 is poor) : 0.80
K magnitude          : 8.714
G magnitude          : 11.211
RP magnitude         : 10.452
BP magnitude         : 11.811
DUPflag             : 0
Distance (au)       : 4.354
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -13.12
Sun-Target sep (deg) : 152.78
Sun-Moon sep (deg)  : 9.47
B (ring opening deg) : -2.42
PA of pole (deg)    : -1.35
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 18.086
C/A sky separation (km) : 57114.9
NAIF SPICE kernels  : RAJobs_U111+rgf15.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
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
Jupiter	I	2043-05-25T17:54:39.980	62.01	-37.30	71486.9	-52.55	-56.04
Jupiter	E	2043-05-25T19:41:29.973	40.37	-15.74	71486.8	-53.48	-56.93