

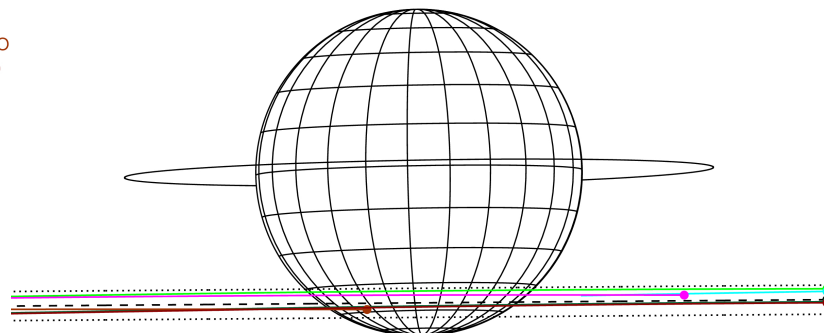
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-07-06T15:35:11.760  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4116861053935370624  
 2Mass ID (if available) : 17424950-2304382

Jupiter 2043-07-06T15:35:11 K7.67 G13.16 Pgt

ICRS Star Coord at Epoch: 17h 42m 49.49302s -23:04:38.29108s  
 RUWE (>1.4 is poor) : 0.81  
 K magnitude : 7.671  
 G magnitude : 13.158  
 RP magnitude : 11.770  
 BP magnitude : 15.489  
 DUPflag : 0  
 Distance (au) : 4.284  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -15.05  
 Sun-Target sep (deg) : 162.16  
 Sun-Moon sep (deg) : 162.66  
 B (ring opening deg) : -2.41  
 PA of pole (deg) : 1.01  
 Pole direction: RA (deg): 268.05669  
 Dec (deg): 64.49732  
 C/A sky separation (") : 18.380  
 C/A sky separation (km) : 57103.7  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



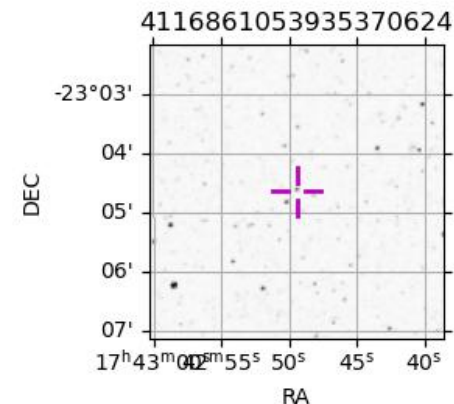
Earth  
 PMO  
 IRTF  
 KAV  
 AAT  
 SAAO  
 MSO



2043-07-06T15:35:11.7600 α: 17 42 49.4930 & -23 04 38.291 C/A \*\*\*\*\* PA 0.45 deg v\_sky -15.05 km/s D 04.28 AU  
 Credit: Styled after SORA/Lucky Star

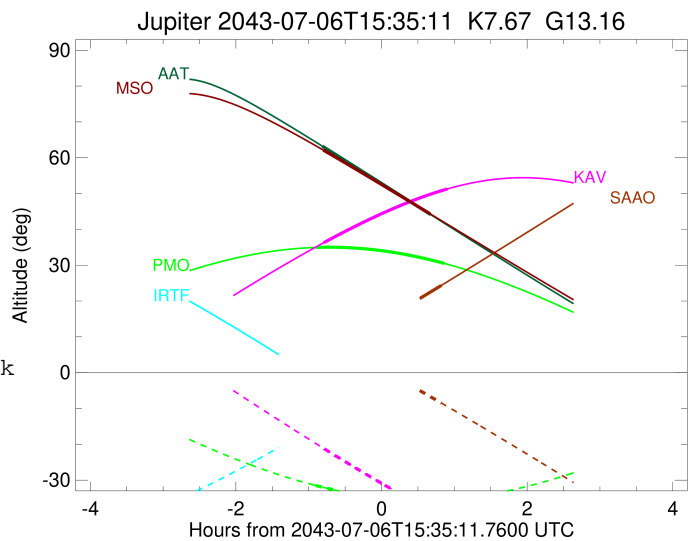
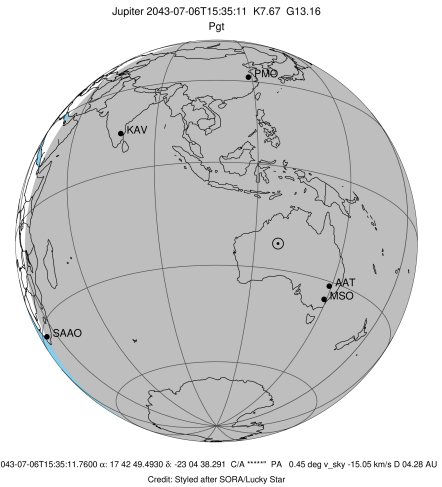
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	JUL 06 14:41 - JUL 06 16:27	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	+ +	JUL 06 14:47 - JUL 06 16:29	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	+ +	JUL 06 14:46 - JUL 06 16:15	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+ +	JUL 06 16:24 - JUL 06 16:24	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	JUL 06 14:47 - JUL 06 16:15	Pie



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-07-06T15:34:01.390
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       : 4116861053935370624
2Mass ID (if available) : 17424950-2304382
ICRS Star Coord at Epoch: 17h 42m 49.49302s -23:04:38.29108s
RUWE (>1.4 is poor) : 0.81
K magnitude           : 7.671
G magnitude           : 13.158
RP magnitude          : 11.770
BP magnitude          : 15.489
DUPflag              : 0
Distance (au)        : 4.284
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.05
Sun-Target sep (deg) : 162.16
Sun-Moon sep (deg)   : 162.92
B (ring opening deg) : -2.41
PA of pole (deg)     : 1.01
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation ("): 16.710
C/A sky separation (km): 51916.7
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
    
```

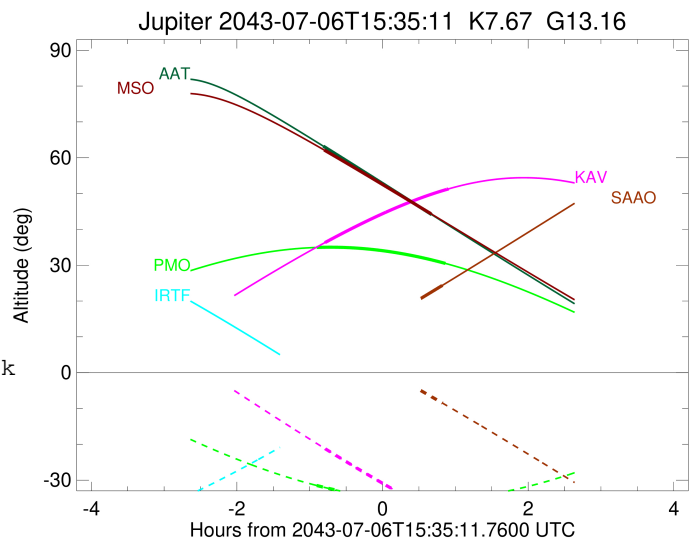
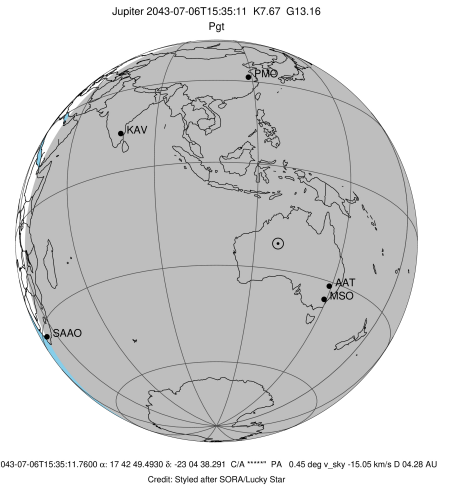


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-07-06T14:41:04.482	34.95	-31.50	71487.7	-47.05	-50.71
Jupiter	E	2043-07-06T16:27:02.953	30.49	-35.30	71487.9	-46.12	-49.81

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-07-06T15:38:48.340
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       : 4116861053935370624
2Mass ID (if available) : 17424950-2304382
ICRS Star Coord at Epoch: 17h 42m 49.49302s -23:04:38.29108s
RUWE (>1.4 is poor) : 0.81
K magnitude           : 7.671
G magnitude           : 13.158
RP magnitude          : 11.770
BP magnitude          : 15.489
DUPflag              : 0
Distance (au)        : 4.284
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.05
Sun-Target sep (deg) : 162.16
Sun-Moon sep (deg)   : 163.46
B (ring opening deg) : -2.41
PA of pole (deg)     : 1.01
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation ("): 17.282
C/A sky separation (km): 53694.1
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
    
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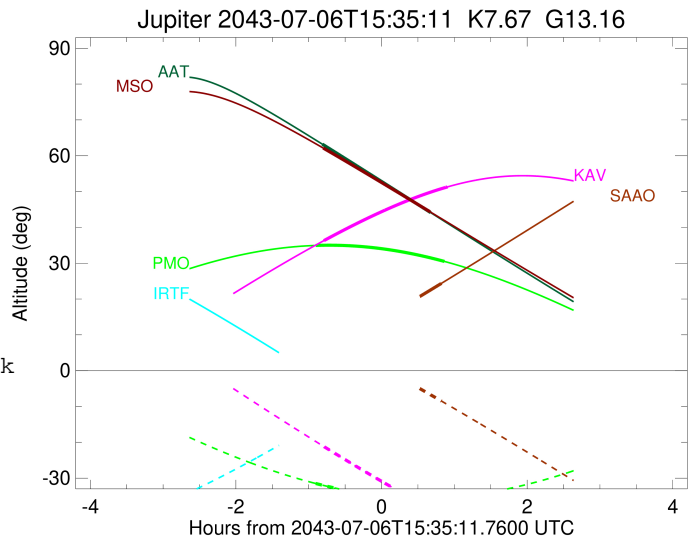
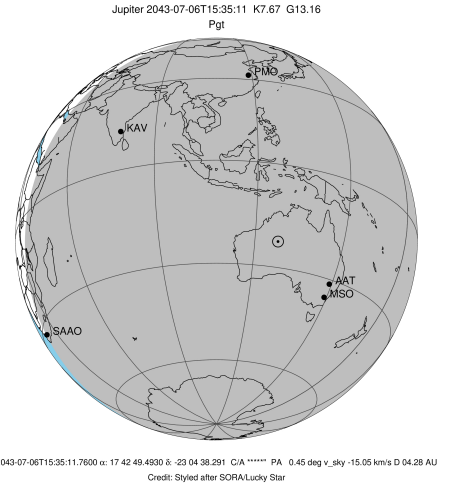


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-07-06T14:47:53.369	36.32	-21.22	71487.4	-49.57	-53.17
Jupiter	E	2043-07-06T16:29:34.721	51.29	-40.93	71487.6	-47.82	-51.47

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-07-06T15:30:53.560
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      : 4116861053935370624
2Mass ID (if available) : 17424950-2304382
ICRS Star Coord at Epoch: 17h 42m 49.49302s -23:04:38.29108s
RUWE (>1.4 is poor) : 0.81
K magnitude          : 7.671
G magnitude          : 13.158
RP magnitude         : 11.770
BP magnitude         : 15.489
DUPflag             : 0
Distance (au)       : 4.284
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.05
Sun-Target sep (deg) : 162.16
Sun-Moon sep (deg)   : 162.33
B (ring opening deg) : -2.41
PA of pole (deg)     : 1.01
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation ("): 18.823
C/A sky separation (km): 58481.4
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
    
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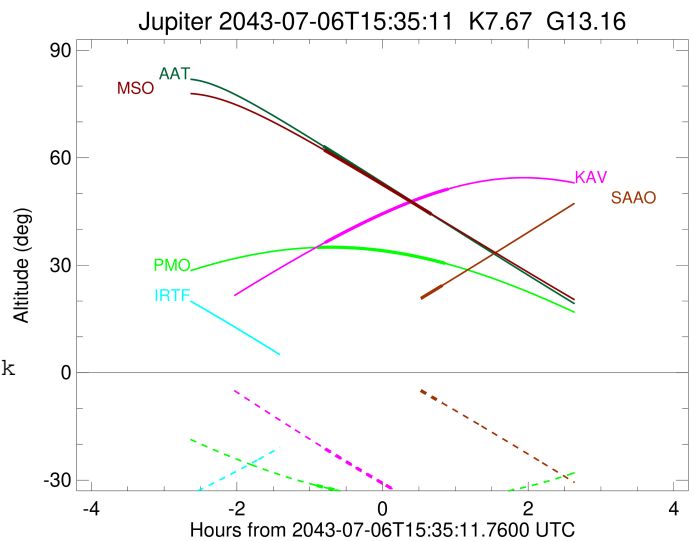
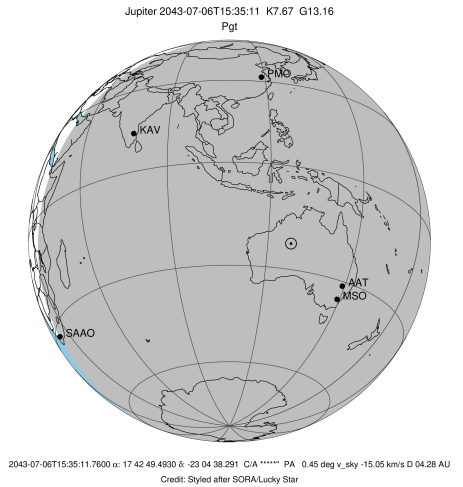


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-07-06T14:46:24.531	63.22	-78.06	71486.7	-55.06	-58.43
Jupiter	E	2043-07-06T16:15:32.324	44.16	-60.56	71486.7	-54.67	-58.06

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-07-06T15:41:49.020
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        : 4116861053935370624
2Mass ID (if available) : 17424950-2304382
ICRS Star Coord at Epoch: 17h 42m 49.49302s -23:04:38.29108s
RUWE (>1.4 is poor)  : 0.81
K magnitude           : 7.671
G magnitude           : 13.158
RP magnitude          : 11.770
BP magnitude          : 15.489
DUPflag              : 0
Distance (au)         : 4.284
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.05
Sun-Target sep (deg)  : 162.16
Sun-Moon sep (deg)    : 163.33
B (ring opening deg) : -2.41
PA of pole (deg)      : 1.01
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (") : 19.339
C/A sky separation (km) : 60085.2
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
    
```

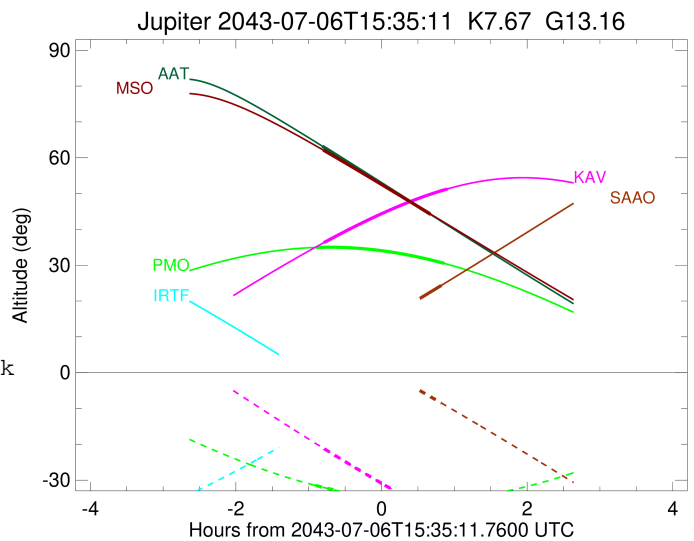
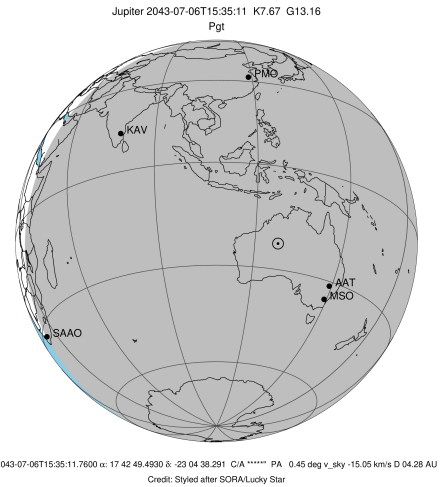


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-07-06T14:58:55.697	7.09	7.63x	71486.2	-58.26	-61.44
Jupiter	E	2043-07-06T16:24:30.239	24.36	-8.47	71486.5	-55.98	-59.30

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-07-06T15:31:04.980
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      : 4116861053935370624
2Mass ID (if available) : 17424950-2304382
ICRS Star Coord at Epoch: 17h 42m 49.49302s -23:04:38.29108s
RUWE (>1.4 is poor) : 0.81
K magnitude          : 7.671
G magnitude          : 13.158
RP magnitude         : 11.770
BP magnitude         : 15.489
DUPflag             : 0
Distance (au)       : 4.284
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.05
Sun-Target sep (deg) : 162.16
Sun-Moon sep (deg)  : 162.33
B (ring opening deg) : -2.41
PA of pole (deg)    : 1.01
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (" ) : 18.958
C/A sky separation (km) : 58900.3
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	2043-07-06T14:47:12.358	62.13	-74.96	71486.6	-55.66	-58.99
Jupiter	E	2043-07-06T16:15:06.687	44.37	-59.83	71486.6	-55.24	-58.60