

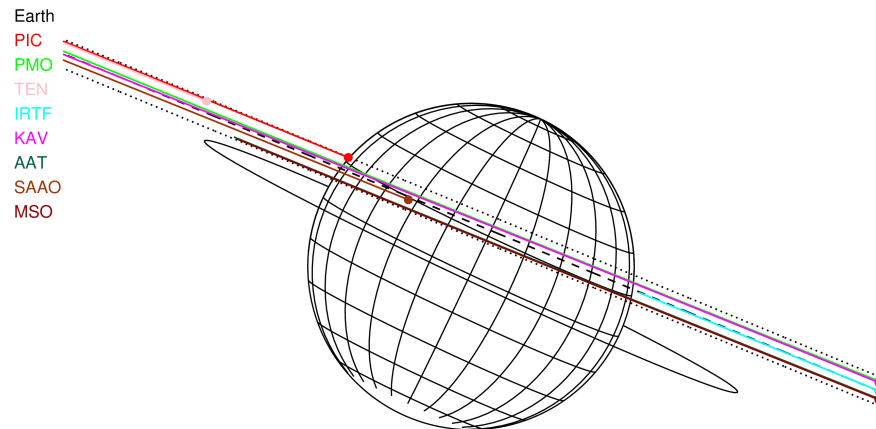
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2034-10-15T16:21:45.870
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 2546975053172103168
 2Mass ID (if available) : 00265677+0109015

Jupiter 2034-10-15T16:21:45 K9.99 G11.34 Pgt

ICRS Star Coord at Epoch: 00h 26m 56.79600s +01:09:00.60543s
 RUWE (>1.4 is poor) : 1.00
 K magnitude : 9.986
 G magnitude : 11.341
 RP magnitude : 10.861
 BP magnitude : 11.661
 DUPflag : 1
 Distance (au) : 3.985
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.01
 Sun-Target sep (deg) : 164.65
 Sun-Moon sep (deg) : 127.78
 B (ring opening deg) : 2.69
 PA of pole (deg) : -25.22
 Pole direction: RA (deg): 268.05641
 Dec (deg): 64.49674
 C/A sky separation (") : 6.181
 C/A sky separation (km) : 17862.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

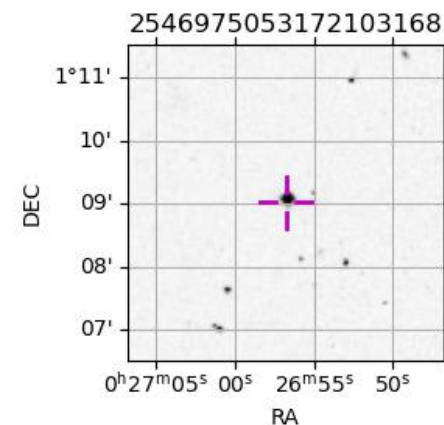


2034-10-15T16:21:45.870000: 00 26 56.796000: +01 09 00.605433 C/A 6.189 PA 157.53 deg v_sky -15.01 km/s D 03.98 AU
 Credit: Styled after SORA/Lucky Star



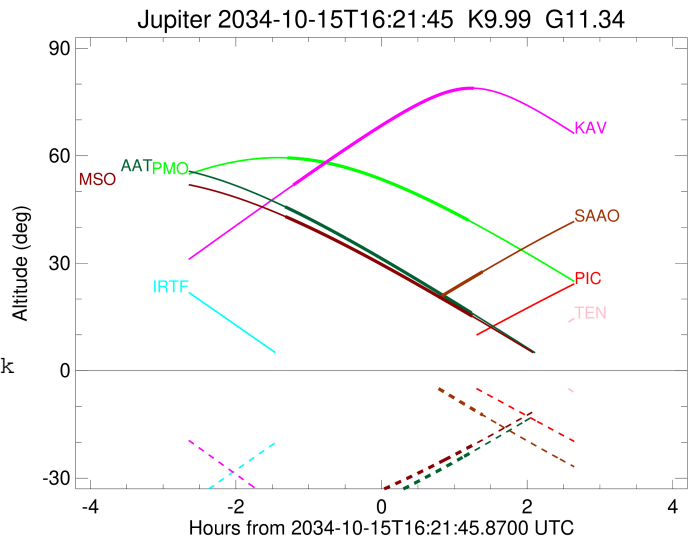
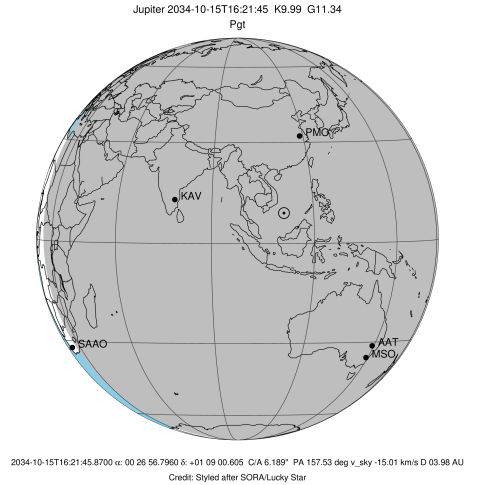
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	OCT 15 15:04 - OCT 15 17:33	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	+ +	OCT 15 15:09 - OCT 15 17:37	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	+ +	OCT 15 15:02 - OCT 15 17:36	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+ +	OCT 15 17:45 - OCT 15 17:45	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	OCT 15 15:02 - OCT 15 17:36	Pie



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2034-10-15T16:18:38.200
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      : 2546975053172103168
2Mass ID (if available) : 00265677+0109015
ICRS Star Coord at Epoch: 00h 26m 56.79600s +01:09:00.60543s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.986
G magnitude          : 11.341
RP magnitude         : 10.861
BP magnitude         : 11.661
DUPflag             : 1
Distance (au)       : 3.985
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.01
Sun-Target sep (deg) : 164.65
Sun-Moon sep (deg)  : 128.10
B (ring opening deg) : 2.69
PA of pole (deg)    : -25.22
Pole direction: RA (deg): 268.05641
Dec (deg): 64.49674
C/A sky separation ("): 6.968
C/A sky separation (km): 20138.4
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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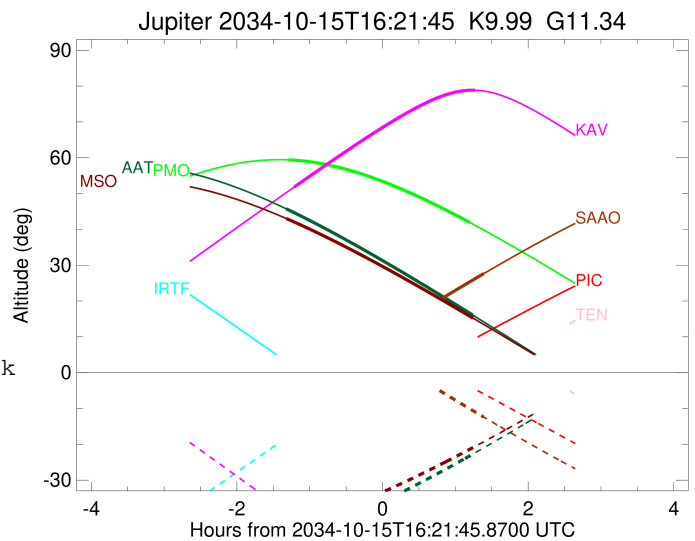
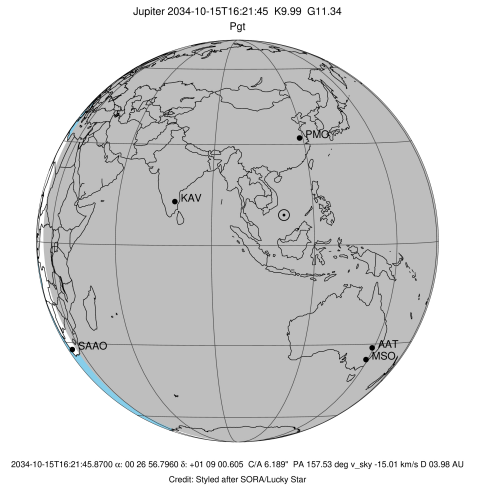


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2034-10-15T15:04:14.994	59.39	-64.44	71490.9	19.63	22.17
Jupiter	E	2034-10-15T17:33:14.936	42.01	-56.75	71491.5	13.12	14.92

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2034-10-15T16:23:28.430
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     : 2546975053172103168
2Mass ID (if available) : 00265677+0109015
ICRS Star Coord at Epoch: 00h 26m 56.79600s +01:09:00.60543s
RUWE (>1.4 is poor) : 1.00
K magnitude        : 9.986
G magnitude        : 11.341
RP magnitude       : 10.861
BP magnitude       : 11.661
DUPflag           : 1
Distance (au)     : 3.985
f0 (km)           : 0.00
g0 (km)           : 0.00
skyplane vel. (km/s) : -15.01
Sun-Target sep (deg) : 164.65
Sun-Moon sep (deg) : 128.57
B (ring opening deg) : 2.69
PA of pole (deg)  : -25.22
Pole direction: RA (deg): 268.05641
Dec (deg): 64.49674
C/A sky separation (") : 6.835
C/A sky separation (km) : 19752.3
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
    
```

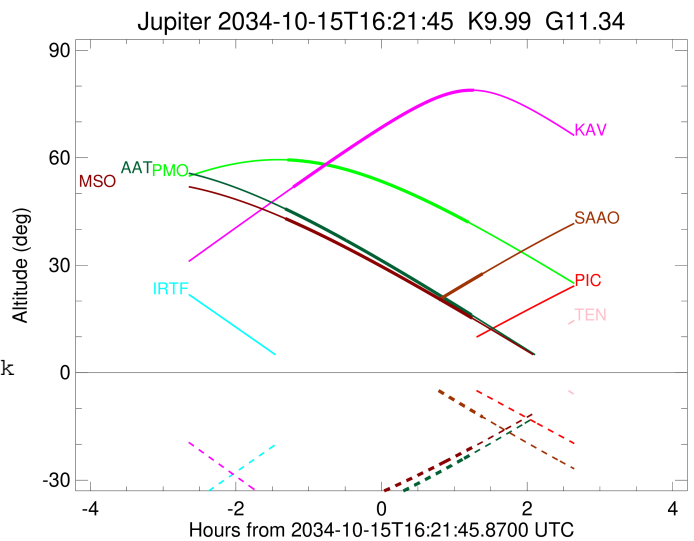
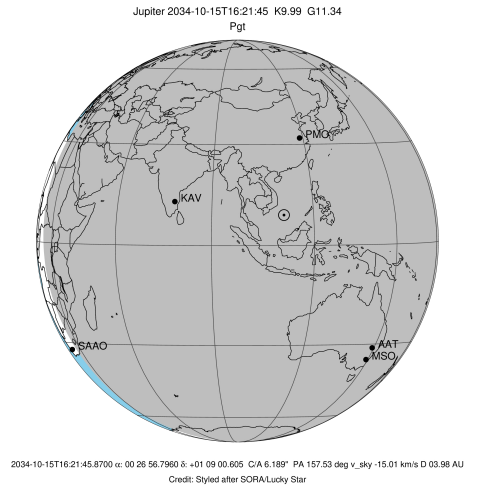


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2034-10-15T15:08:59.831	51.80	-40.44	71490.9	19.36	21.87
Jupiter	E	2034-10-15T17:37:45.987	78.84	-76.54	71491.5	12.63	14.36

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2034-10-15T16:18:55.930
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        : 2546975053172103168
2Mass ID (if available) : 00265677+0109015
ICRS Star Coord at Epoch: 00h 26m 56.79600s +01:09:00.60543s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.986
G magnitude           : 11.341
RP magnitude          : 10.861
BP magnitude          : 11.661
DUPflag              : 1
Distance (au)         : 3.985
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.01
Sun-Target sep (deg)  : 164.65
Sun-Moon sep (deg)    : 127.89
B (ring opening deg) : 2.69
PA of pole (deg)      : -25.22
Pole direction: RA (deg): 268.05641
Dec (deg): 64.49674
C/A sky separation (" ) : 4.543
C/A sky separation (km) : 13128.7
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
    
```

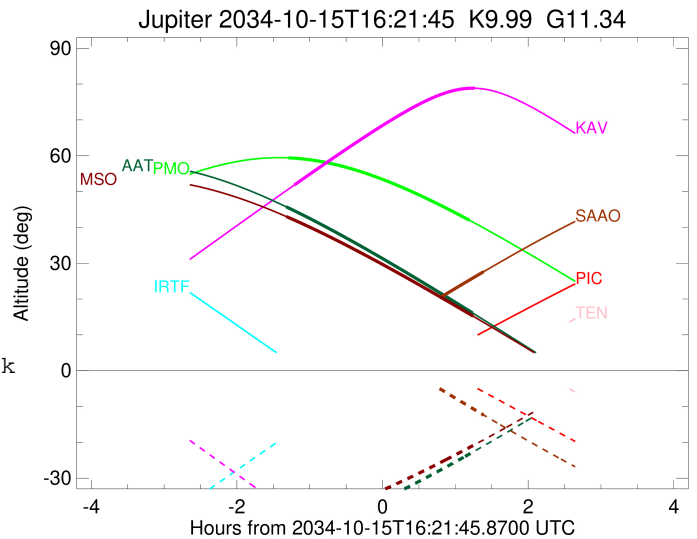
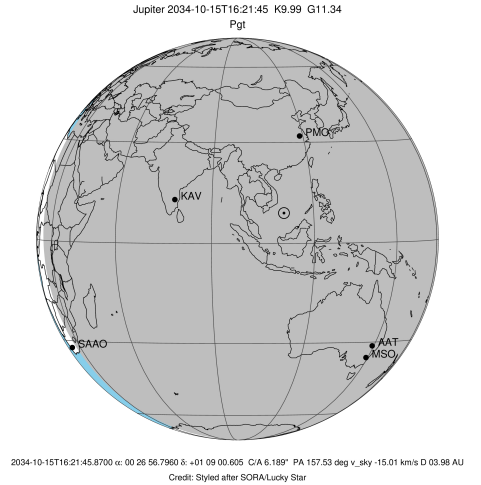


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2034-10-15T15:02:20.034	45.74	-46.54	71491.4	13.72	15.60
Jupiter	E	2034-10-15T17:36:02.520	16.10	-22.76	71491.8	7.56	8.63

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2034-10-15T16:28:37.350
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       : 2546975053172103168
2Mass ID (if available) : 00265677+0109015
ICRS Star Coord at Epoch: 00h 26m 56.79600s +01:09:00.60543s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.986
G magnitude           : 11.341
RP magnitude          : 10.861
BP magnitude          : 11.661
DUPflag              : 1
Distance (au)        : 3.985
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.01
Sun-Target sep (deg) : 164.65
Sun-Moon sep (deg)   : 128.44
B (ring opening deg) : 2.69
PA of pole (deg)     : -25.22
Pole direction: RA (deg): 268.05641
Dec (deg): 64.49674
C/A sky separation ("): 5.772
C/A sky separation (km): 16680.5
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
    
```

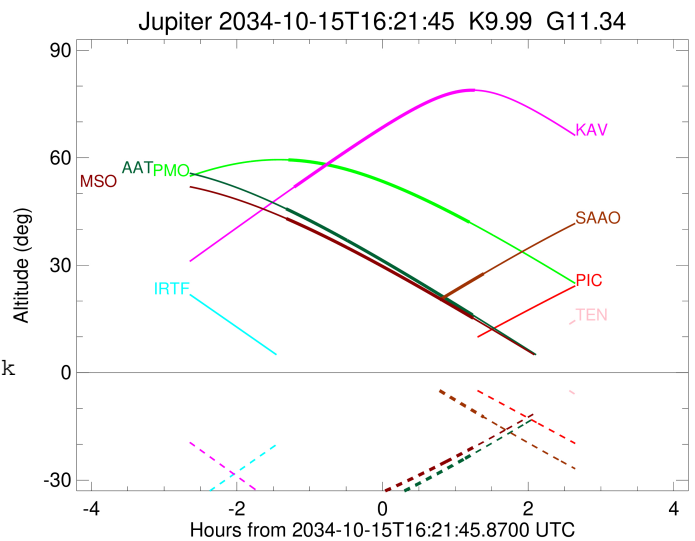
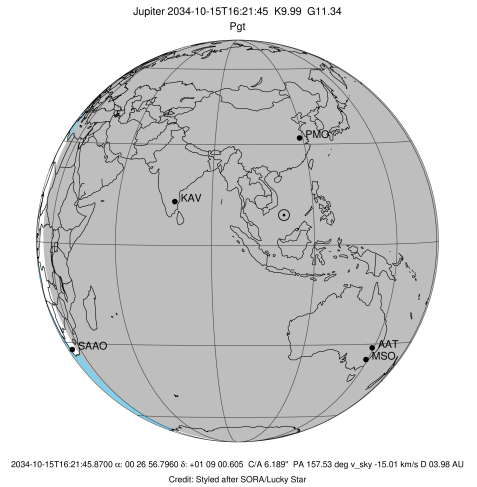


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2034-10-15T15:11:33.160	-4.31x	19.59x	71491.2	16.31	18.49
Jupiter	E	2034-10-15T17:45:07.867	27.63	-12.38	71491.7	10.46	11.92

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2034-10-15T16:19:16.710
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      : 2546975053172103168
2Mass ID (if available) : 00265677+0109015
ICRS Star Coord at Epoch: 00h 26m 56.79600s +01:09:00.60543s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.986
G magnitude          : 11.341
RP magnitude         : 10.861
BP magnitude         : 11.661
DUPflag             : 1
Distance (au)       : 3.985
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -15.01
Sun-Target sep (deg) : 164.65
Sun-Moon sep (deg)  : 127.90
B (ring opening deg) : 2.69
PA of pole (deg)    : -25.22
Pole direction: RA (deg): 268.05641
Dec (deg): 64.49674
C/A sky separation (" ) : 4.449
C/A sky separation (km) : 12858.3
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	2034-10-15T15:02:33.670	43.01	-42.91	71491.5	13.49	15.33
Jupiter	E	2034-10-15T17:36:29.272	15.21	-20.87	71491.8	7.36	8.40