

target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2046-10-01T13:49:00.830
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 2551787645629895808
 2Mass ID (if available) : 00541206+0402165

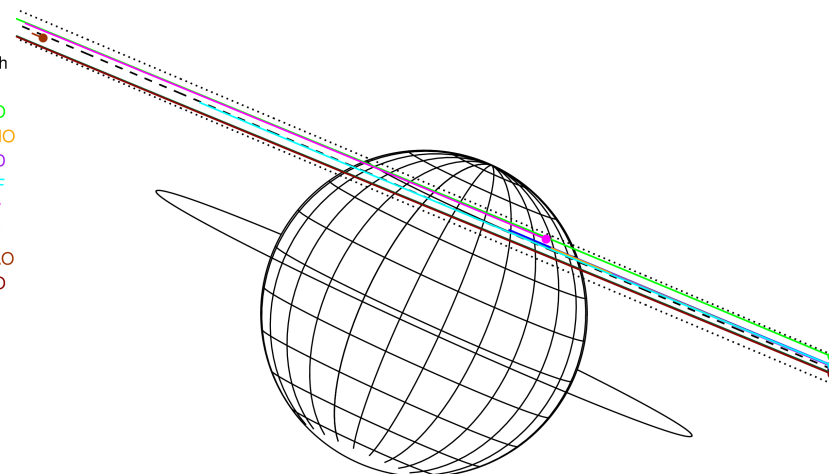
Jupiter 2046-10-01T13:49:00 K9.75 G10.89 Pgt

ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
 RUWE (>1.4 is poor) : 1.05
 K magnitude : 9.748
 G magnitude : 10.888
 RP magnitude : 10.479
 BP magnitude : 11.136
 DUPflag : 0
 Distance (au) : 3.957
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.94
 Sun-Target sep (deg) : 173.66
 Sun-Moon sep (deg) : 163.65
 B (ring opening deg) : 2.93
 PA of pole (deg) : -24.55
 Pole direction: RA (deg): 268.05714
 Dec (deg): 64.49722
 C/A sky separation (") : 16.446
 C/A sky separation (km) : 47202.0
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



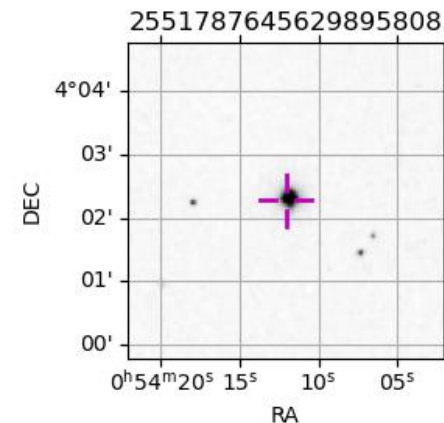
2046-10-01T13:49:00.8300 a: 00 54 12.1801 s: +04 02 16.1212 C/A ***** PA 157.05 deg v_sky -15.94 km/s D 03.96 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PAL
 PMO
 KPNO
 MCD
 IRTF
 KAV
 AAT
 SAAO
 MSO



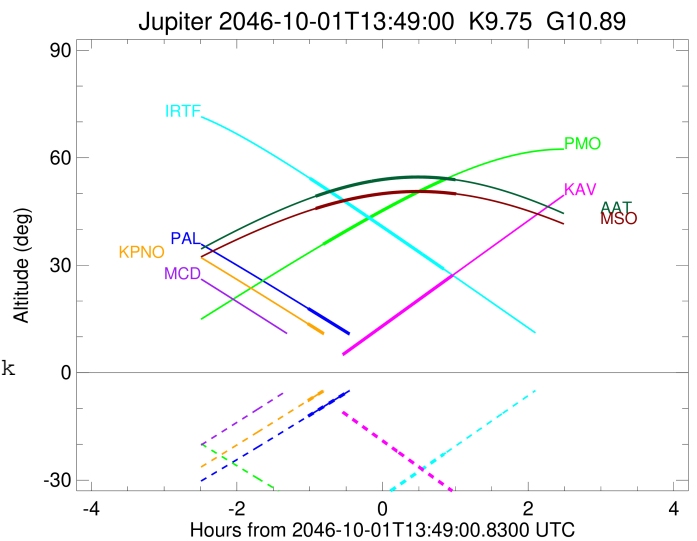
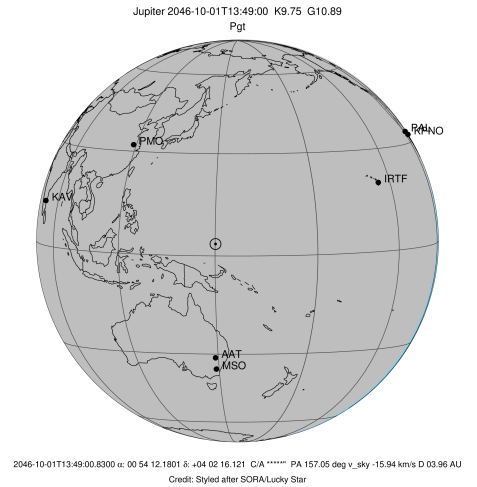
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+	OCT 01 12:47 - OCT 01 12:47	Pin
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	OCT 01 13:00 - OCT 01 14:42	Pie
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	OCT 01 12:47 - OCT 01 12:47	Pin
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	+ +	OCT 01 12:49 - OCT 01 14:39	Pie
KAV	Kavalur Observatory	12.6	78.8	+	OCT 01 14:46 - OCT 01 14:46	Pne
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 01 12:53 - OCT 01 14:49	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	OCT 01 12:53 - OCT 01 14:49	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2046-10-01T13:42:26.920
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: 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       : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 9.748
G magnitude          : 10.888
RP magnitude         : 10.479
BP magnitude         : 11.136
DUPflag             : 0
Distance (au)        : 3.957
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg) : 173.66
Sun-Moon sep (deg)   : 162.74
B (ring opening deg) : 2.93
PA of pole (deg)     : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation ("): 16.831
C/A sky separation (km): 48307.9
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
    
```

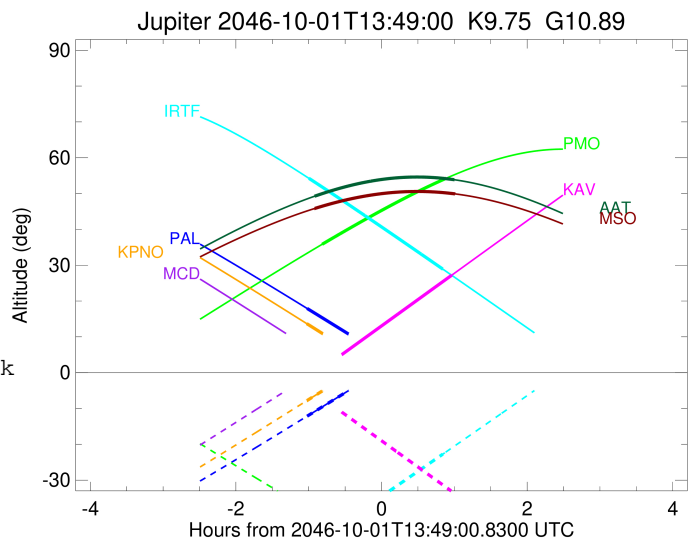
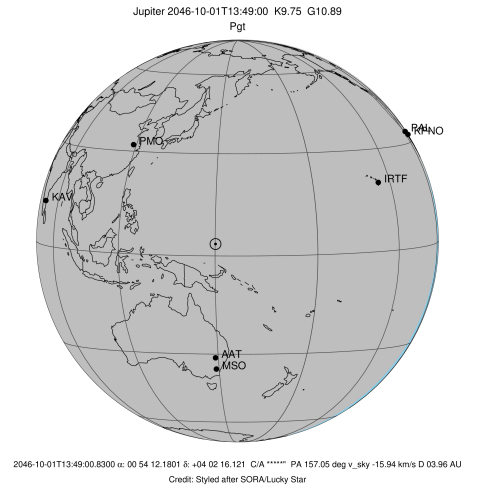


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2046-10-01T12:47:40.882	17.93	-12.16	71486.3	44.05	47.77
Jupiter	E	2046-10-01T14:37:30.136	-5.05x	10.70x	71486.9	40.96	44.68

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2046-10-01T13:51:22.570
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      : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 9.748
G magnitude          : 10.888
RP magnitude         : 10.479
BP magnitude         : 11.136
DUPflag             : 0
Distance (au)       : 3.957
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg) : 173.66
Sun-Moon sep (deg)  : 163.85
B (ring opening deg) : 2.93
PA of pole (deg)    : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation ("): 17.862
C/A sky separation (km): 51265.3
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
    
```

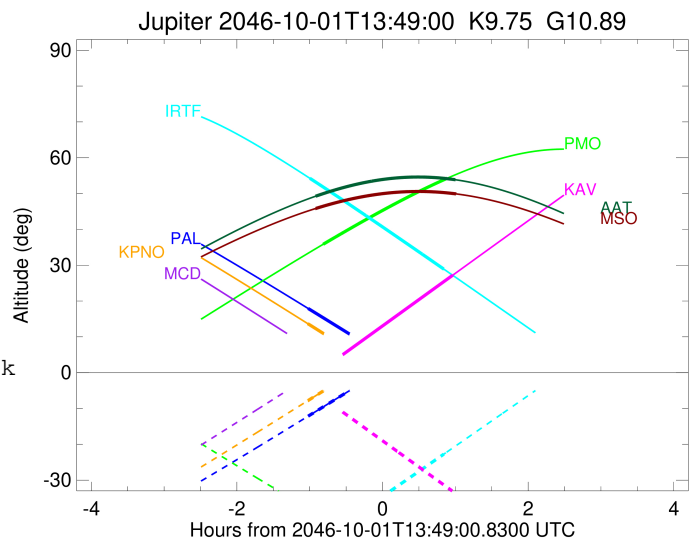
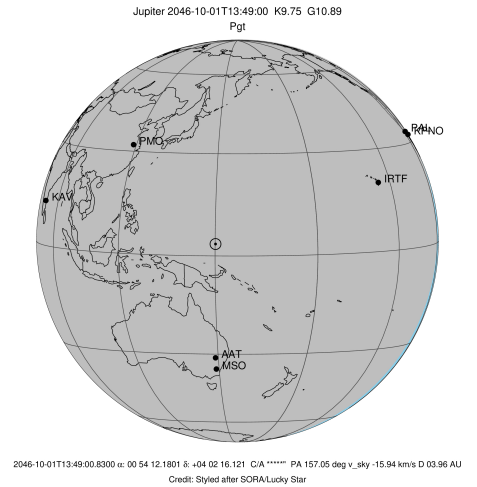


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2046-10-01T13:00:03.843	35.82	-40.21	71485.5	47.79	51.44
Jupiter	E	2046-10-01T14:42:30.863	54.28	-56.91	71486.4	43.63	47.35

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2046-10-01T13:42:20.500
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: 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        : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 9.748
G magnitude           : 10.888
RP magnitude          : 10.479
BP magnitude          : 11.136
DUPflag              : 0
Distance (au)         : 3.957
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg)  : 173.66
Sun-Moon sep (deg)   : 162.72
B (ring opening deg) : 2.93
PA of pole (deg)     : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation (") : 16.787
C/A sky separation (km) : 48182.1
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
    
```

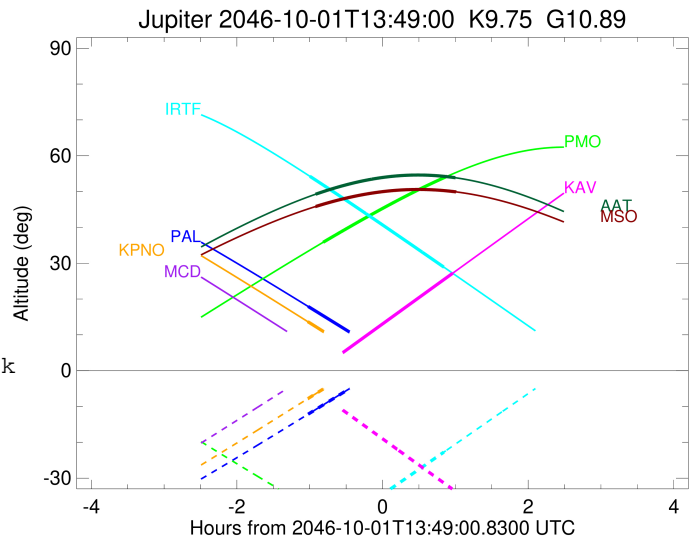
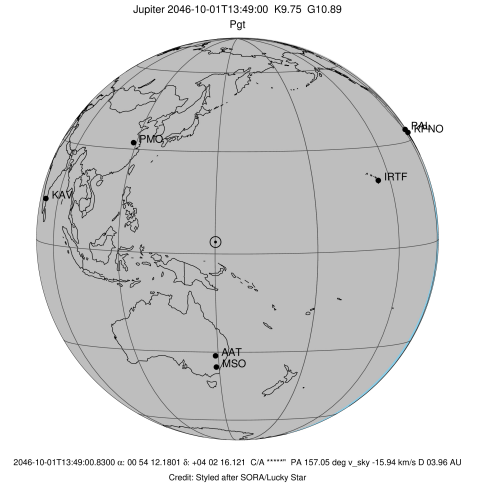


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2046-10-01T12:47:20.926	13.70	-7.85	71486.3	43.87	47.58
Jupiter	E	2046-10-01T14:37:37.868	-9.69x	15.36x	71486.9	40.88	44.59

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2046-10-01T13:44:19.460
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: 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       : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 9.748
G magnitude           : 10.888
RP magnitude          : 10.479
BP magnitude          : 11.136
DUPflag              : 0
Distance (au)        : 3.957
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg) : 173.66
Sun-Moon sep (deg)   : 163.17
B (ring opening deg) : 2.93
PA of pole (deg)     : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation ("): 16.442
C/A sky separation (km): 47189.3
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
    
```

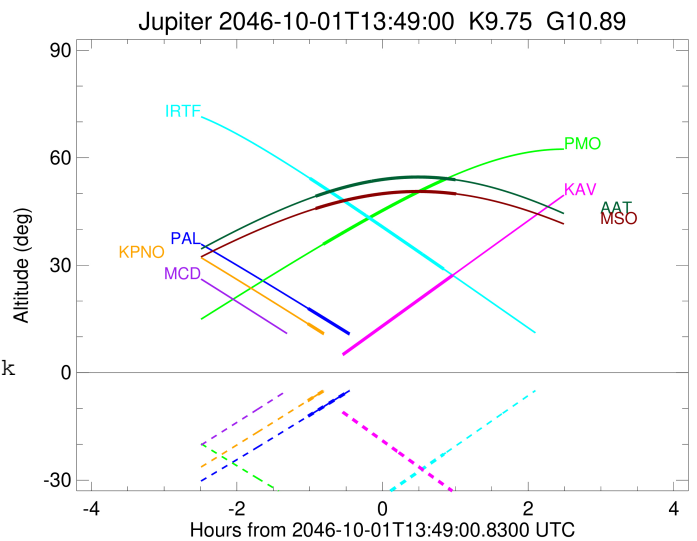
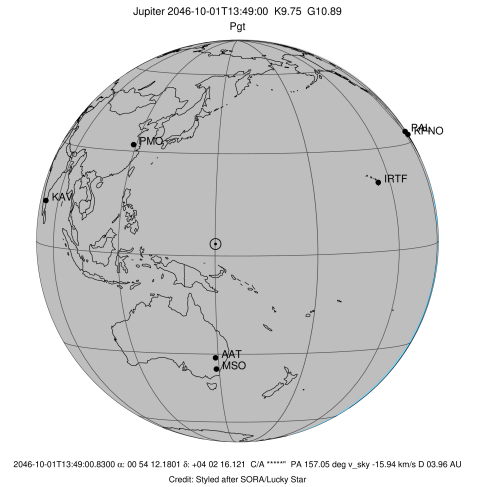


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2046-10-01T12:49:18.176	54.22	-48.18	71486.5	43.23	46.94
Jupiter	E	2046-10-01T14:39:34.080	28.90	-22.74	71487.2	39.38	43.08

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2046-10-01T13:54:33.950
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      : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 9.748
G magnitude          : 10.888
RP magnitude         : 10.479
BP magnitude         : 11.136
DUPflag             : 0
Distance (au)       : 3.957
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg) : 173.66
Sun-Moon sep (deg)  : 164.19
B (ring opening deg) : 2.93
PA of pole (deg)    : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation ("): 17.672
C/A sky separation (km): 50719.3
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
    
```

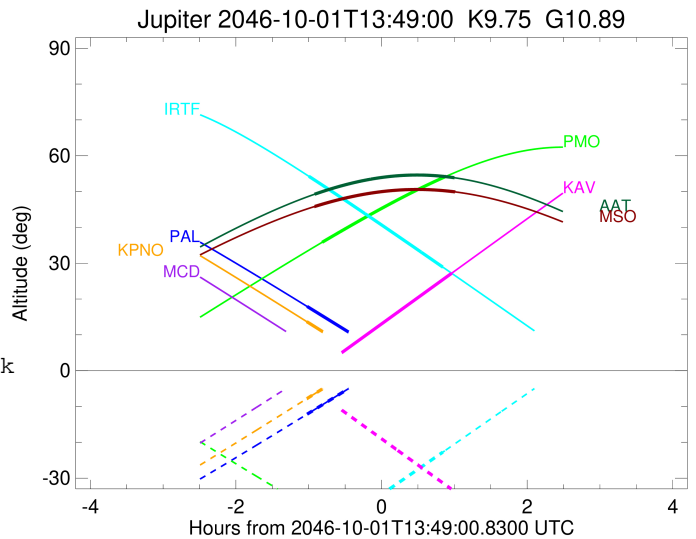
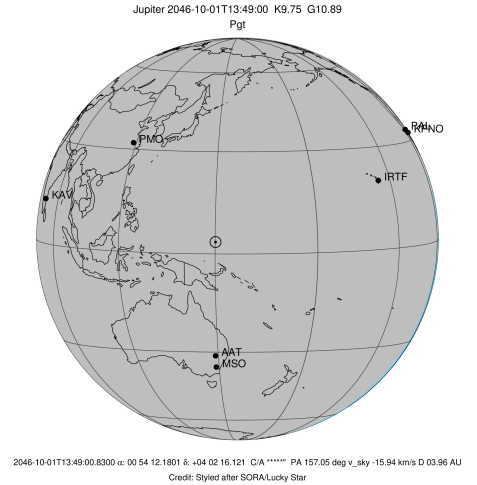


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2046-10-01T13:01:56.624	1.53x	-7.51	71485.7	46.90	50.57
Jupiter	E	2046-10-01T14:46:52.240	27.20	-33.11	71486.5	43.20	46.92

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2046-10-01T13:51:34.300
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       : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 9.748
G magnitude           : 10.888
RP magnitude         : 10.479
BP magnitude         : 11.136
DUPflag              : 0
Distance (au)        : 3.957
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg) : 173.66
Sun-Moon sep (deg)   : 164.36
B (ring opening deg) : 2.93
PA of pole (deg)     : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation ("): 15.349
C/A sky separation (km): 44052.9
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
    
```

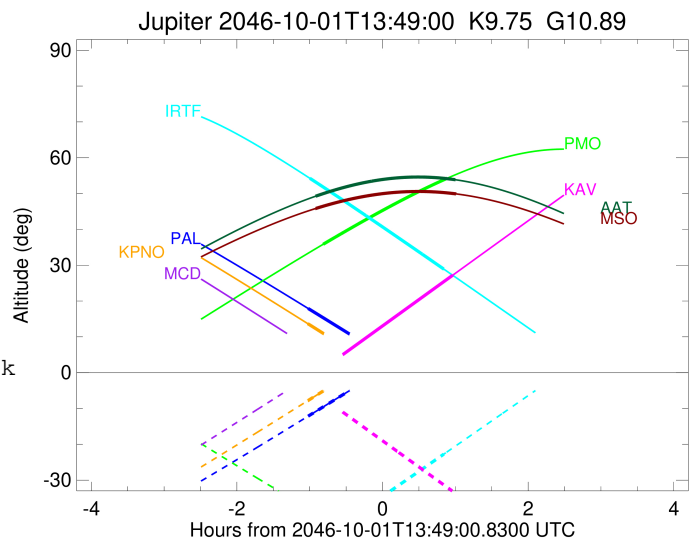
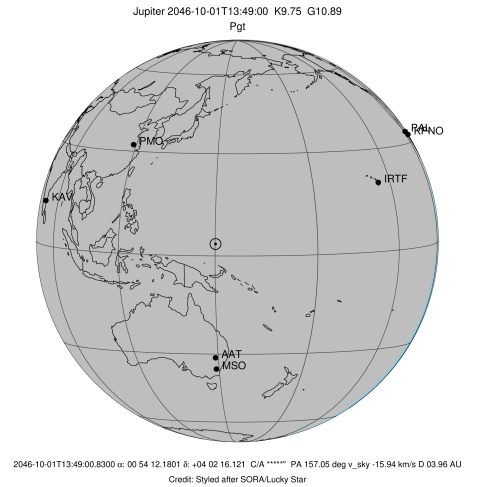


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2046-10-01T12:53:57.653	49.26	-52.73	71487.1	40.13	43.84
Jupiter	E	2046-10-01T14:49:07.124	53.85	-53.00	71487.9	35.85	39.47


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2046-10-01T13:51:40.110
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       : 2551787645629895808
2Mass ID (if available) : 00541206+0402165
ICRS Star Coord at Epoch: 00h 54m 12.18010s +04:02:16.12121s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 9.748
G magnitude           : 10.888
RP magnitude         : 10.479
BP magnitude         : 11.136
DUPflag              : 0
Distance (au)        : 3.957
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.94
Sun-Target sep (deg) : 173.66
Sun-Moon sep (deg)   : 164.38
B (ring opening deg) : 2.93
PA of pole (deg)     : -24.55
Pole direction: RA (deg): 268.05714
Dec (deg): 64.49722
C/A sky separation (") : 15.231
C/A sky separation (km) : 43715.5
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	2046-10-01T12:53:43.909	45.80	-49.01	71487.2	39.76	43.47
Jupiter	E	2046-10-01T14:49:32.584	49.90	-49.26	71488.0	35.53	39.14