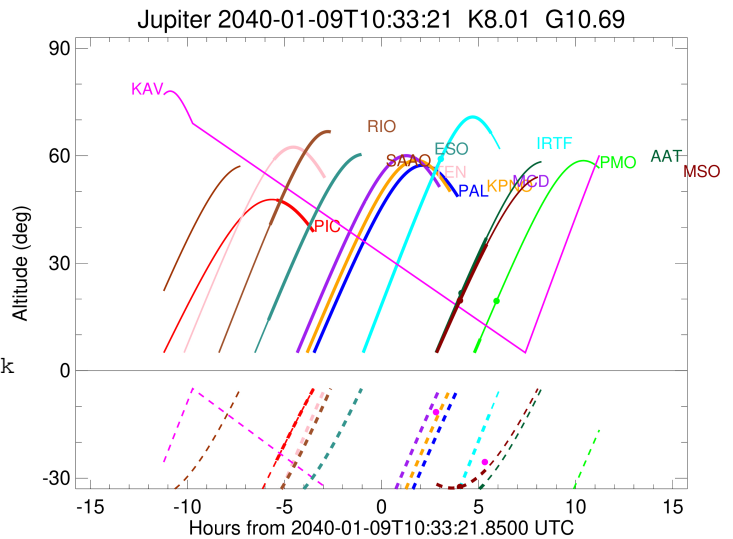
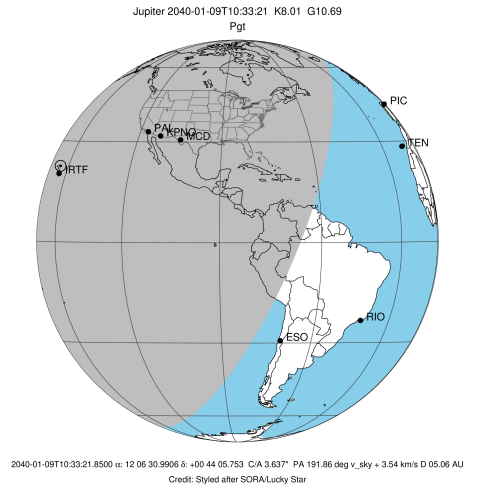




```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2040-01-09T10:50:41.130
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: 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       : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude           : 8.012
G magnitude           : 10.687
RP magnitude          : 9.890
BP magnitude          : 11.377
DUPflag              : 1
Distance (au)        : 5.060
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)   : 41.78
B (ring opening deg) : -2.20
PA of pole (deg)     : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 5.054
C/A sky separation (km) : 18549.5
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
    
```

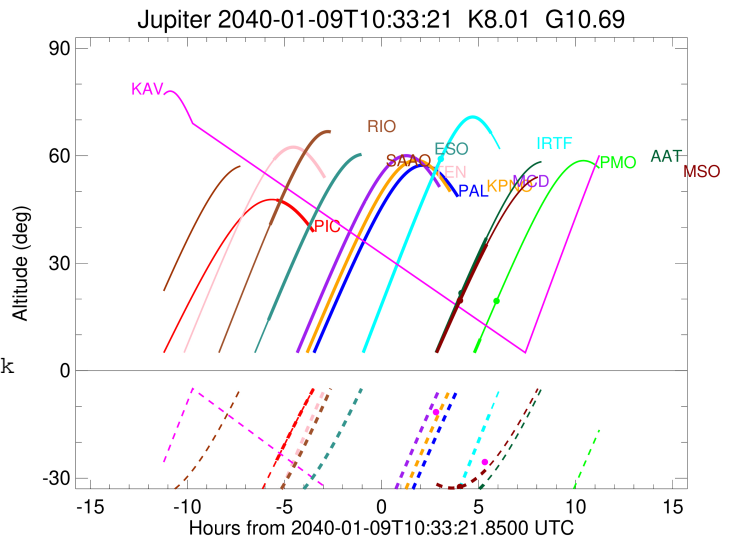
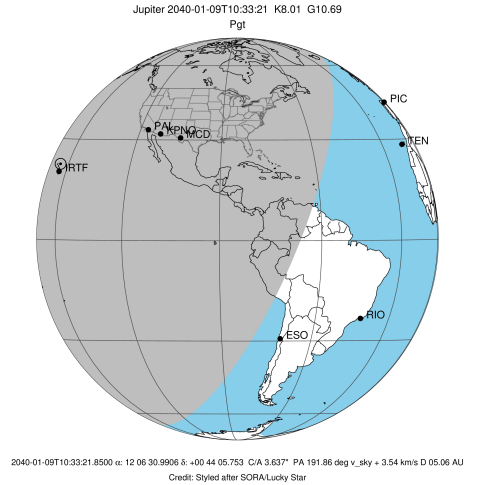


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T05:09:15.445	47.64	-25.03	71490.6	27.67	30.90
Jupiter	E	2040-01-09T16:05:05.783	-45.44x	5.06x	71492.0	0.65	0.74

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:22:39.380
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      : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude          : 8.012
G magnitude          : 10.687
RP magnitude         : 9.890
BP magnitude         : 11.377
DUPflag             : 1
Distance (au)       : 5.061
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)  : 41.92
B (ring opening deg) : -2.20
PA of pole (deg)    : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 4.442
C/A sky separation (km) : 16302.2
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
    
```

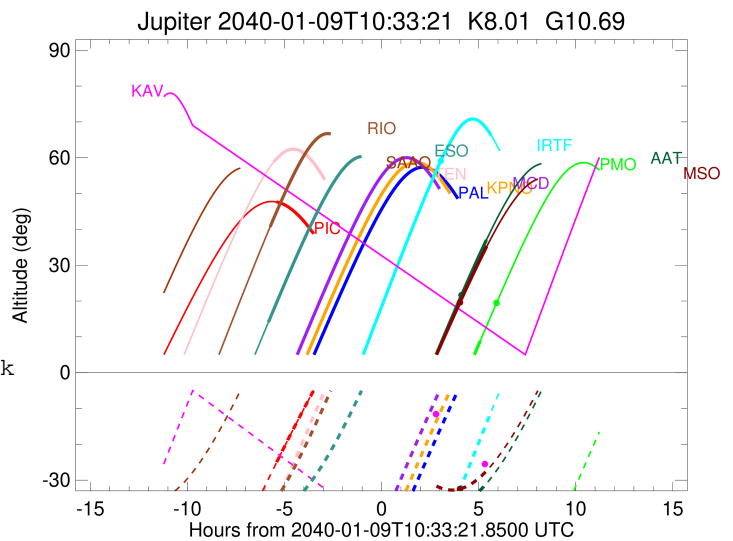
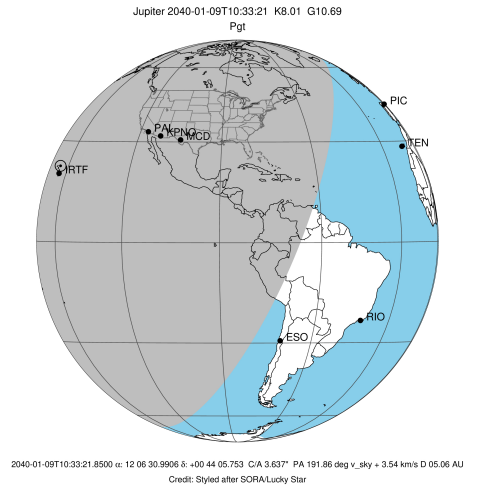


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T05:28:00.897	-30.48x	32.93x	71490.6	27.66	30.88
Jupiter	E	2040-01-09T15:38:47.324	8.91	-77.78	71492.0	-1.20	-1.37

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:54:44.240
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : TEN
Location            : Teide Obs./Tenerife
Latitude (deg)      : 28.30050
E. Longitude (deg)  : 343.48909
Altitude (km)       : 2.395
Gaia source ID      : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude          : 8.012
G magnitude          : 10.687
RP magnitude         : 9.890
BP magnitude         : 11.377
DUPflag             : 1
Distance (au)       : 5.060
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)  : 41.84
B (ring opening deg) : -2.20
PA of pole (deg)    : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 4.739
C/A sky separation (km) : 17393.6
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
    
```

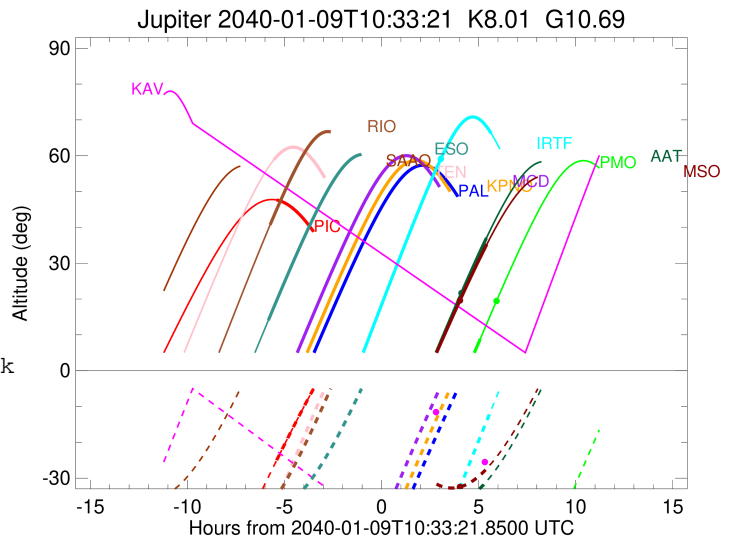
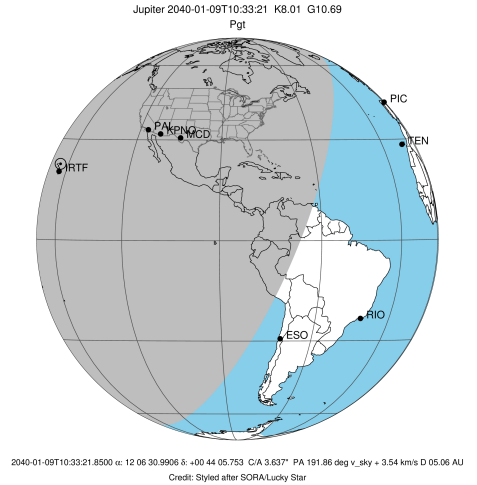


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T05:00:48.838	58.85	-38.49	71490.7	26.30	29.42
Jupiter	E	2040-01-09T16:14:47.105	-51.97x	23.31x	71492.0	-0.17	-0.19

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:03:56.280
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       : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude           : 8.012
G magnitude           : 10.687
RP magnitude          : 9.890
BP magnitude          : 11.377
DUPflag              : 1
Distance (au)         : 5.061
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)   : 42.95
B (ring opening deg) : -2.20
PA of pole (deg)     : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 3.880
C/A sky separation (km) : 14242.9
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
    
```

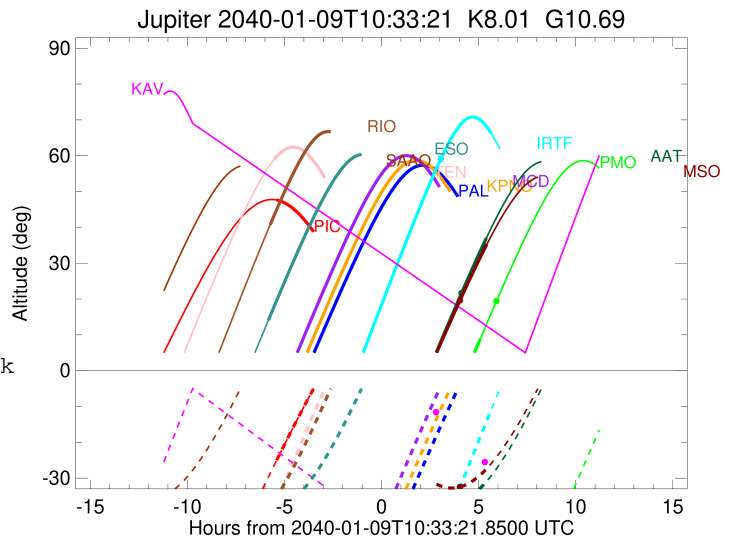
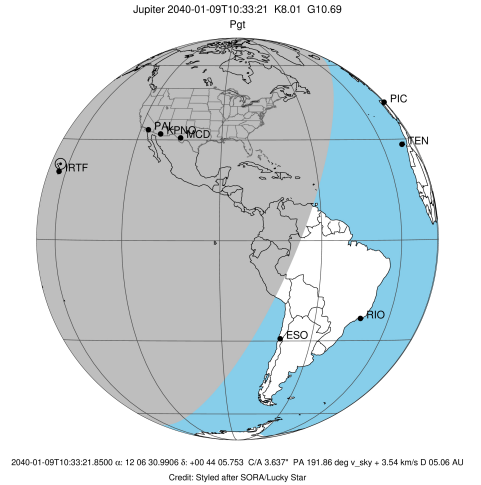


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T04:55:51.934	-58.43x	-13.33	71490.8	25.51	28.57
Jupiter	E	2040-01-09T16:12:17.525	66.24	-10.93	71492.0	-1.10	-1.26

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:54:31.660
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : RIO
Location            : Rio de Janeiro
Latitude (deg)      : -22.89506
E. Longitude (deg)  : 316.77708
Altitude (km)       : 0.033
Gaia source ID      : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude          : 8.012
G magnitude          : 10.687
RP magnitude         : 9.890
BP magnitude         : 11.377
DUPflag             : 1
Distance (au)       : 5.060
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)  : 41.98
B (ring opening deg) : -2.20
PA of pole (deg)    : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 3.213
C/A sky separation (km) : 11791.9
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
    
```

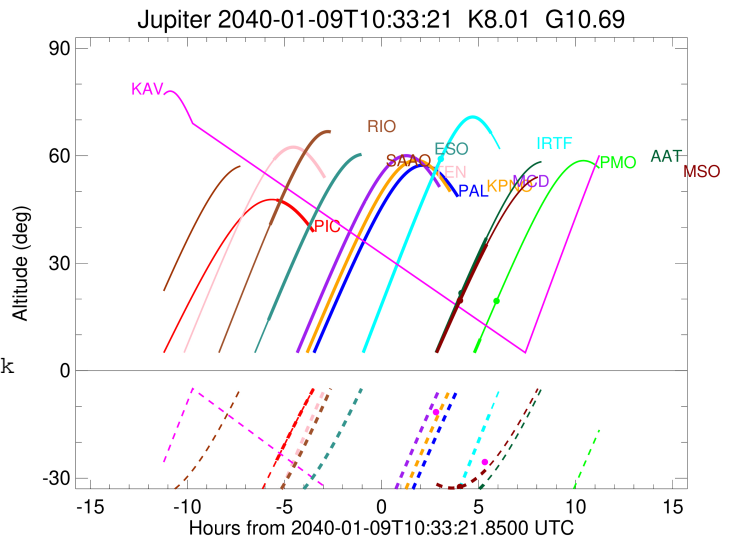
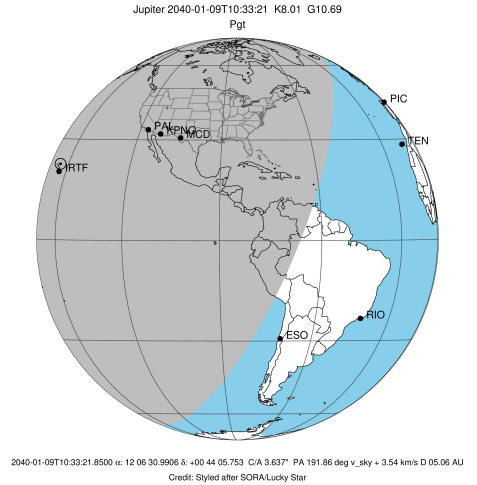


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T04:49:05.431	40.68	-37.78	71491.1	21.48	24.20
Jupiter	E	2040-01-09T16:34:12.665	-38.39x	68.20x	71492.0	-4.26	-4.87

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:42:21.500
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : ESO
Location             : European Southern Obs. (3.6m)
Latitude (deg)       : -29.26097
E. Longitude (deg)   : 289.26831
Altitude (km)        : 2.400
Gaia source ID       : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude           : 8.012
G magnitude           : 10.687
RP magnitude         : 9.890
BP magnitude         : 11.377
DUPflag              : 1
Distance (au)        : 5.060
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)   : 42.34
B (ring opening deg) : -2.20
PA of pole (deg)     : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 2.889
C/A sky separation (km) : 10601.7
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
    
```

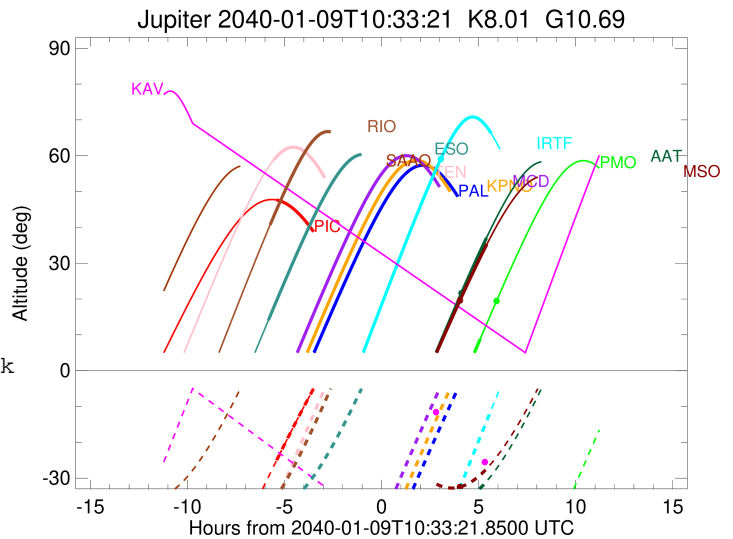
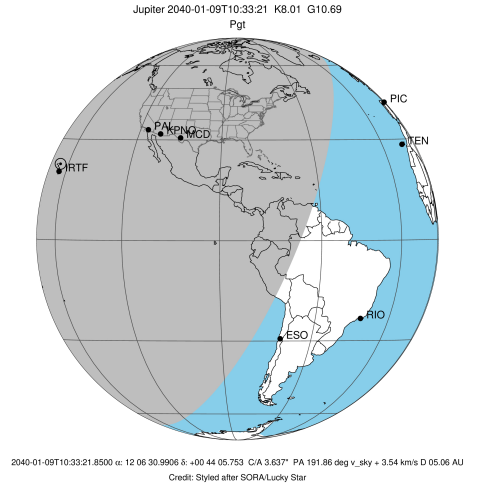


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T04:43:46.036	14.06	-38.73	71491.2	20.80	23.45
Jupiter	E	2040-01-09T16:39:56.900	-14.17x	82.64x	71492.0	-4.62	-5.28

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:17:53.770
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       : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude           : 8.012
G magnitude           : 10.687
RP magnitude          : 9.890
BP magnitude          : 11.377
DUPflag              : 1
Distance (au)         : 5.061
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)   : 42.06
B (ring opening deg) : -2.20
PA of pole (deg)     : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation ("): 2.536
C/A sky separation (km): 9307.4
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
    
```



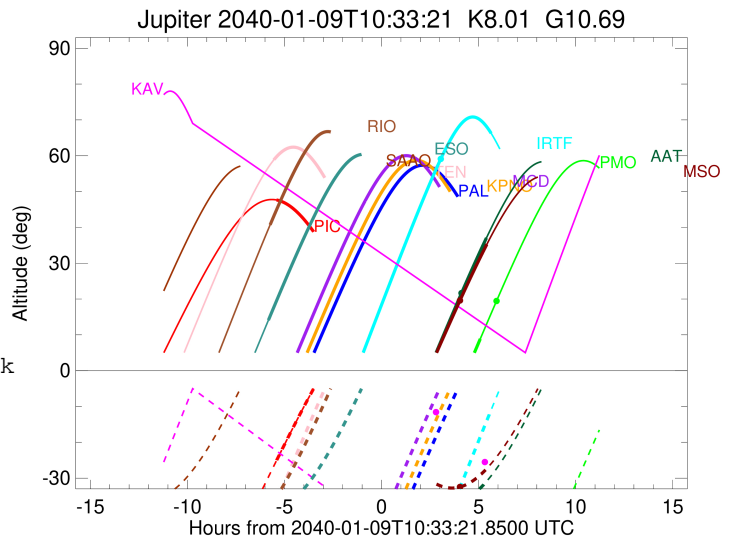
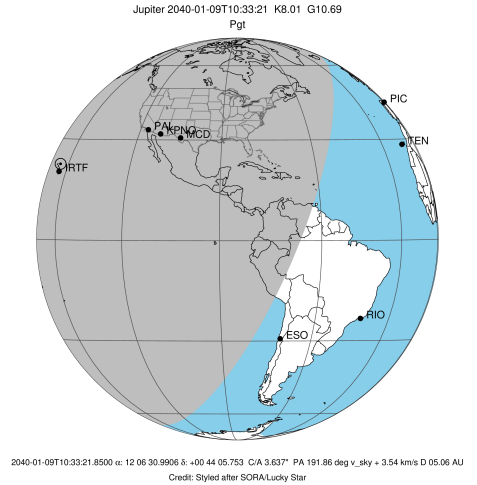
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2040-01-09T05:18:56.856	-51.35x	47.26x	71491.1	22.00	24.76
Jupiter	E	2040-01-09T15:57:46.472	37.08	-30.93	71491.9	-6.29	-7.19



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2040-01-09T10:19:01.100
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      : 3699070584028003712
2Mass ID (if available) : 12063104+0044061
ICRS Star Coord at Epoch: 12h 06m 30.99058s +00:44:05.75297s
RUWE (>1.4 is poor) : 1.16
K magnitude          : 8.012
G magnitude          : 10.687
RP magnitude         : 9.890
BP magnitude         : 11.377
DUPflag             : 1
Distance (au)       : 5.061
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.54
Sun-Target sep (deg) : 107.00
Sun-Moon sep (deg)  : 42.03
B (ring opening deg) : -2.20
PA of pole (deg)    : 25.47
Pole direction: RA (deg): 268.05614
Dec (deg): 64.49706
C/A sky separation (") : 2.445
C/A sky separation (km) : 8975.4
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
    
```



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	2040-01-09T05:18:37.786	-48.23x	47.20x	71491.1	21.68	24.42
Jupiter	E	2040-01-09T15:59:16.282	35.33	-27.27	71491.9	-6.56	-7.49