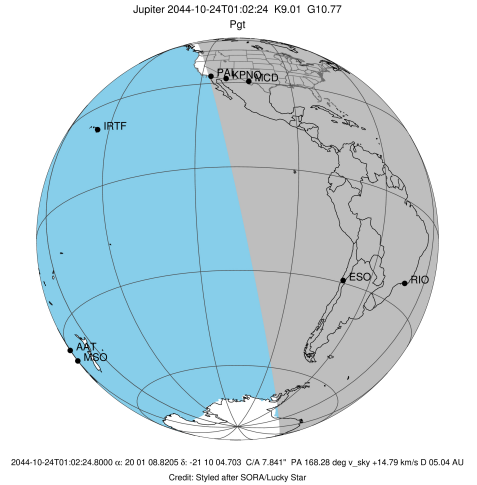
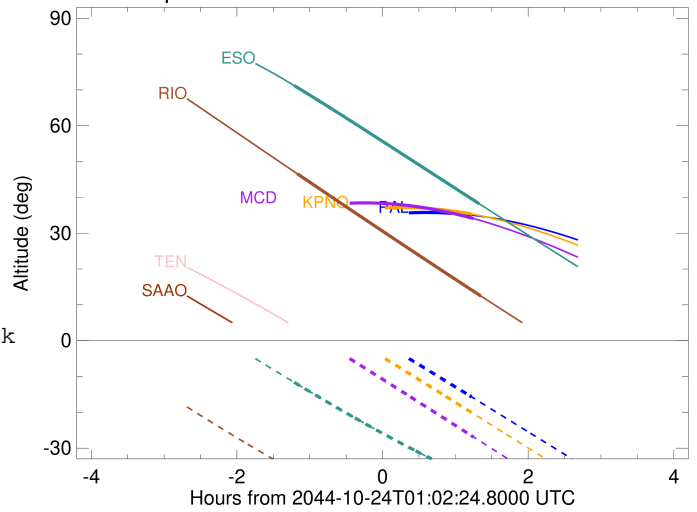



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-10-24T01:02:50.980
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       : 6866026292388236288
2Mass ID (if available) : 20010867-2110035
ICRS Star Coord at Epoch: 20h 01m 08.82047s -21:10:04.70308s
RUWE (>1.4 is poor) : 0.92
K magnitude           : 9.006
G magnitude           : 10.773
RP magnitude         : 10.171
BP magnitude         : 11.207
DUPflag              : 0
Distance (au)        : 5.040
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.79
Sun-Target sep (deg) : 87.41
Sun-Moon sep (deg)   : 52.15
B (ring opening deg) : -0.79
PA of pole (deg)     : -13.28
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation ("): 9.270
C/A sky separation (km): 33882.6
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
    
```



Jupiter 2044-10-24T01:02:24 K9.01 G10.77

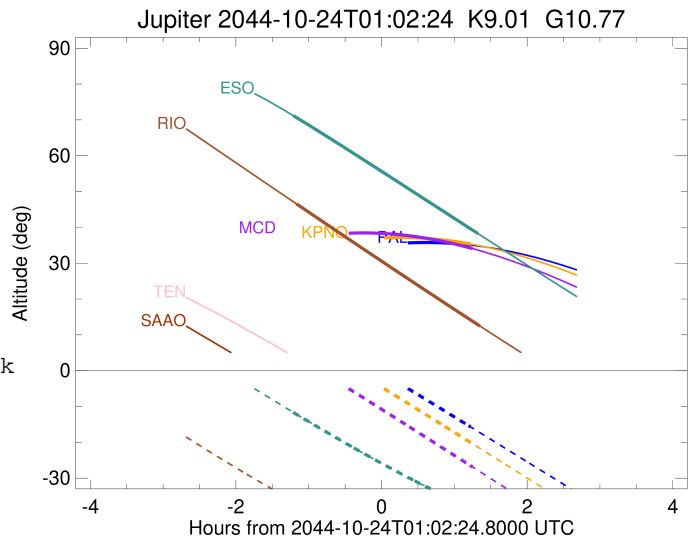
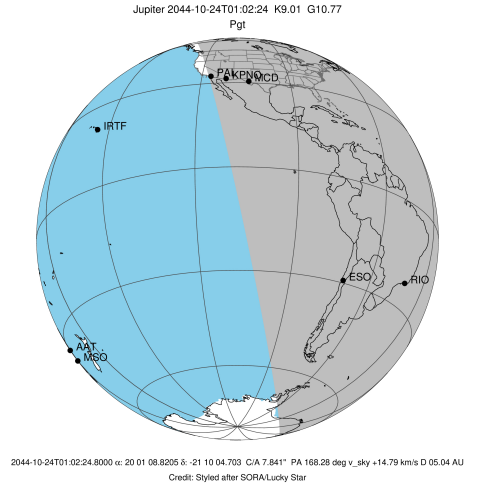


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-10-23T23:49:58.590	29.86	13.78x	71491.8	26.86	30.03
Jupiter	E	2044-10-24T02:15:38.043	35.06	-15.66	71491.8	29.53	32.87

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-10-24T01:03:25.010
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      : 6866026292388236288
2Mass ID (if available) : 20010867-2110035
ICRS Star Coord at Epoch: 20h 01m 08.82047s -21:10:04.70308s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 9.006
G magnitude          : 10.773
RP magnitude         : 10.171
BP magnitude         : 11.207
DUPflag             : 0
Distance (au)        : 5.040
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.79
Sun-Target sep (deg) : 87.41
Sun-Moon sep (deg)  : 52.21
B (ring opening deg) : -0.79
PA of pole (deg)    : -13.28
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (") : 9.223
C/A sky separation (km) : 33710.4
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
    
```

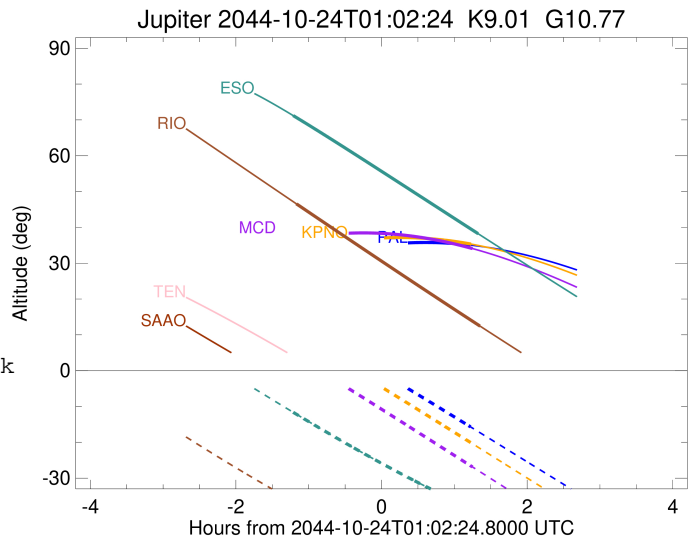
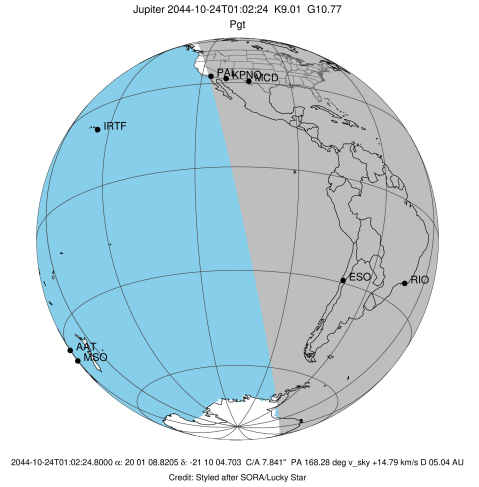


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-10-23T23:50:22.461	33.16	10.15x	71491.8	26.76	29.93
Jupiter	E	2044-10-24T02:16:18.630	35.32	-20.16	71491.8	29.32	32.65

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2044-10-24T01:04:15.870
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : MCD
Location              : McDonald Obs. 2.7m
Latitude (deg)        : 30.67158
E. Longitude (deg)    : 255.97844
Altitude (km)         : 2.075
Gaia source ID        : 6866026292388236288
2Mass ID (if available) : 20010867-2110035
ICRS Star Coord at Epoch: 20h 01m 08.82047s -21:10:04.70308s
RUWE (>1.4 is poor) : 0.92
K magnitude           : 9.006
G magnitude           : 10.773
RP magnitude          : 10.171
BP magnitude          : 11.207
DUPflag              : 0
Distance (au)         : 5.040
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 14.79
Sun-Target sep (deg)  : 87.41
Sun-Moon sep (deg)   : 52.28
B (ring opening deg) : -0.79
PA of pole (deg)     : -13.28
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (") : 9.157
C/A sky separation (km) : 33470.0
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
    
```

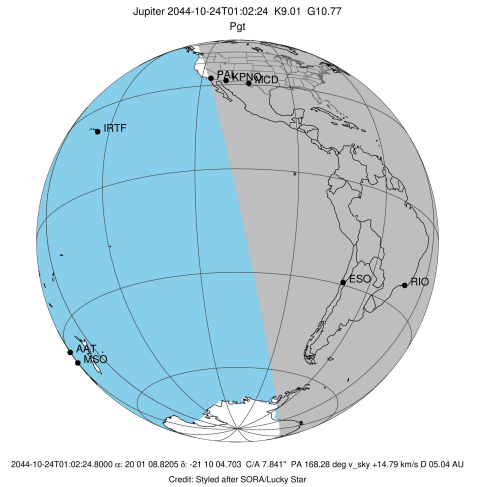


x: target alt < 5.0 deg or sun > -5.0 deg

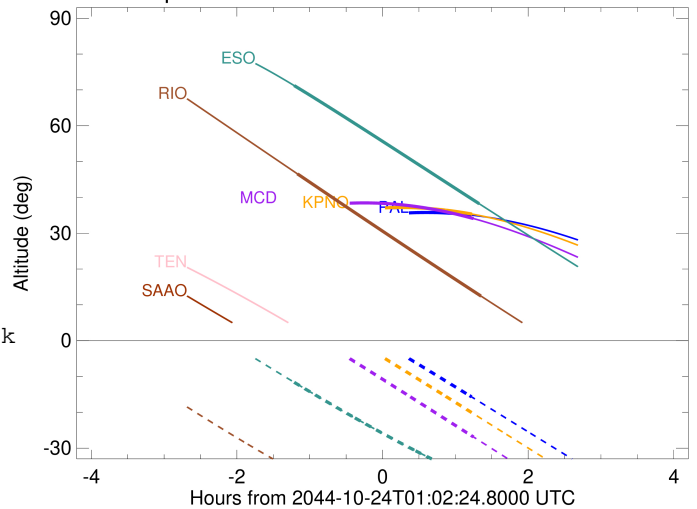
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-10-23T23:51:01.893	36.69	4.28x	71491.8	26.63	29.78
Jupiter	E	2044-10-24T02:17:15.627	34.10	-26.85	71491.8	29.02	32.34

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2044-10-24T01:08:20.770
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       : 6866026292388236288
2Mass ID (if available) : 20010867-2110035
ICRS Star Coord at Epoch: 20h 01m 08.82047s -21:10:04.70308s
RUWE (>1.4 is poor) : 0.92
K magnitude           : 9.006
G magnitude           : 10.773
RP magnitude          : 10.171
BP magnitude          : 11.207
DUPflag              : 0
Distance (au)        : 5.040
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.79
Sun-Target sep (deg) : 87.41
Sun-Moon sep (deg)   : 52.44
B (ring opening deg) : -0.79
PA of pole (deg)     : -13.28
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (") : 7.154
C/A sky separation (km) : 26151.0
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
    
```



Jupiter 2044-10-24T01:02:24 K9.01 G10.77

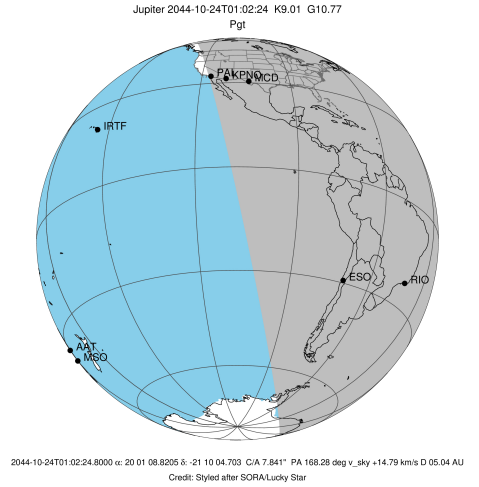


x: target alt < 5.0 deg or sun > -5.0 deg

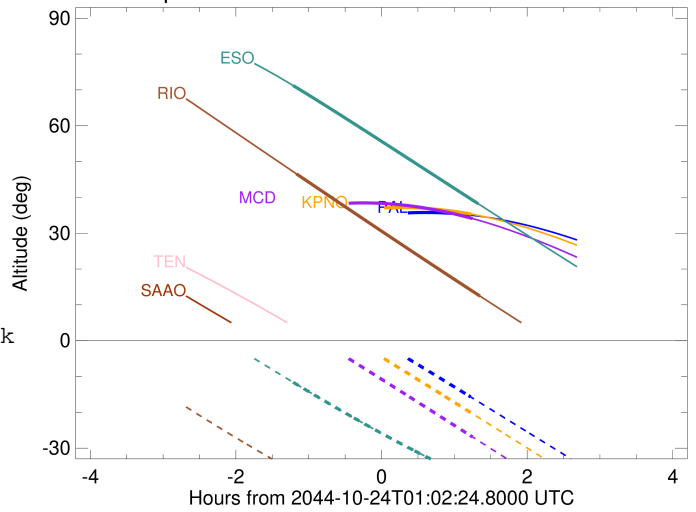
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-10-23T23:52:16.790	46.57	-36.83	71491.9	20.58	23.21
Jupiter	E	2044-10-24T02:23:35.401	12.45	-55.15	71491.9	22.36	25.16

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-10-24T01:06:12.290
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      : 6866026292388236288
2Mass ID (if available) : 20010867-2110035
ICRS Star Coord at Epoch: 20h 01m 08.82047s -21:10:04.70308s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 9.006
G magnitude          : 10.773
RP magnitude         : 10.171
BP magnitude         : 11.207
DUPflag             : 0
Distance (au)        : 5.040
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.79
Sun-Target sep (deg) : 87.41
Sun-Moon sep (deg)  : 52.51
B (ring opening deg) : -0.79
PA of pole (deg)    : -13.28
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (") : 7.298
C/A sky separation (km) : 26677.2
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
    
```



Jupiter 2044-10-24T01:02:24 K9.01 G10.77



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	2044-10-23T23:49:39.720	71.19	-11.63	71491.9	20.91	23.57
Jupiter	E	2044-10-24T02:22:07.484	38.21	-39.09	71491.9	22.83	25.68