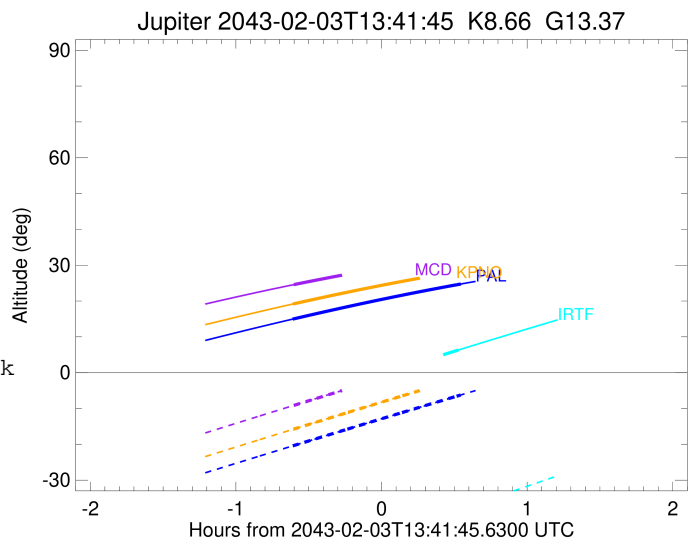
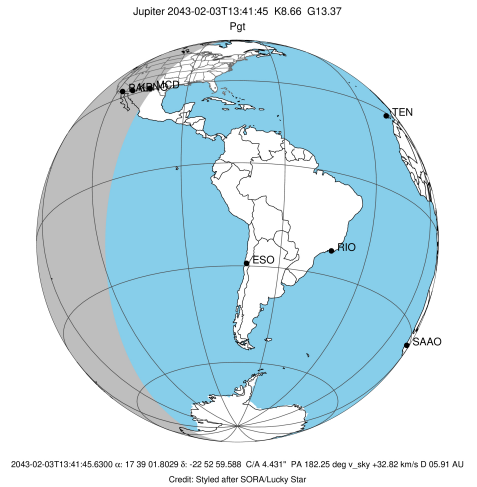



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-03T13:39:45.920
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       : 4116749247335039488
2Mass ID (if available) : 17390179-2252597
ICRS Star Coord at Epoch: 17h 39m 01.80291s -22:52:59.58779s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 8.663
G magnitude          : 13.370
RP magnitude         : 12.149
BP magnitude         : 14.998
DUPflag             : 0
Distance (au)       : 5.909
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 32.82
Sun-Target sep (deg) : 48.84
Sun-Moon sep (deg)  : 26.13
B (ring opening deg) : -2.58
PA of pole (deg)    : 1.42
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (" ) : 5.509
C/A sky separation (km) : 23609.3
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
    
```

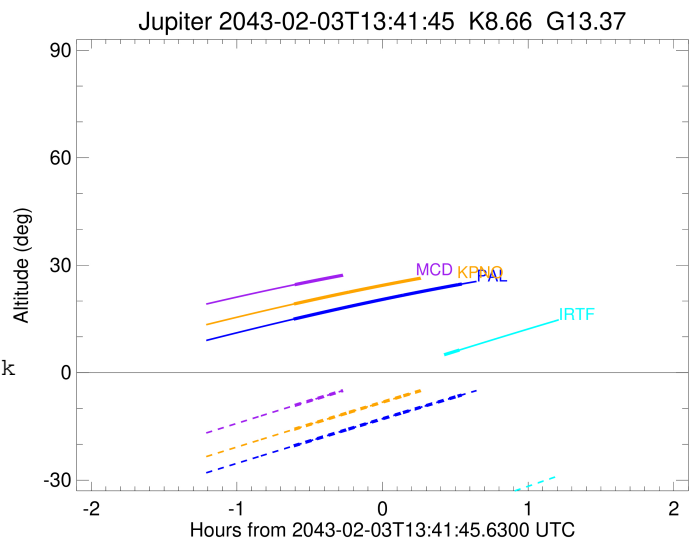
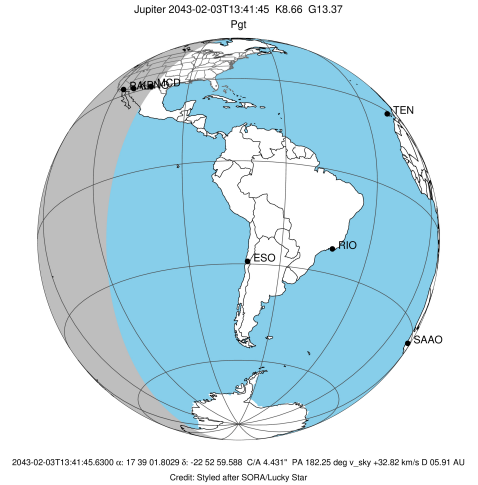


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-03T13:05:13.936	14.96	-20.42	71491.1	18.21	20.60
Jupiter	E	2043-02-03T14:14:21.144	24.73	-6.24	71490.9	20.29	22.89

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-03T13:39:55.810
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       : 4116749247335039488
2Mass ID (if available) : 17390179-2252597
ICRS Star Coord at Epoch: 17h 39m 01.80291s -22:52:59.58779s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 8.663
G magnitude           : 13.370
RP magnitude          : 12.149
BP magnitude          : 14.998
DUPflag              : 0
Distance (au)         : 5.909
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.82
Sun-Target sep (deg) : 48.84
Sun-Moon sep (deg)   : 26.20
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.42
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 5.519
C/A sky separation (km) : 23652.6
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
    
```

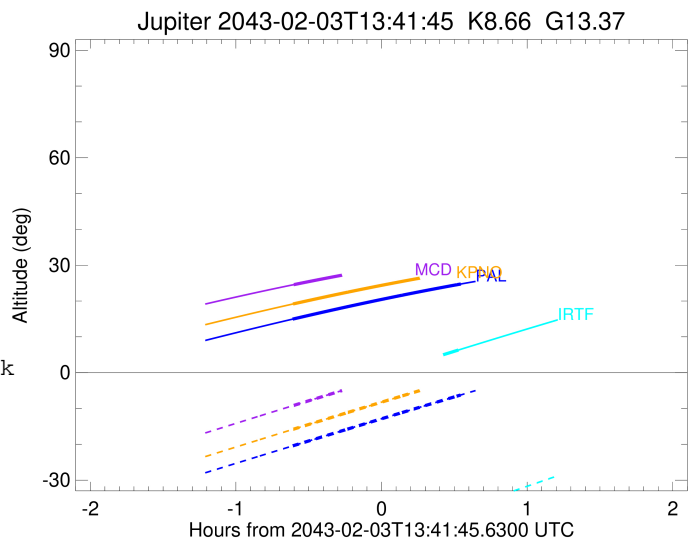
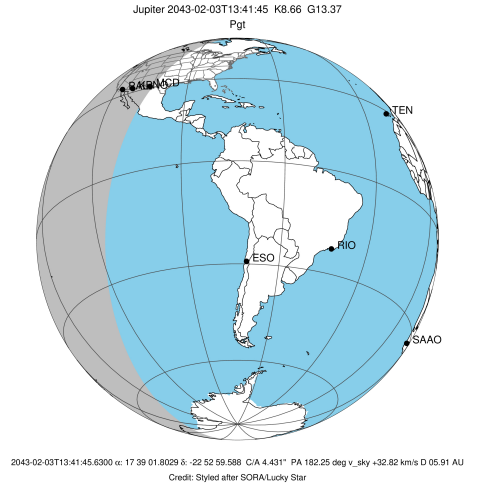


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-03T13:05:22.342	19.18	-15.80	71491.1	18.26	20.66
Jupiter	E	2043-02-03T14:14:32.319	28.36	-1.55x	71490.9	20.31	22.91

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-03T13:40:13.020
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        : 4116749247335039488
2Mass ID (if available) : 17390179-2252597
ICRS Star Coord at Epoch: 17h 39m 01.80291s -22:52:59.58779s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 8.663
G magnitude           : 13.370
RP magnitude          : 12.149
BP magnitude          : 14.998
DUPflag              : 0
Distance (au)         : 5.909
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.82
Sun-Target sep (deg)  : 48.84
Sun-Moon sep (deg)   : 26.30
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.42
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 5.541
C/A sky separation (km) : 23743.6
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
    
```

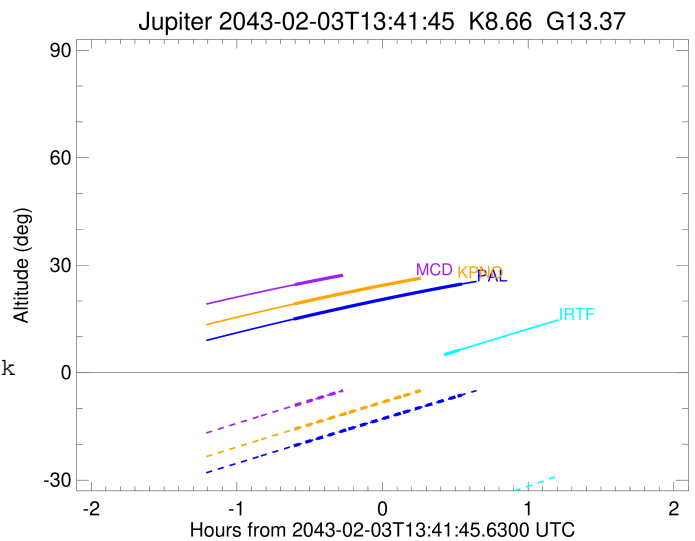
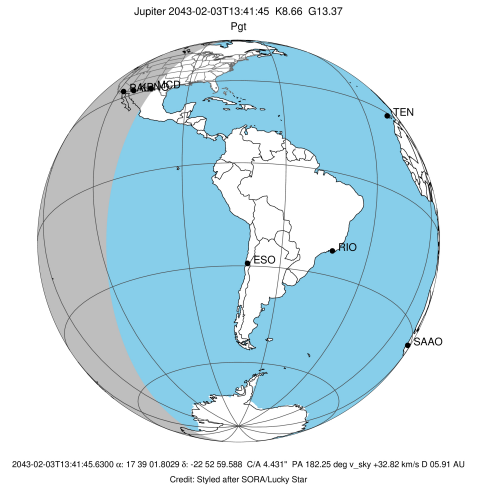


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-03T13:05:38.078	24.57	-9.13	71491.1	18.36	20.77
Jupiter	E	2043-02-03T14:14:50.618	32.55	5.04x	71490.9	20.36	22.97

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-03T13:38:38.500
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       : 4116749247335039488
2Mass ID (if available) : 17390179-2252597
ICRS Star Coord at Epoch: 17h 39m 01.80291s -22:52:59.58779s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 8.663
G magnitude          : 13.370
RP magnitude         : 12.149
BP magnitude         : 14.998
DUPflag             : 0
Distance (au)        : 5.909
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 32.82
Sun-Target sep (deg) : 48.84
Sun-Moon sep (deg)   : 25.64
B (ring opening deg) : -2.58
PA of pole (deg)     : 1.42
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 4.924
C/A sky separation (km) : 21101.0
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	2043-02-03T13:03:56.584	-8.64x	-54.66	71491.3	16.01	18.16
Jupiter	E	2043-02-03T14:13:25.236	6.31	-38.34	71491.1	18.28	20.68