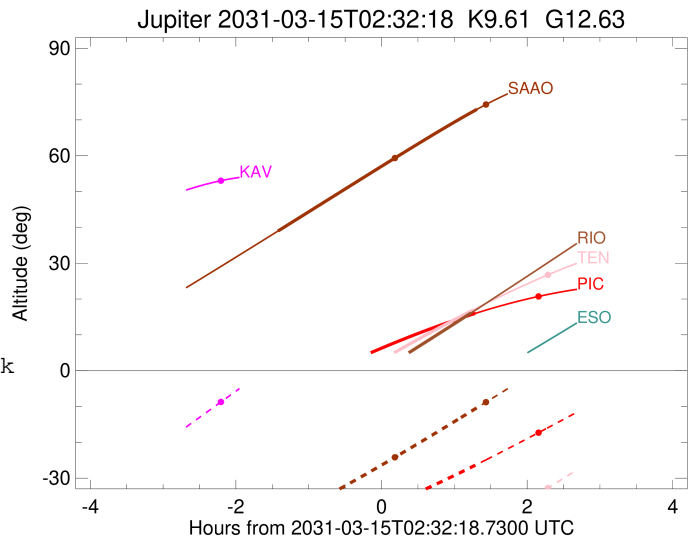
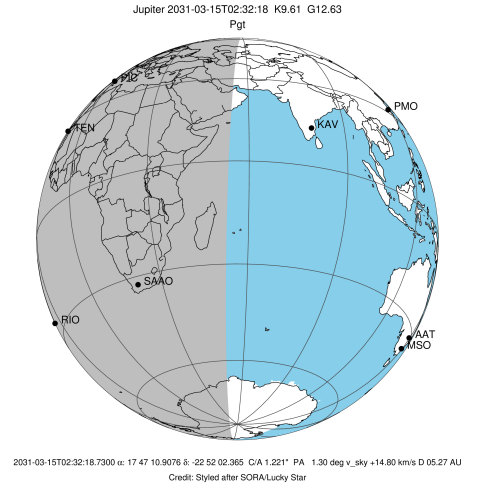




```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-03-15T02:27:44.970
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     : 4068936842398673920
2Mass ID (if available) : 17471090-2252024
ICRS Star Coord at Epoch: 17h 47m 10.90759s -22:52:02.36532s
RUWE (>1.4 is poor) : 0.84
K magnitude         : 9.612
G magnitude         : 12.629
RP magnitude        : 11.735
BP magnitude        : 13.452
DUPflag            : 0
Distance (au)      : 5.272
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 14.80
Sun-Target sep (deg) : 86.83
Sun-Moon sep (deg) : 17.89
B (ring opening deg) : -2.63
PA of pole (deg)   : 0.54
Pole direction: RA (deg): 268.05700
Dec (deg): 64.49651
C/A sky separation (") : 0.065
C/A sky separation (km) : 249.4
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
    
```

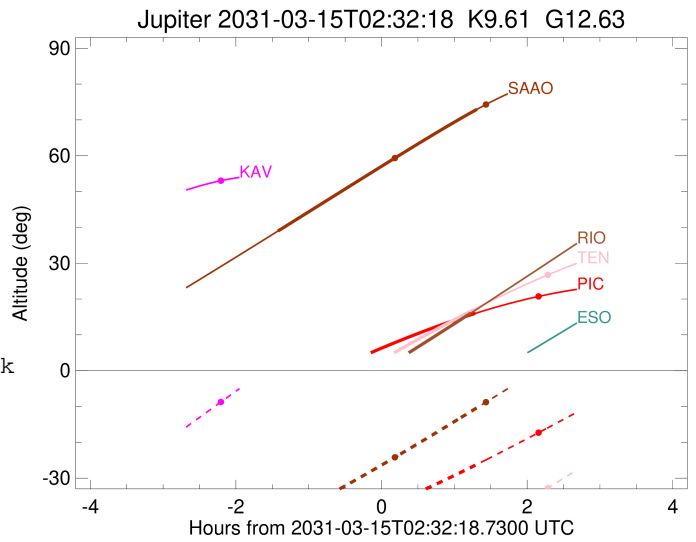
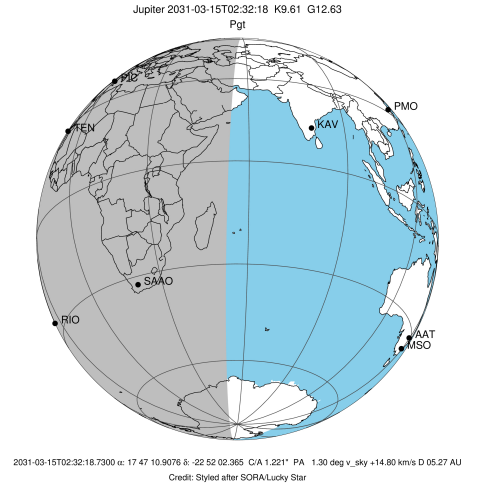


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-03-15T01:06:38.105	-7.08x	-47.51	71492.0	-1.05	-1.20
Jupiter	E	2031-03-15T03:49:35.794	15.98	-26.39	71492.0	1.36	1.55

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-03-15T02:26:08.920
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        : 4068936842398673920
2Mass ID (if available) : 17471090-2252024
ICRS Star Coord at Epoch: 17h 47m 10.90759s -22:52:02.36532s
RUWE (>1.4 is poor) : 0.84
K magnitude           : 9.612
G magnitude           : 12.629
RP magnitude          : 11.735
BP magnitude          : 13.452
DUPflag              : 0
Distance (au)         : 5.272
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 14.80
Sun-Target sep (deg)  : 86.83
Sun-Moon sep (deg)   : 17.66
B (ring opening deg) : -2.63
PA of pole (deg)     : 0.54
Pole direction: RA (deg): 268.05700
Dec (deg): 64.49651
C/A sky separation (") : 0.364
C/A sky separation (km) : 1391.3
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
    
```

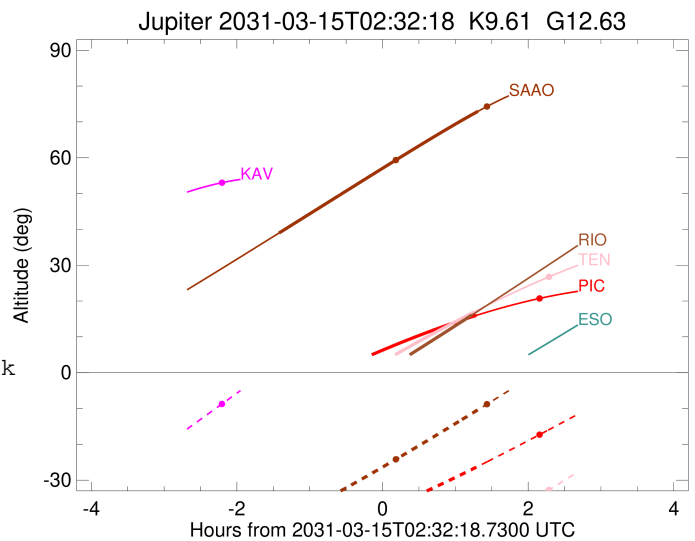
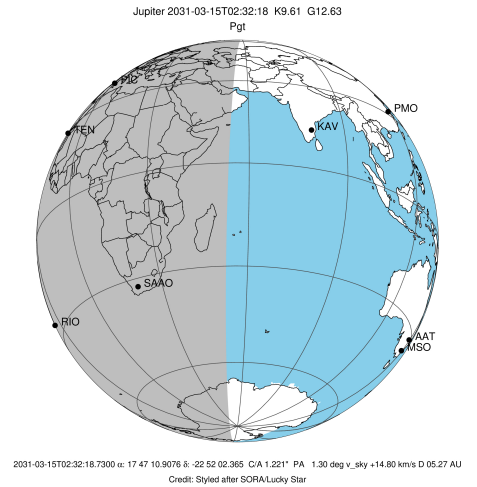


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-03-15T01:05:33.469	-14.65x	-64.05	71492.0	-2.49	-2.84
Jupiter	E	2031-03-15T03:47:39.972	16.92	-45.34	71492.0	0.22	0.25

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-03-15T02:25:58.590
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      : 4068936842398673920
2Mass ID (if available) : 17471090-2252024
ICRS Star Coord at Epoch: 17h 47m 10.90759s -22:52:02.36532s
RUWE (>1.4 is poor) : 0.84
K magnitude          : 9.612
G magnitude          : 12.629
RP magnitude         : 11.735
BP magnitude         : 13.452
DUPflag             : 0
Distance (au)       : 5.272
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.80
Sun-Target sep (deg) : 86.83
Sun-Moon sep (deg)  : 17.61
B (ring opening deg) : -2.63
PA of pole (deg)    : 0.54
Pole direction: RA (deg): 268.05700
Dec (deg): 64.49651
C/A sky separation ("): 1.953
C/A sky separation (km): 7469.8
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
    
```

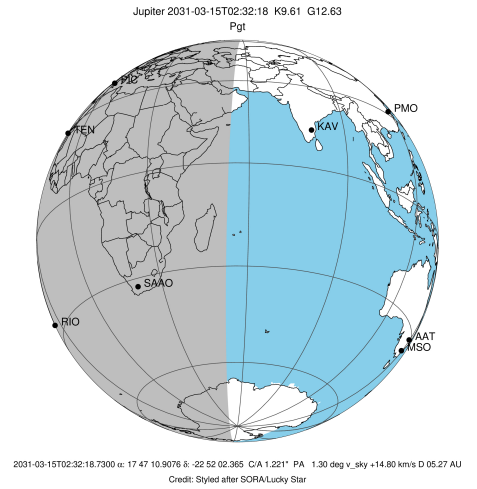


x: target alt < 5.0 deg or sun > -5.0 deg

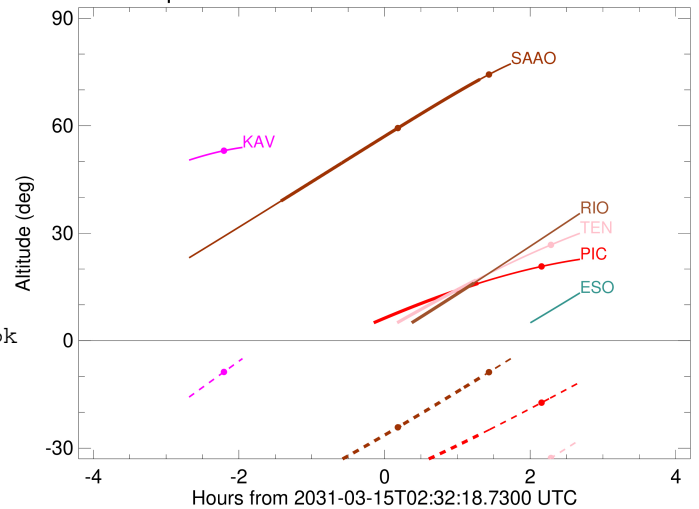
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-03-15T01:06:50.047	-16.94x	-52.39	71491.8	-7.33	-8.37
Jupiter	E	2031-03-15T03:46:02.441	16.09	-62.79	71491.9	-4.59	-5.25

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-03-15T02:28:45.370
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       : 4068936842398673920
2Mass ID (if available) : 17471090-2252024
ICRS Star Coord at Epoch: 17h 47m 10.90759s -22:52:02.36532s
RUWE (>1.4 is poor) : 0.84
K magnitude           : 9.612
G magnitude           : 12.629
RP magnitude          : 11.735
BP magnitude          : 13.452
DUPflag              : 0
Distance (au)        : 5.272
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.80
Sun-Target sep (deg) : 86.83
Sun-Moon sep (deg)   : 18.25
B (ring opening deg) : -2.63
PA of pole (deg)     : 0.54
Pole direction: RA (deg): 268.05700
Dec (deg): 64.49651
C/A sky separation (") : 1.607
C/A sky separation (km) : 6143.5
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
    
```



Jupiter 2031-03-15T02:32:18 K9.61 G12.63



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	2031-03-15T01:07:10.582	39.01	-41.95	71491.9	-6.14	-7.01
Jupiter	E	2031-03-15T03:50:58.620	72.94	-10.35	71492.0	-3.87	-4.42