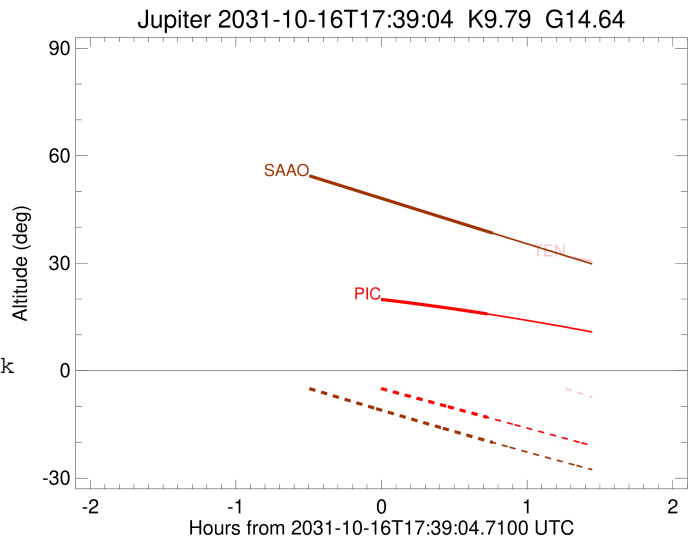
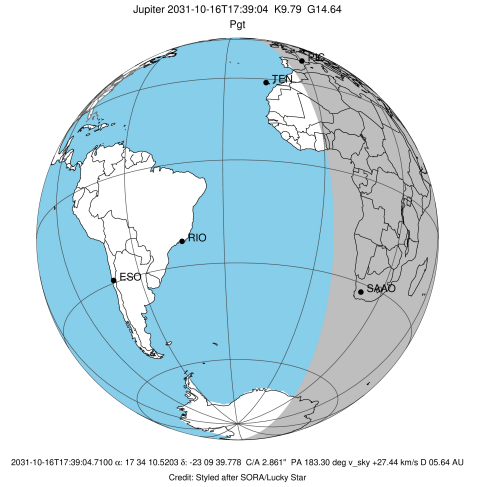



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-10-16T17:40:09.810
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     : 4116682688152736640
2Mass ID (if available) : 17341052-2309396
ICRS Star Coord at Epoch: 17h 34m 10.52035s -23:09:39.77842s
RUWE (>1.4 is poor) : 0.90
K magnitude        : 9.792
G magnitude        : 14.641
RP magnitude       : 13.411
BP magnitude       : 16.319
DUPflag           : 0
Distance (au)     : 5.642
f0 (km)           : 0.00
g0 (km)           : 0.00
skyplane vel. (km/s) : 27.44
Sun-Target sep (deg) : 61.35
Sun-Moon sep (deg) : 57.02
B (ring opening deg) : -2.27
PA of pole (deg)  : 1.94
Pole direction: RA (deg): 268.05682
Dec (deg): 64.49652
C/A sky separation (") : 4.270
C/A sky separation (km) : 17471.6
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
    
```

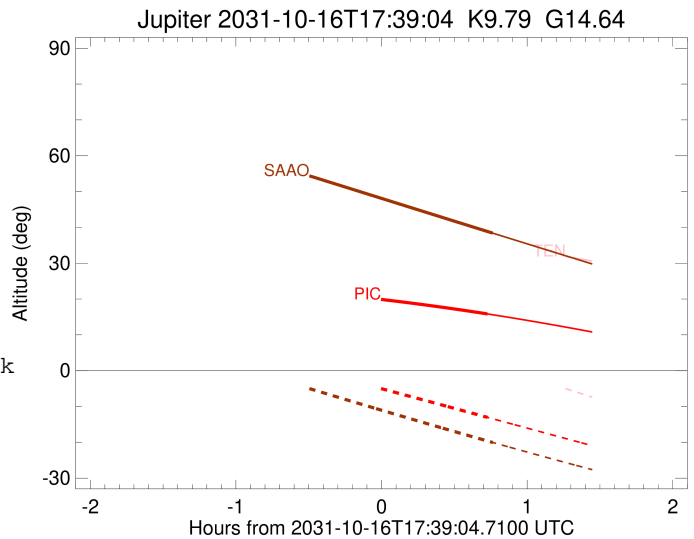
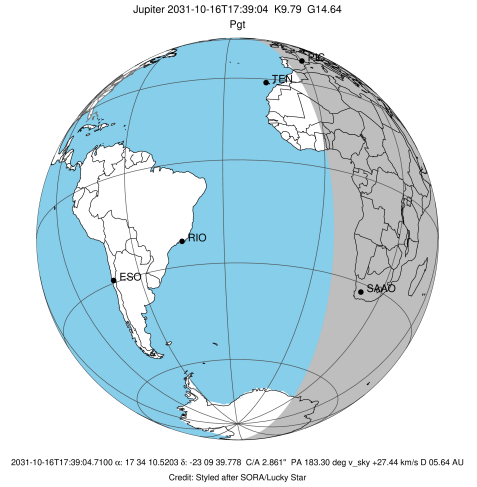


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-10-16T16:57:32.633	22.54	2.46x	71491.7	12.85	14.61
Jupiter	E	2031-10-16T18:22:43.188	15.84	-13.02	71491.5	15.37	17.44

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-10-16T17:41:33.440
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        : 4116682688152736640
2Mass ID (if available) : 17341052-2309396
ICRS Star Coord at Epoch: 17h 34m 10.52035s -23:09:39.77842s
RUWE (>1.4 is poor) : 0.90
K magnitude           : 9.792
G magnitude           : 14.641
RP magnitude          : 13.411
BP magnitude          : 16.319
DUPflag              : 0
Distance (au)         : 5.642
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 27.44
Sun-Target sep (deg)  : 61.35
Sun-Moon sep (deg)   : 57.49
B (ring opening deg) : -2.27
PA of pole (deg)     : 1.94
Pole direction: RA (deg): 268.05682
Dec (deg): 64.49652
C/A sky separation (") : 2.511
C/A sky separation (km) : 10276.0
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	2031-10-16T16:58:06.021	56.76	-2.68x	71491.9	7.09	8.09
Jupiter	E	2031-10-16T18:24:54.414	38.39	-20.04	71491.8	9.38	10.69