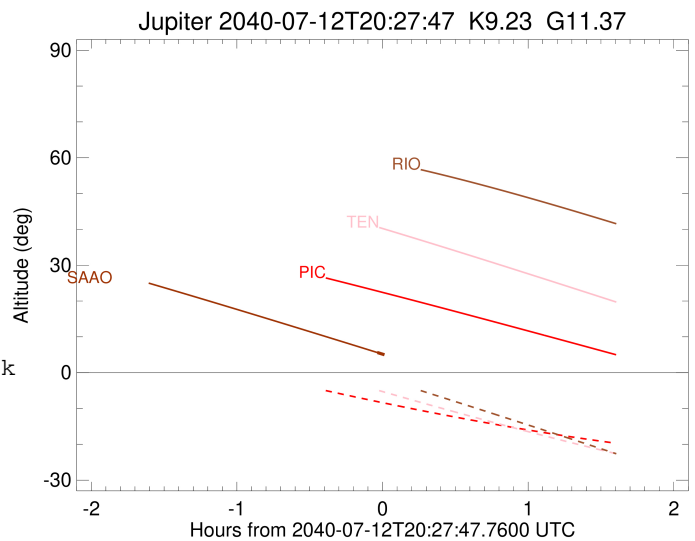
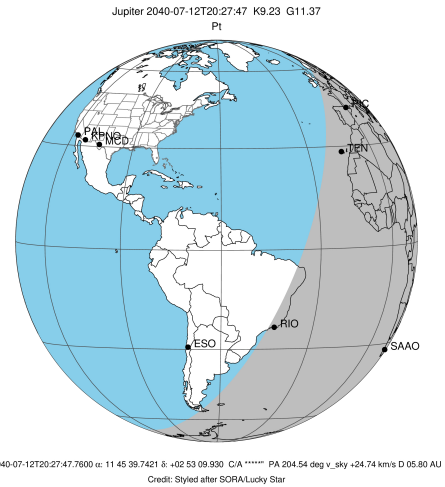




```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2040-07-12T20:31:58.030
Event type            : Pt
: Jupiter occs: topocentric, not geocentric
: 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        : 3799628206652117248
2Mass ID (if available) : 11453982+0253099
ICRS Star Coord at Epoch: 11h 45m 39.74208s +02:53:09.93022s
RUWE (>1.4 is poor) : 1.18
K magnitude           : 9.228
G magnitude           : 11.365
RP magnitude          : 10.681
BP magnitude          : 11.900
DUPflag              : 0
Distance (au)         : 5.800
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 24.74
Sun-Target sep (deg) : 65.04
Sun-Moon sep (deg)   : 28.18
B (ring opening deg) : -1.90
PA of pole (deg)     : 25.51
Pole direction: RA (deg): 268.05617
Dec (deg): 64.49712
C/A sky separation (") : 16.852
C/A sky separation (km) : 70881.5
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	2040-07-12T20:25:41.801	5.61	-57.95	71487.2	83.15	83.95
Jupiter	E	2040-07-12T20:38:14.090	2.97x	-60.55	71487.2	81.44	82.44