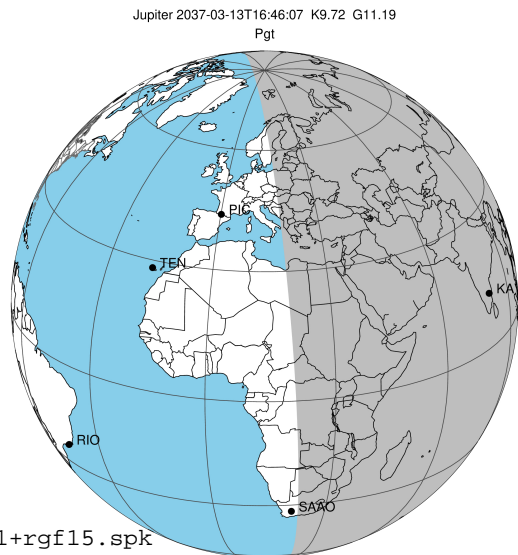


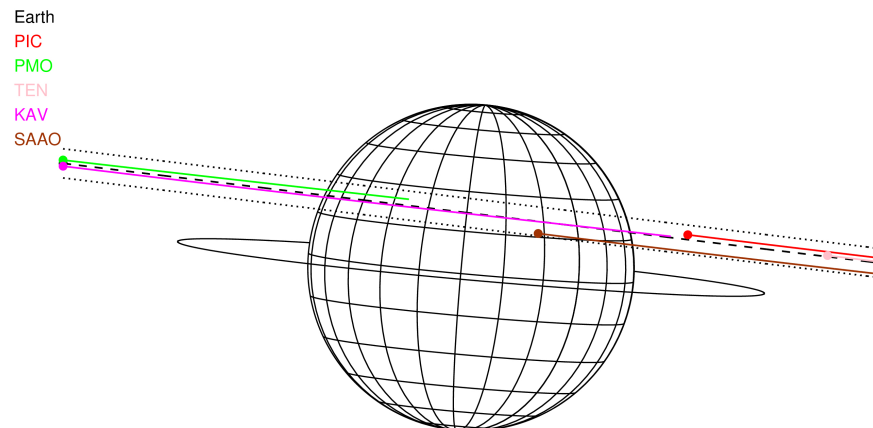
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2037-03-13T16:46:07.800  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3418274383950721280  
 2Mass ID (if available) : 05050694+2234069

Jupiter 2037-03-13T16:46:07 K9.72 G11.19 Pgt

ICRS Star Coord at Epoch: 05h 05m 06.95054s +22:34:06.58283s  
 RUWE (>1.4 is poor) : 6.06  
 K magnitude : 9.717  
 G magnitude : 11.193  
 RP magnitude : 10.683  
 BP magnitude : 11.533  
 DUPflag : 0  
 Distance (au) : 5.123  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 15.57  
 Sun-Target sep (deg) : 84.42  
 Sun-Moon sep (deg) : 119.96  
 B (ring opening deg) : 2.45  
 PA of pole (deg) : -5.05  
 Pole direction: RA (deg): 268.05630  
 Dec (deg): 64.49688  
 C/A sky separation (") : 6.354  
 C/A sky separation (km) : 23609.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

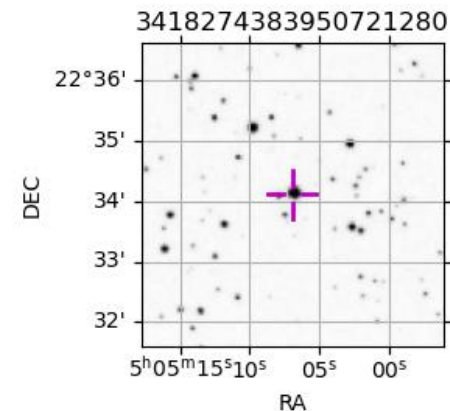


2037-03-13T16:46:07.8000 cc: 05 05 06.9505 s: +22 34 06.583 C/A 6.363" PA 173.04 deg v\_sky +15.57 km/s D 05.12 AU  
 Credit: Styled after SORA/Lucky Star



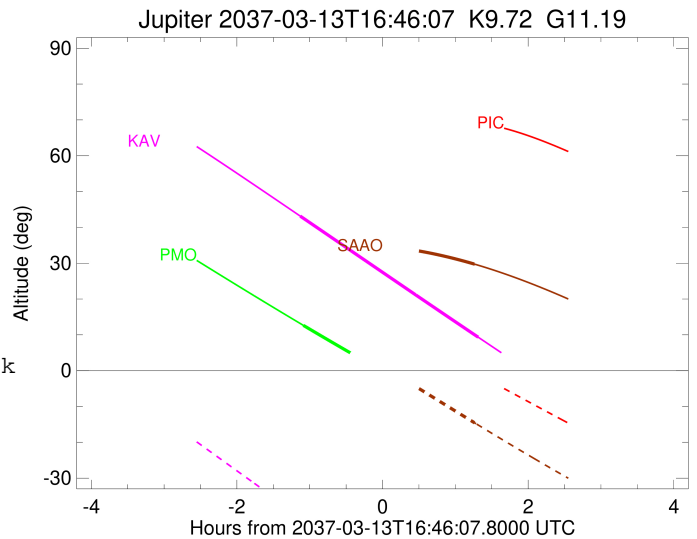
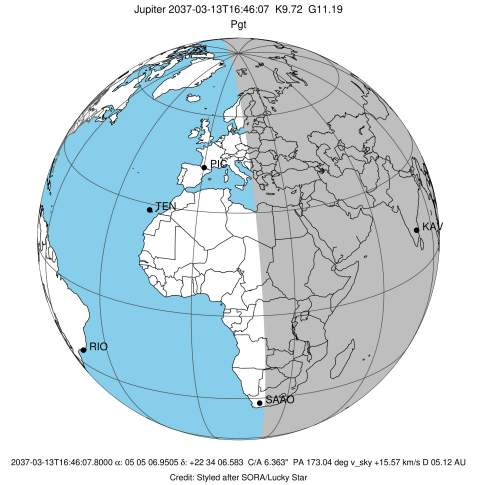
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+	MAR 13 15:40 - MAR 13 15:40	Pin
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+ +	MAR 13 15:38 - MAR 13 18:04	Pie
RIO	Rio de Janeiro	-22.9	316.8			Pnn
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+	MAR 13 18:01 - MAR 13 18:01	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-03-13T16:51:49.220
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)   : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 3418274383950721280
2Mass ID (if available) : 05050694+2234069
ICRS Star Coord at Epoch: 05h 05m 06.95054s +22:34:06.58283s
RUWE (>1.4 is poor) : 6.06
K magnitude           : 9.717
G magnitude           : 11.193
RP magnitude          : 10.683
BP magnitude          : 11.533
DUPflag              : 0
Distance (au)        : 5.123
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 15.57
Sun-Target sep (deg) : 84.42
Sun-Moon sep (deg)   : 119.56
B (ring opening deg) : 2.45
PA of pole (deg)     : -5.05
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49688
C/A sky separation ("): 7.180
C/A sky separation (km): 26679.2
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
    
```

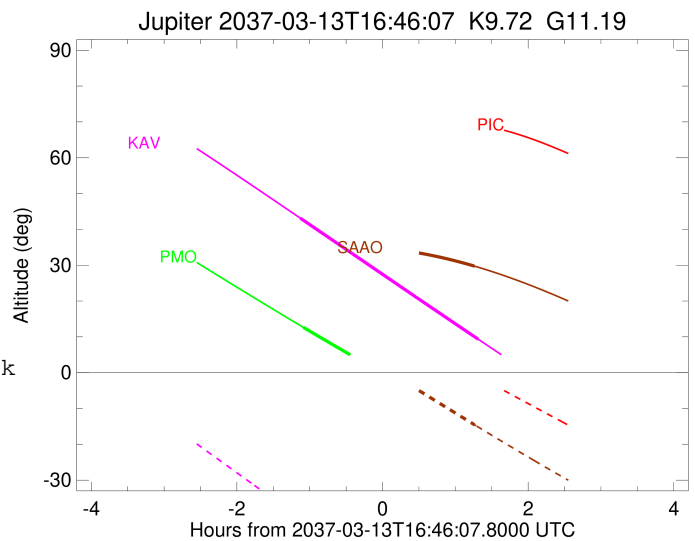
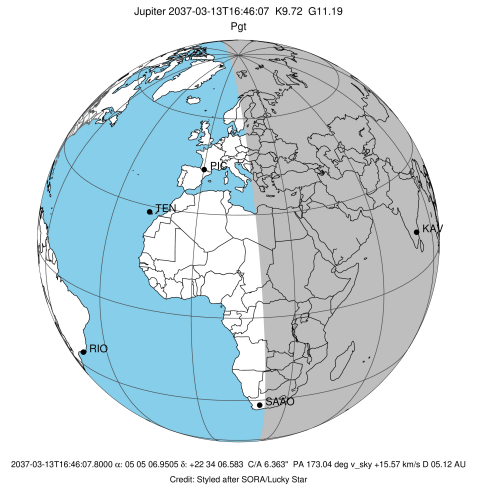


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-03-13T15:40:55.296	12.64	-59.71	71490.7	23.24	26.12
Jupiter	E	2037-03-13T18:02:05.333	-13.75x	-51.20	71491.0	20.55	23.18

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-03-13T16:52:01.600
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)   : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 3418274383950721280
2Mass ID (if available) : 05050694+2234069
ICRS Star Coord at Epoch: 05h 05m 06.95054s +22:34:06.58283s
RUWE (>1.4 is poor) : 6.06
K magnitude           : 9.717
G magnitude           : 11.193
RP magnitude         : 10.683
BP magnitude         : 11.533
DUPflag              : 0
Distance (au)        : 5.123
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 15.57
Sun-Target sep (deg) : 84.42
Sun-Moon sep (deg)   : 119.92
B (ring opening deg) : 2.45
PA of pole (deg)     : -5.05
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49688
C/A sky separation ("): 6.260
C/A sky separation (km): 23262.3
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
    
```

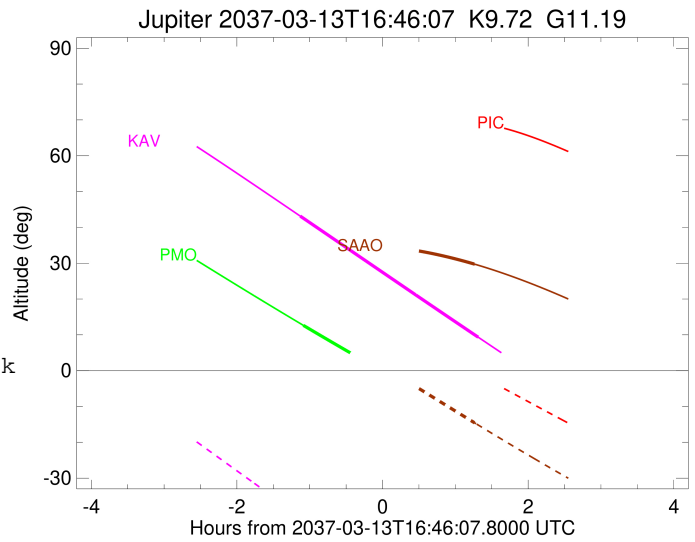
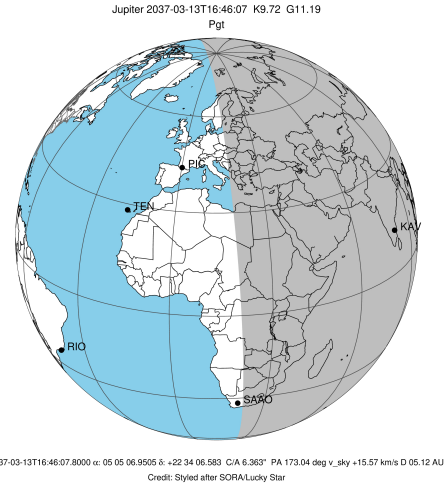


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-03-13T15:38:24.282	43.12	-40.64	71491.0	20.45	23.07
Jupiter	E	2037-03-13T18:04:54.971	9.36	-74.34	71491.2	17.63	19.96

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-03-13T16:46:13.860
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        : 3418274383950721280
2Mass ID (if available) : 05050694+2234069
ICRS Star Coord at Epoch: 05h 05m 06.95054s +22:34:06.58283s
RUWE (>1.4 is poor)  : 6.06
K magnitude           : 9.717
G magnitude           : 11.193
RP magnitude          : 10.683
BP magnitude          : 11.533
DUPflag              : 0
Distance (au)         : 5.123
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 15.57
Sun-Target sep (deg)  : 84.42
Sun-Moon sep (deg)    : 120.39
B (ring opening deg)  : 2.45
PA of pole (deg)      : -5.05
Pole direction: RA (deg): 268.05630
Dec (deg): 64.49688
C/A sky separation (") : 4.945
C/A sky separation (km) : 18372.6
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	2037-03-13T15:30:19.851	34.03	17.36x	71491.3	16.99	19.24
Jupiter	E	2037-03-13T18:01:56.634	29.74	-14.54	71491.6	12.96	14.74