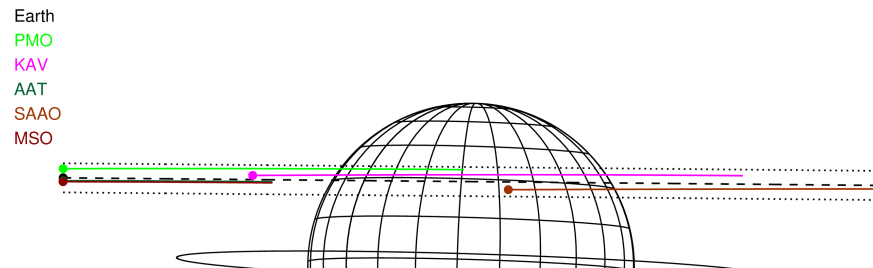
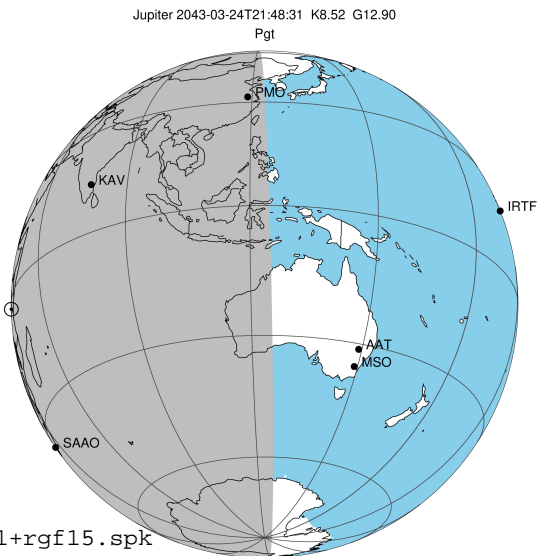


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-03-24T21:48:31.510  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4066600998654526976  
 2Mass ID (if available) : 18082223-2258369

Jupiter 2043-03-24T21:48:31 K8.52 G12.90 Pgt

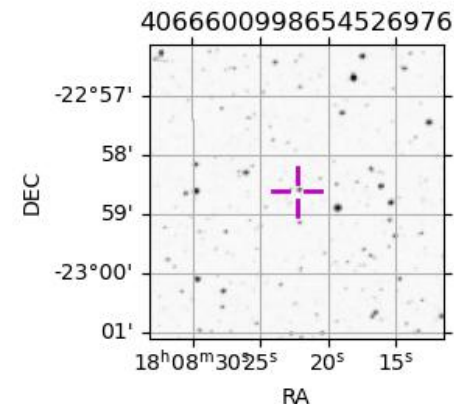
ICRS Star Coord at Epoch: 18h 08m 22.23945s -22:58:37.12909s  
 RUWE (>1.4 is poor) : 0.81  
 K magnitude : 8.523  
 G magnitude : 12.900  
 RP magnitude : 11.760  
 BP magnitude : 14.255  
 DUPflag : 0  
 Distance (au) : 5.173  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 12.34  
 Sun-Target sep (deg) : 91.62  
 Sun-Moon sep (deg) : 96.13  
 B (ring opening deg) : -2.47  
 PA of pole (deg) : -1.74  
 Pole direction: RA (deg): 268.05664  
 Dec (deg): 64.49732  
 C/A sky separation (") : 9.910  
 C/A sky separation (km) : 37180.5  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



2043-03-24T21:48:31.510000: 18 08 22.2395 S: -22 58 37.129 S C/A 9.900" PA 179.46 deg v\_sky +12.34 km/s D 05.17 AU  
 Credit: Styled after SORA/Lucky Star

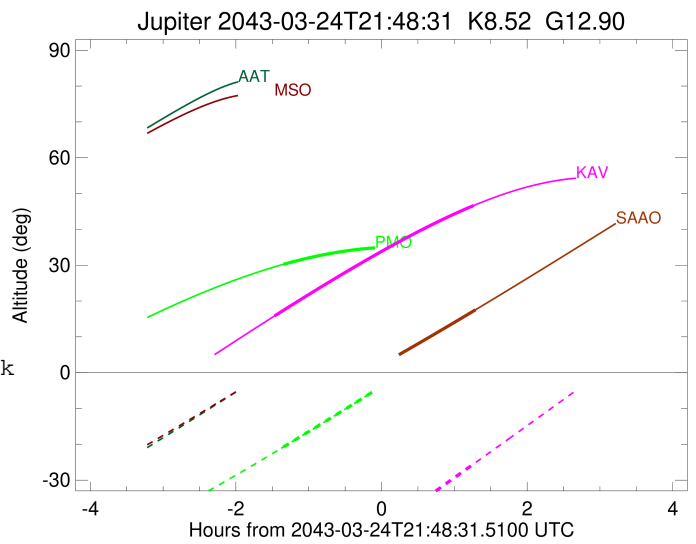
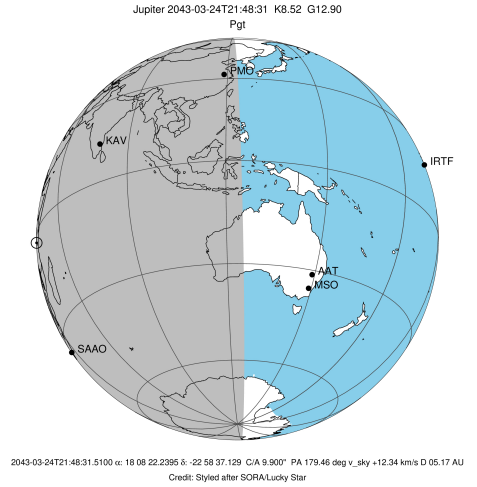
Observable events with sun below -5 deg and altitude above 5 deg

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 24 20:27 - MAR 24 20:27	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 24 20:20 - MAR 24 23:04	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 24 23:05 - MAR 24 23:05	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-24T21:47:59.880
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      : 4066600998654526976
2Mass ID (if available) : 18082223-2258369
ICRS Star Coord at Epoch: 18h 08m 22.23945s -22:58:37.12909s
RUWE (>1.4 is poor) : 0.81
K magnitude          : 8.523
G magnitude          : 12.900
RP magnitude         : 11.760
BP magnitude         : 14.255
DUPflag             : 0
Distance (au)       : 5.173
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 12.34
Sun-Target sep (deg) : 91.62
Sun-Moon sep (deg)  : 96.66
B (ring opening deg) : -2.47
PA of pole (deg)    : -1.74
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 11.298
C/A sky separation (km) : 42390.5
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
    
```

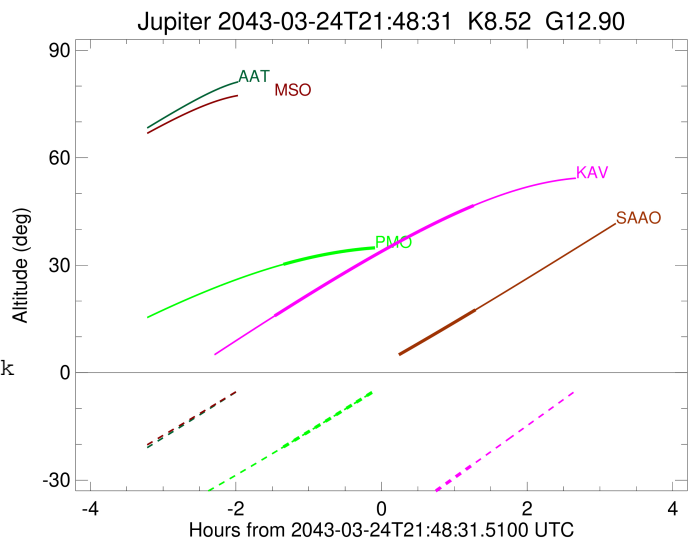
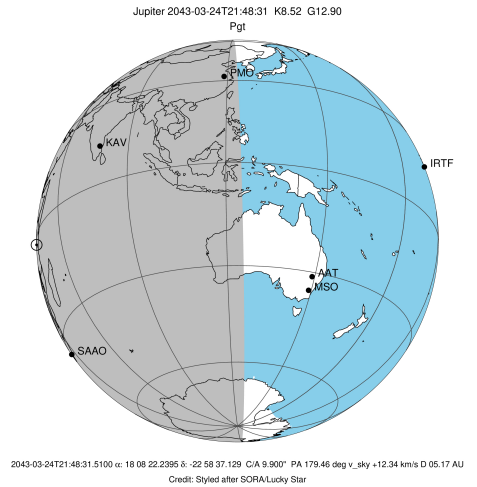


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-24T20:27:44.633	30.24	-20.73	71489.3	34.97	38.56
Jupiter	E	2043-03-24T23:08:30.944	33.16	13.11x	71488.9	37.43	41.10

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-24T21:41:57.630
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       : 4066600998654526976
2Mass ID (if available) : 18082223-2258369
ICRS Star Coord at Epoch: 18h 08m 22.23945s -22:58:37.12909s
RUWE (>1.4 is poor) : 0.81
K magnitude          : 8.523
G magnitude          : 12.900
RP magnitude         : 11.760
BP magnitude         : 14.255
DUPflag             : 0
Distance (au)        : 5.173
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 12.34
Sun-Target sep (deg) : 91.62
Sun-Moon sep (deg)   : 96.71
B (ring opening deg) : -2.47
PA of pole (deg)     : -1.74
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 10.714
C/A sky separation (km) : 40198.6
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
    
```

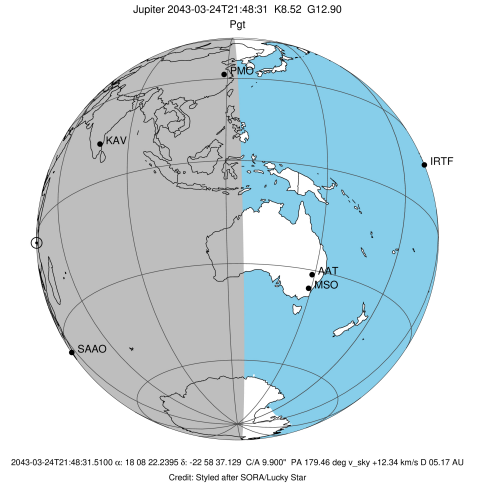


x: target alt < 5.0 deg or sun > -5.0 deg

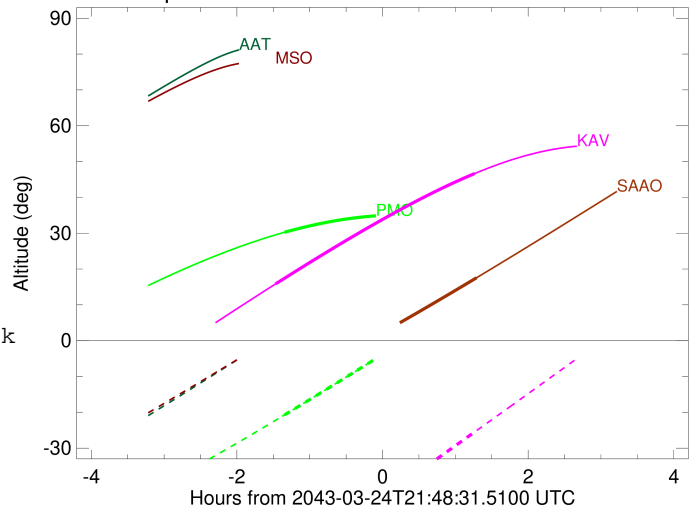
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-24T20:20:28.887	15.85	-63.64	71489.6	32.30	35.79
Jupiter	E	2043-03-24T23:04:27.252	46.64	-25.49	71489.1	35.85	39.47

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-24T21:40:51.440
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       : 4066600998654526976
2Mass ID (if available) : 18082223-2258369
ICRS Star Coord at Epoch: 18h 08m 22.23945s -22:58:37.12909s
RUWE (>1.4 is poor) : 0.81
K magnitude          : 8.523
G magnitude          : 12.900
RP magnitude         : 11.760
BP magnitude         : 14.255
DUPflag             : 0
Distance (au)        : 5.173
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 12.34
Sun-Target sep (deg) : 91.62
Sun-Moon sep (deg)   : 96.25
B (ring opening deg) : -2.47
PA of pole (deg)     : -1.74
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 8.956
C/A sky separation (km) : 33603.3
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
    
```



Jupiter 2043-03-24T21:48:31 K8.52 G12.90



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	2043-03-24T20:16:54.304	-14.13x	-44.04	71490.4	26.16	29.28
Jupiter	E	2043-03-24T23:05:59.052	17.55	-58.99	71489.9	29.92	33.28