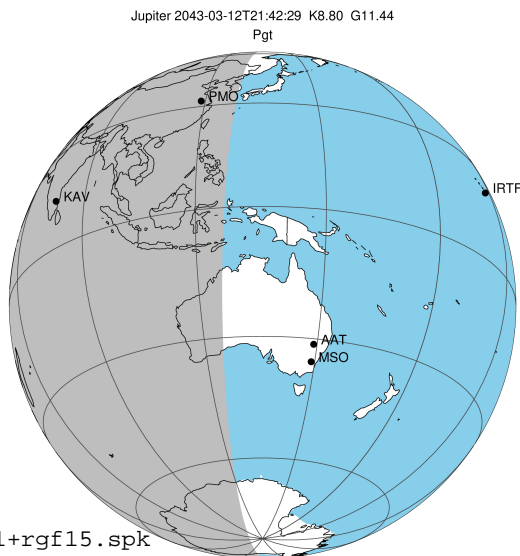


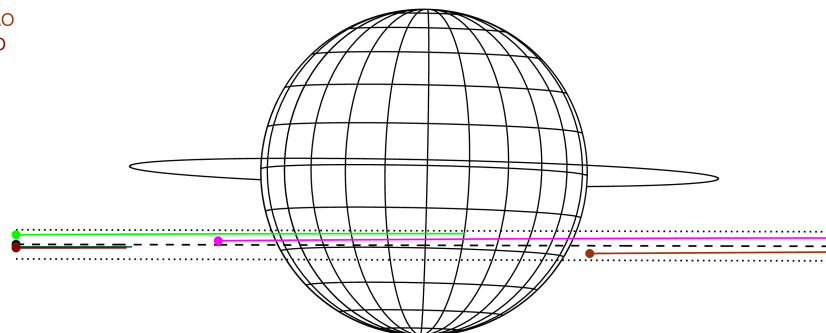
target : Jupiter  
target radius (km) : 71492.00  
C/A epoch : 2043-03-12T21:42:29.850  
Event type : Pgt  
: Jupiter occs: geocentric, topocentric  
: Not a ringed target  
Gaia source ID : 4069262538347389568  
2Mass ID (if available) : 18032499-2259200

Jupiter 2043-03-12T21:42:29 K8.80 G11.44 Pgt

ICRS Star Coord at Epoch: 18h 03m 24.99068s -22:59:20.14805s  
RUWE (>1.4 is poor) : 0.90  
K magnitude : 8.803  
G magnitude : 11.440  
RP magnitude : 10.581  
BP magnitude : 12.186  
DUPflag : 0  
Distance (au) : 5.367  
f0 (km) : 0.00  
g0 (km) : 0.00  
skyplane vel. (km/s) : 17.93  
Sun-Target sep (deg) : 80.82  
Sun-Moon sep (deg) : 101.65  
B (ring opening deg) : -2.49  
PA of pole (deg) : -1.21  
Pole direction: RA (deg): 268.05663  
Dec (deg): 64.49732  
C/A sky separation (") : 8.195  
C/A sky separation (km) : 31896.8  
NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



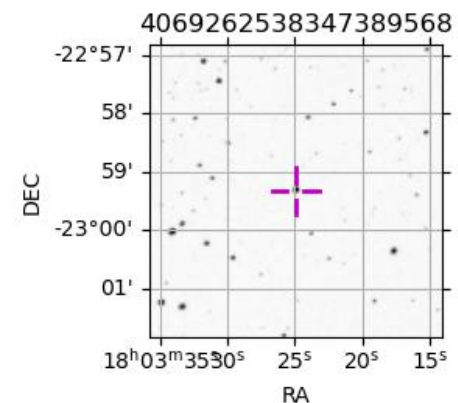
Earth  
PMO  
KAV  
AAT  
SAAO  
MSO



2043-03-12T21:42:29.8500 ex: 18 03 24.9907 s: -22 59 20.148 C/A 8.2057 PA 359.86 deg v\_sky +17.93 km/s D 05.37 AU  
Credit: Styled after SORA/Lucky Star

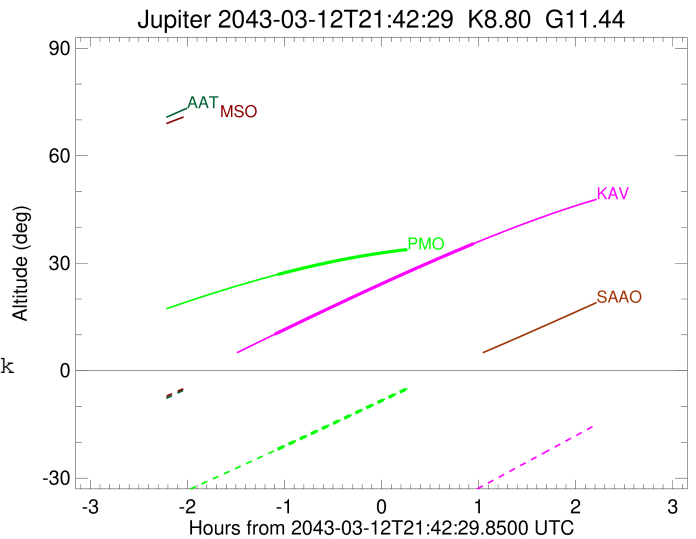
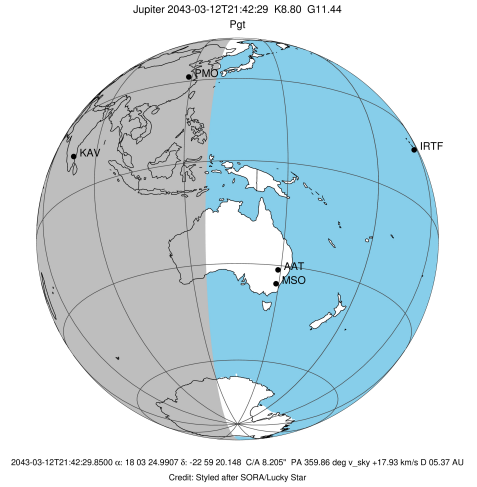
Observable events with sun below -5 deg and altitude above 5 deg

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 12 20:38 - MAR 12 20:38	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 12 20:36 - MAR 12 22:39	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			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-12T21:41:07.430
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      : 4069262538347389568
2Mass ID (if available) : 18032499-2259200
ICRS Star Coord at Epoch: 18h 03m 24.99068s -22:59:20.14805s
RUWE (>1.4 is poor) : 0.90
K magnitude          : 8.803
G magnitude          : 11.440
RP magnitude         : 10.581
BP magnitude         : 12.186
DUPflag             : 0
Distance (au)       : 5.367
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.93
Sun-Target sep (deg) : 80.82
Sun-Moon sep (deg)  : 102.13
B (ring opening deg) : -2.49
PA of pole (deg)    : -1.21
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation (" ) : 6.876
C/A sky separation (km) : 26765.4
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
    
```

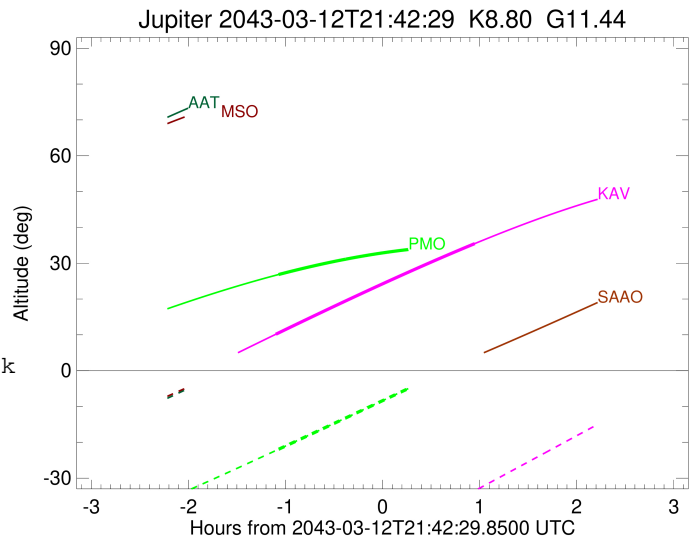
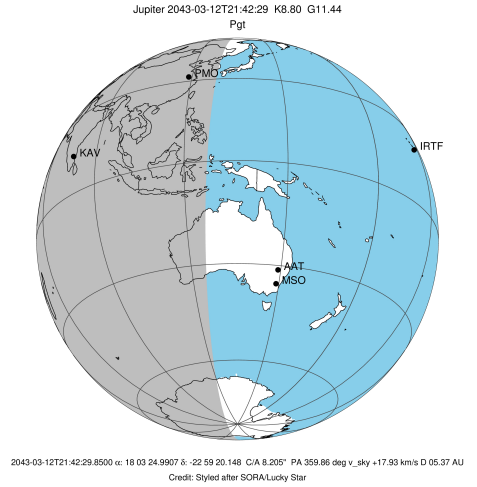


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-12T20:38:18.273	26.84	-21.93	71490.7	-23.23	-26.11
Jupiter	E	2043-03-12T22:44:08.061	35.11	4.69x	71490.9	-20.83	-23.49

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-12T21:37:50.740
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      : 4069262538347389568
2Mass ID (if available) : 18032499-2259200
ICRS Star Coord at Epoch: 18h 03m 24.99068s -22:59:20.14805s
RUWE (>1.4 is poor) : 0.90
K magnitude          : 8.803
G magnitude          : 11.440
RP magnitude         : 10.581
BP magnitude         : 12.186
DUPflag             : 0
Distance (au)       : 5.367
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 17.93
Sun-Target sep (deg) : 80.82
Sun-Moon sep (deg)  : 101.89
B (ring opening deg) : -2.49
PA of pole (deg)    : -1.21
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation (") : 7.526
C/A sky separation (km) : 29293.8
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	2043-03-12T20:36:37.644	10.18	-63.00	71490.4	-25.75	-28.83
Jupiter	E	2043-03-12T22:39:29.464	35.46	-33.53	71490.7	-22.67	-25.50