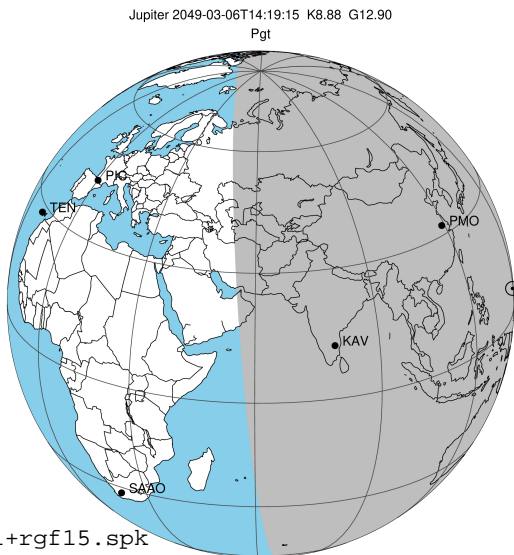


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2049-03-06T14:19:15.110  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3414826757865125632  
 2Mass ID (if available) : 05204310+2255473

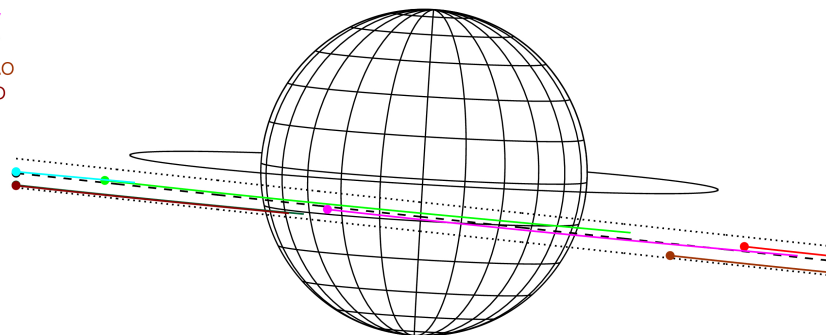
Jupiter 2049-03-06T14:19:15 K8.88 G12.90 Pgt

ICRS Star Coord at Epoch: 05h 20m 43.10676s +22:55:47.16265s  
 RUWE (>1.4 is poor) : 1.04  
 K magnitude : 8.885  
 G magnitude : 12.904  
 RP magnitude : 11.818  
 BP magnitude : 14.130  
 DUPflag : 0  
 Distance (au) : 4.947  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 9.94  
 Sun-Target sep (deg) : 95.20  
 Sun-Moon sep (deg) : 61.67  
 B (ring opening deg) : 2.36  
 PA of pole (deg) : -3.39  
 Pole direction: RA (deg): 268.05741  
 Dec (deg): 64.49720  
 C/A sky separation (") : 5.413  
 C/A sky separation (km) : 19423.8  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk  
 URKALLv1.spk  
 naif0012.tls  
 nep097.bsp  
 nep101.bsp  
 sat4401.bsp



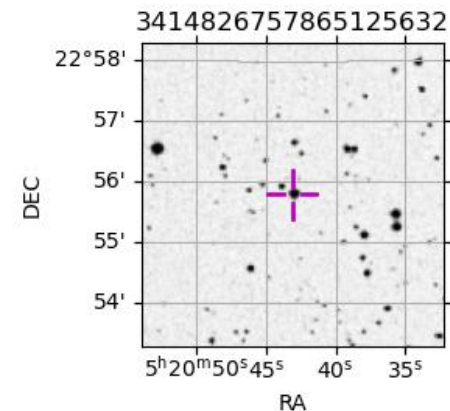
2049-03-06T14:19:15.1100 ra: 05 20 43.1068 s: +22 55 47.163 C/A 5.403" PA 353.86 deg v\_sky + 9.94 km/s D 04.95 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 PIC  
 PMO  
 IRTF  
 KAV  
 AAT  
 SAAO  
 MSO



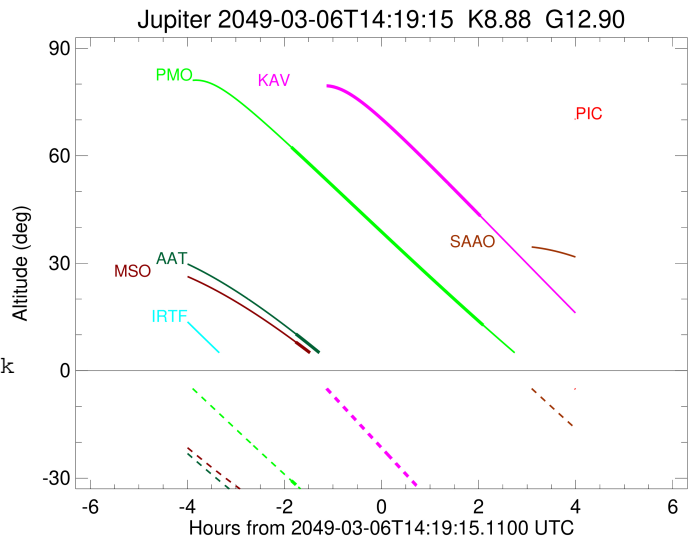
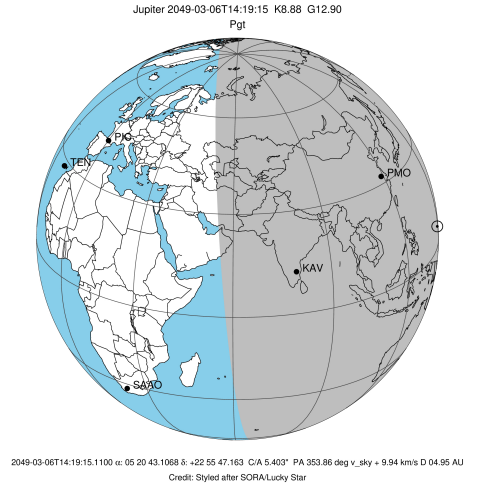
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
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 06 12:27 - MAR 06 16:24	Pie
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 06 16:21 - MAR 06 16:21	Pne
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	+	MAR 06 12:33 - MAR 06 12:33	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	MAR 06 12:33 - MAR 06 12:33	Pin



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-06T14:27:43.580
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       : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10676s +22:55:47.16265s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 8.885
G magnitude           : 12.904
RP magnitude          : 11.818
BP magnitude          : 14.130
DUPflag              : 0
Distance (au)         : 4.947
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 9.94
Sun-Target sep (deg)  : 95.20
Sun-Moon sep (deg)   : 62.52
B (ring opening deg) : 2.36
PA of pole (deg)     : -3.39
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation (" ) : 4.983
C/A sky separation (km) : 17878.8
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
    
```

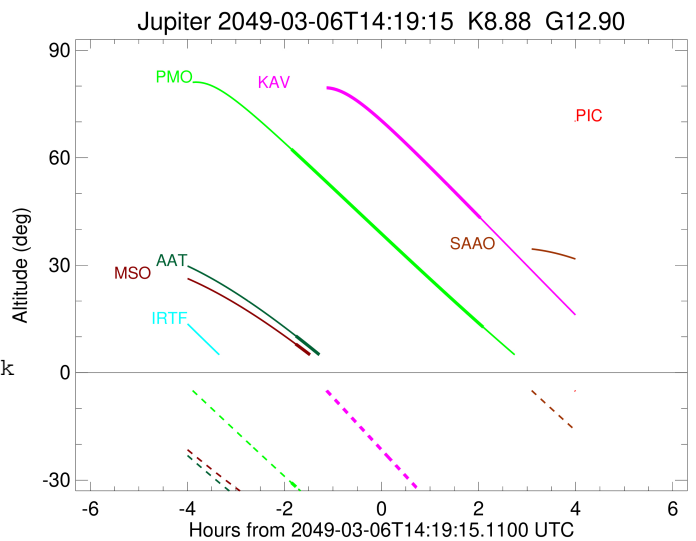
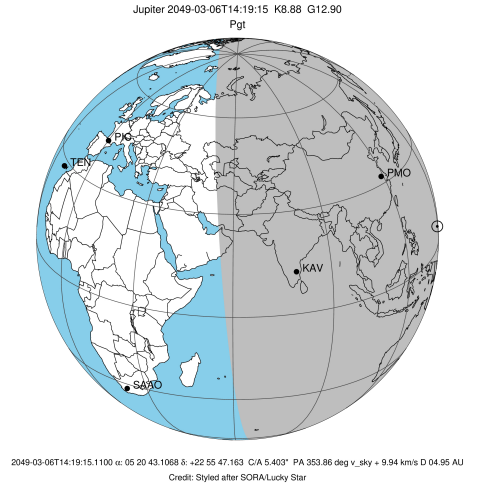


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-03-06T12:27:53.745	62.37	-30.70	71491.7	-12.18	-13.86
Jupiter	E	2049-03-06T16:24:57.772	12.70	-63.33	71491.4	-16.43	-18.62

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-06T14:22:22.510
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      : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10676s +22:55:47.16265s
RUWE (>1.4 is poor) : 1.04
K magnitude          : 8.885
G magnitude          : 12.904
RP magnitude         : 11.818
BP magnitude         : 14.130
DUPflag             : 0
Distance (au)       : 4.947
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 9.94
Sun-Target sep (deg) : 95.20
Sun-Moon sep (deg)  : 62.60
B (ring opening deg) : 2.36
PA of pole (deg)    : -3.39
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation (" ) : 5.756
C/A sky separation (km) : 20654.7
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
    
```

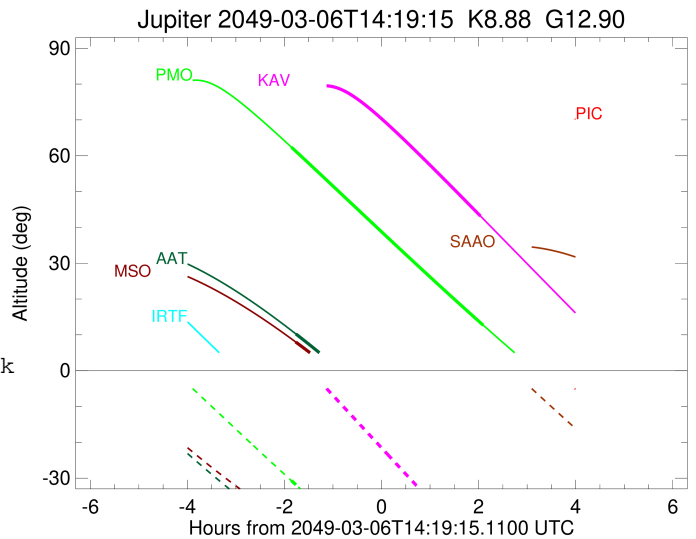
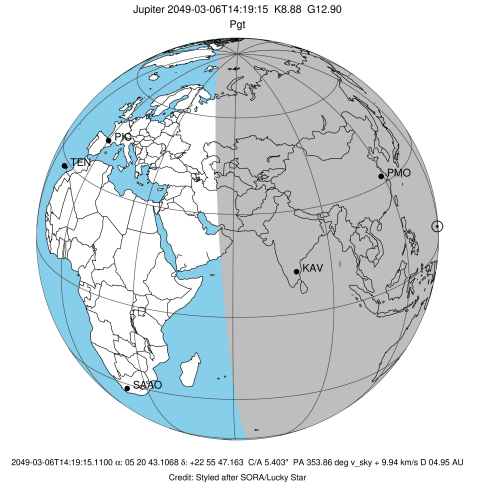


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-03-06T12:21:47.277	74.56	7.05x	71491.6	-13.81	-15.69
Jupiter	E	2049-03-06T16:21:36.881	43.14	-51.34	71491.2	-19.18	-21.67

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-06T14:28:26.100
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : AAT
Location             : Siding Spring (AAT)
Latitude (deg)       : -31.27703
E. Longitude (deg)  : 149.06608
Altitude (km)        : 1.164
Gaia source ID       : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10676s +22:55:47.16265s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 8.885
G magnitude           : 12.904
RP magnitude          : 11.818
BP magnitude          : 14.130
DUPflag              : 0
Distance (au)        : 4.947
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 9.94
Sun-Target sep (deg) : 95.20
Sun-Moon sep (deg)  : 61.92
B (ring opening deg) : 2.36
PA of pole (deg)    : -3.39
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation (" ) : 6.409
C/A sky separation (km) : 22996.3
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
    
```

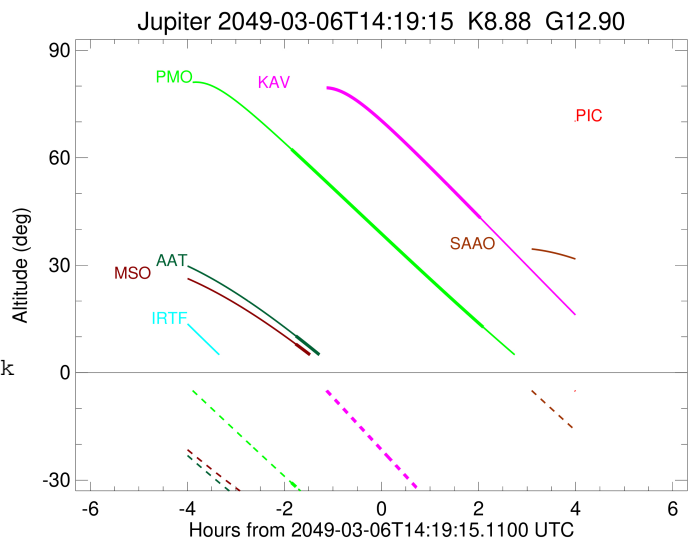
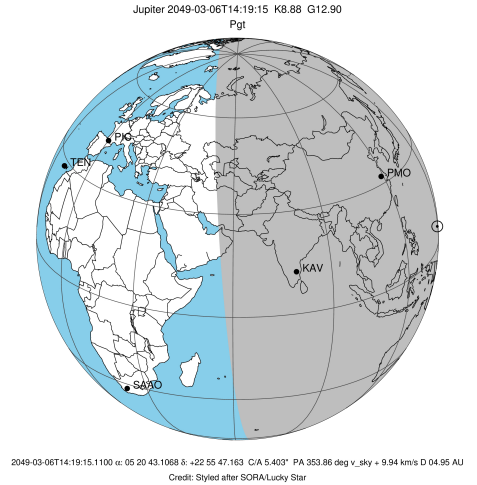


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2049-03-06T12:33:23.981	10.25	-46.23	71491.4	-16.80	-19.03
Jupiter	E	2049-03-06T16:20:44.619	-35.04x	-42.76	71491.1	-20.59	-23.22

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2049-03-06T14:27:56.680
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code       : MSO
Location            : Mt. Stromlo Observatory
Latitude (deg)      : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)       : 0.770
Gaia source ID      : 3414826757865125632
2Mass ID (if available) : 05204310+2255473
ICRS Star Coord at Epoch: 05h 20m 43.10676s +22:55:47.16265s
RUWE (>1.4 is poor) : 1.04
K magnitude          : 8.885
G magnitude          : 12.904
RP magnitude         : 11.818
BP magnitude         : 14.130
DUPflag             : 0
Distance (au)       : 4.947
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 9.94
Sun-Target sep (deg) : 95.20
Sun-Moon sep (deg)  : 61.88
B (ring opening deg) : 2.36
PA of pole (deg)    : -3.39
Pole direction: RA (deg): 268.05741
Dec (deg): 64.49720
C/A sky separation ("): 6.499
C/A sky separation (km): 23320.5
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	2049-03-06T12:33:08.689	8.01	-42.94	71491.3	-17.04	-19.29
Jupiter	E	2049-03-06T16:20:07.658	-35.30x	-39.97	71491.0	-20.90	-23.57