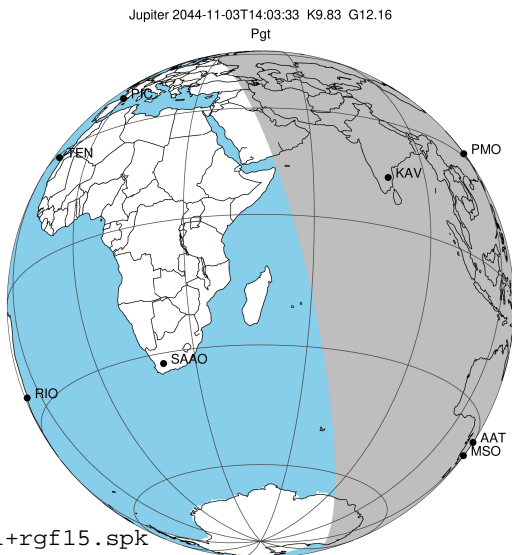


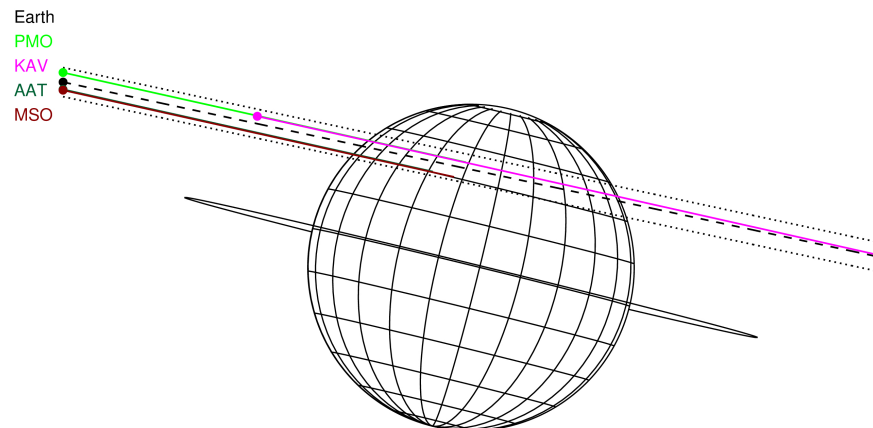
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2044-11-03T14:03:33.870
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 6865910293909834624
 2Mass ID (if available) : 20060398-2055300

Jupiter 2044-11-03T14:03:33 K9.83 G12.16 Pgt

ICRS Star Coord at Epoch: 20h 06m 03.99467s -20:55:29.82147s
 RUWE (>1.4 is poor) : 1.00
 K magnitude : 9.827
 G magnitude : 12.161
 RP magnitude : 11.433
 BP magnitude : 12.743
 DUPflag : 0
 Distance (au) : 5.201
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 19.63
 Sun-Target sep (deg) : 78.05
 Sun-Moon sep (deg) : 76.93
 B (ring opening deg) : -0.75
 PA of pole (deg) : -13.73
 Pole direction: RA (deg): 268.05693
 Dec (deg): 64.49727
 C/A sky separation (") : 11.126
 C/A sky separation (km) : 41970.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

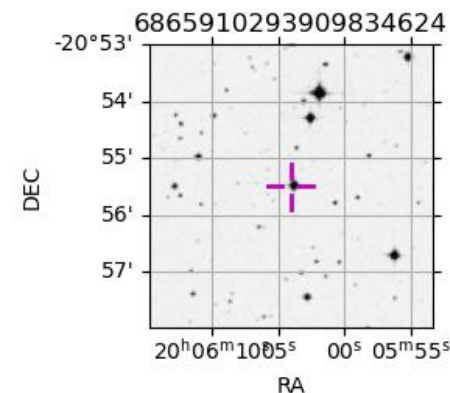


2044-11-03T14:03:33.8700 at: 20 06 03.9947 & -20 55 29.821 C/A ***** PA 167.90 deg v_sky +19.63 km/s D 05.20 AU
 Credit: Styled after SORA/Lucky Star



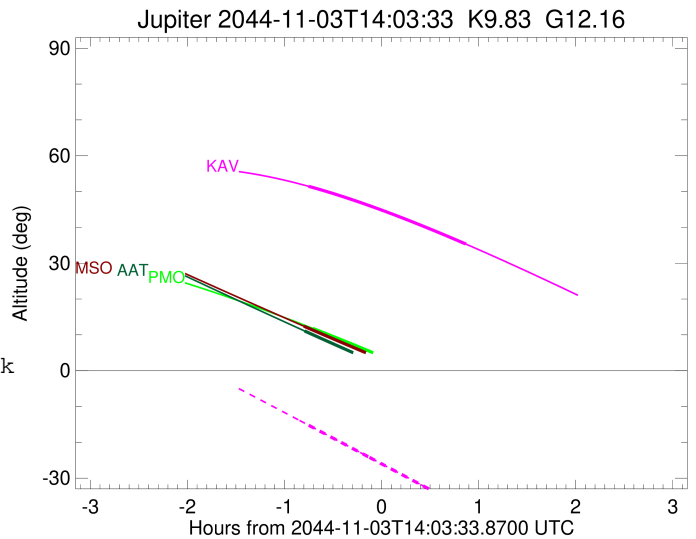
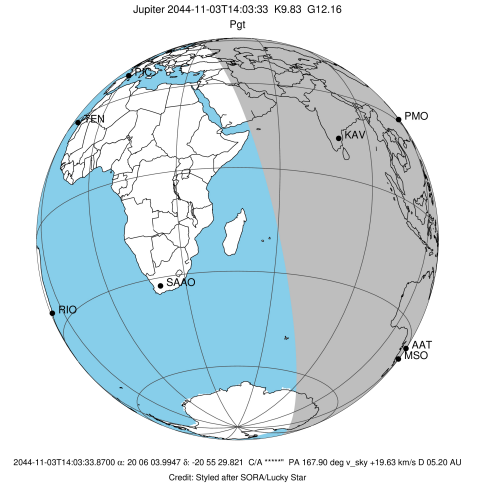
Observable events with sun below -5 deg and altitude above 5 deg

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	+	NOV 03 13:21 - NOV 03 13:21	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	+ +	NOV 03 13:18 - NOV 03 14:55	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	+	NOV 03 13:16 - NOV 03 13:16	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	NOV 03 13:15 - NOV 03 13:15	Pin



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-03T14:08:49.140
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       : 6865910293909834624
2Mass ID (if available) : 20060398-2055300
ICRS Star Coord at Epoch: 20h 06m 03.99467s -20:55:29.82147s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.827
G magnitude           : 12.161
RP magnitude         : 11.433
BP magnitude         : 12.743
DUPflag              : 0
Distance (au)        : 5.201
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.63
Sun-Target sep (deg) : 78.05
Sun-Moon sep (deg)   : 76.79
B (ring opening deg) : -0.75
PA of pole (deg)     : -13.73
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation ("): 11.800
C/A sky separation (km): 44515.1
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
    
```

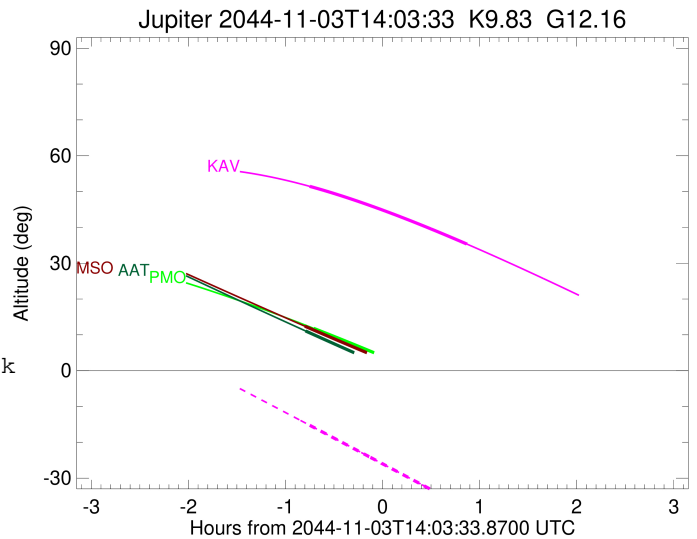
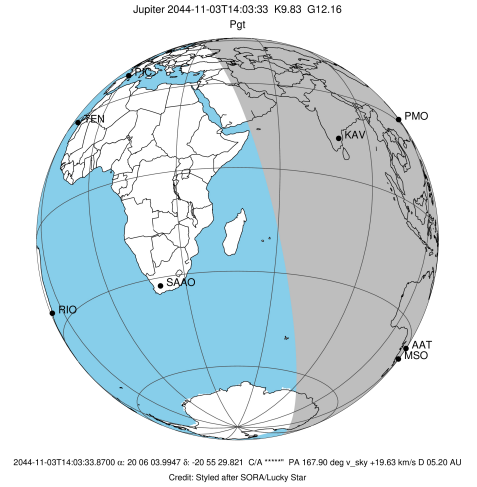


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-11-03T13:21:00.031	11.81	-52.71	71491.7	37.33	41.00
Jupiter	E	2044-11-03T14:56:24.089	-6.23x	-69.72	71491.7	39.70	43.41

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-03T14:07:11.760
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      : 6865910293909834624
2Mass ID (if available) : 20060398-2055300
ICRS Star Coord at Epoch: 20h 06m 03.99467s -20:55:29.82147s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.827
G magnitude          : 12.161
RP magnitude         : 11.433
BP magnitude         : 12.743
DUPflag             : 0
Distance (au)       : 5.201
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.63
Sun-Target sep (deg) : 78.05
Sun-Moon sep (deg)  : 77.46
B (ring opening deg) : -0.75
PA of pole (deg)    : -13.73
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (" ) : 11.760
C/A sky separation (km) : 44361.0
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
    
```

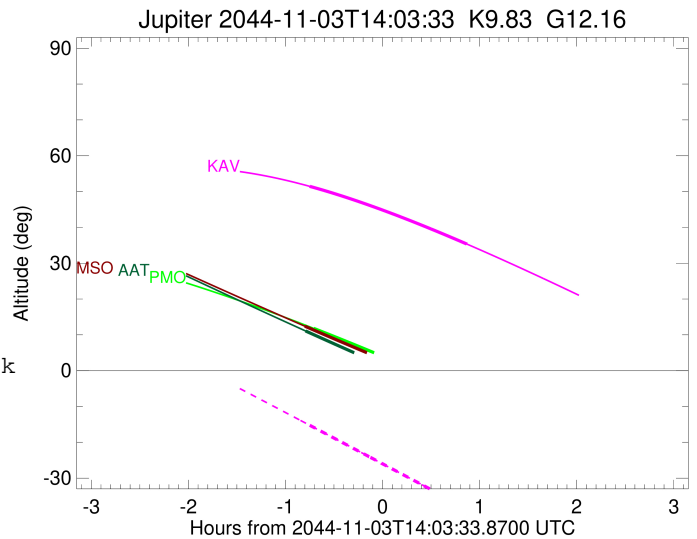
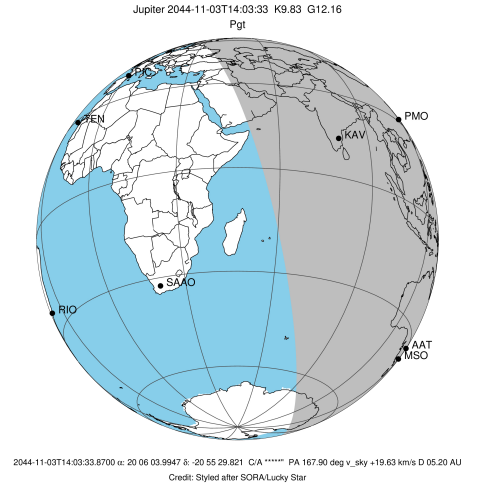


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-11-03T13:18:36.395	51.44	-15.25	71491.7	37.17	40.83
Jupiter	E	2044-11-03T14:55:35.822	35.36	-38.48	71491.7	39.47	43.17

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-03T14:07:32.580
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       : 6865910293909834624
2Mass ID (if available) : 20060398-2055300
ICRS Star Coord at Epoch: 20h 06m 03.99467s -20:55:29.82147s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.827
G magnitude          : 12.161
RP magnitude         : 11.433
BP magnitude         : 12.743
DUPflag             : 0
Distance (au)        : 5.201
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.63
Sun-Target sep (deg) : 78.05
Sun-Moon sep (deg)   : 76.81
B (ring opening deg) : -0.75
PA of pole (deg)     : -13.73
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation ("): 9.920
C/A sky separation (km): 37423.0
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
    
```

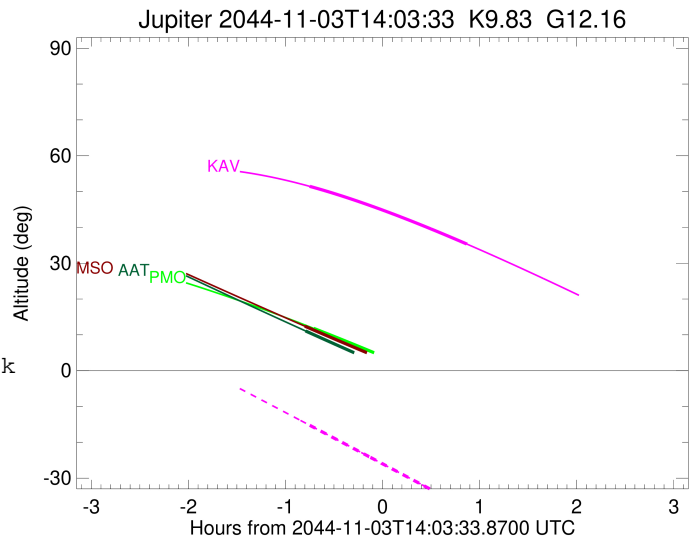
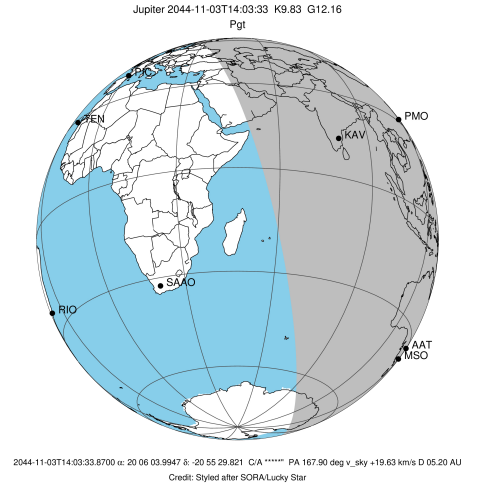


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-11-03T13:16:00.079	11.08	-42.93	71491.8	30.30	33.68
Jupiter	E	2044-11-03T14:58:49.041	-9.01x	-40.43	71491.8	32.90	36.42

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-03T14:07:16.580
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      : 6865910293909834624
2Mass ID (if available) : 20060398-2055300
ICRS Star Coord at Epoch: 20h 06m 03.99467s -20:55:29.82147s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.827
G magnitude          : 12.161
RP magnitude         : 11.433
BP magnitude         : 12.743
DUPflag             : 0
Distance (au)       : 5.201
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.63
Sun-Target sep (deg) : 78.05
Sun-Moon sep (deg)   : 76.84
B (ring opening deg) : -0.75
PA of pole (deg)     : -13.73
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation ("): 9.849
C/A sky separation (km): 37153.7
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	2044-11-03T13:15:35.007	12.41	-38.94	71491.8	30.03	33.40
Jupiter	E	2044-11-03T14:58:42.621	-6.85x	-36.72	71491.8	32.66	36.17