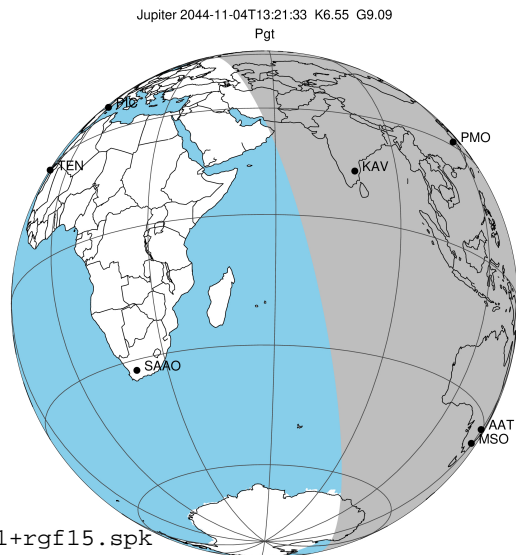


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2044-11-04T13:21:33.880  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 6865908404124358272  
 2Mass ID (if available) : 20063497-2054141

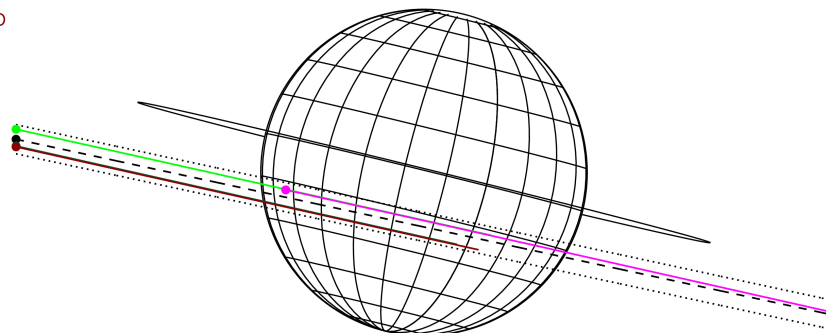
Jupiter 2044-11-04T13:21:33 K6.55 G9.09 Pgt

ICRS Star Coord at Epoch: 20h 06m 35.00047s -20°54:14.22589s

RUWE (>1.4 is poor) : 1.05  
 K magnitude : 6.551  
 G magnitude : 9.090  
 RP magnitude : 8.310  
 BP magnitude : 9.750  
 DUPflag : 0  
 Distance (au) : 5.216  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 20.06  
 Sun-Target sep (deg) : 77.20  
 Sun-Moon sep (deg) : 90.18  
 B (ring opening deg) : -0.75  
 PA of pole (deg) : -13.78  
 Pole direction: RA (deg): 268.05693  
 Dec (deg): 64.49727  
 C/A sky separation (") : 6.171  
 C/A sky separation (km) : 23345.7  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



Earth  
 PMO  
 KAV  
 AAT  
 MSO

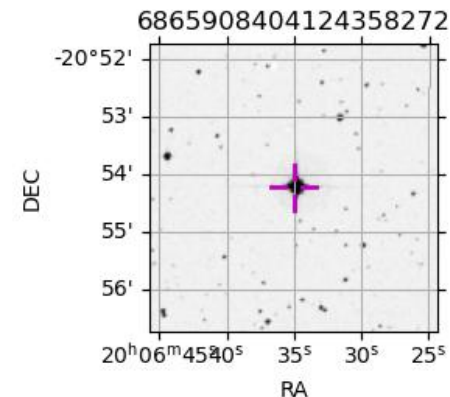


2044-11-04T13:21:33.8800 ex: 20 06 35.0005 s: -20 54 14.226 C/A 6.175° PA 347.86 deg v\_sky +20.06 km/s D 05.22 AU

Credit: Styled after SORA/Lucky Star

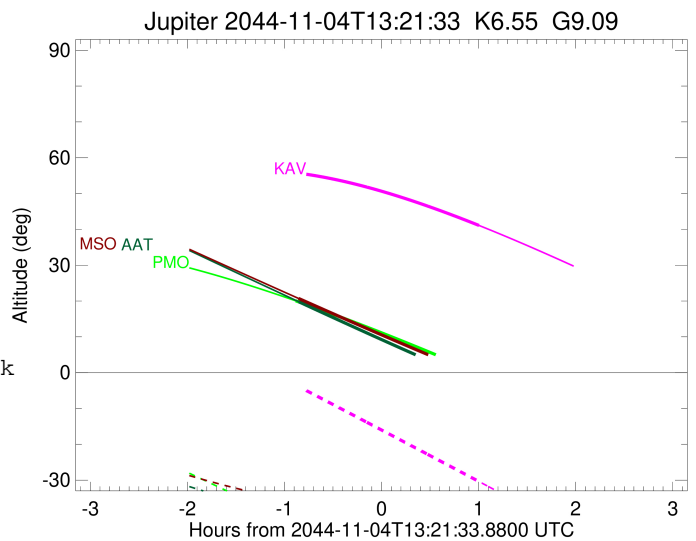
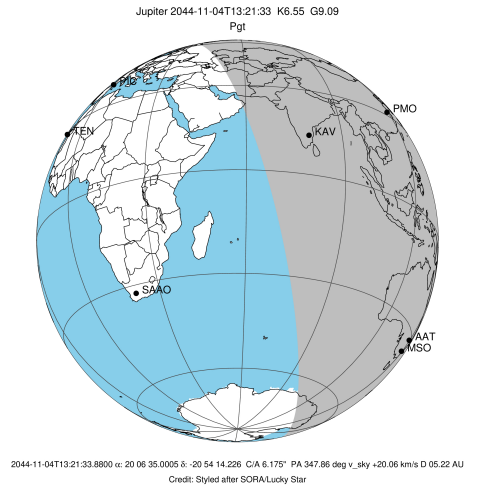
Observable events with sun below -5 deg and altitude above 5 deg

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 04 12:28 - NOV 04 12:28	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 04 14:21 - NOV 04 14:21	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	+	NOV 04 12:30 - NOV 04 12:30	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	NOV 04 12:30 - NOV 04 12:30	Pin



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-04T13:26:02.410
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      : 6865908404124358272
2Mass ID (if available) : 20063497-2054141
ICRS Star Coord at Epoch: 20h 06m 35.00047s -20:54:14.22589s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 6.551
G magnitude          : 9.090
RP magnitude         : 8.310
BP magnitude         : 9.750
DUPflag             : 0
Distance (au)       : 5.216
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 20.06
Sun-Target sep (deg) : 77.20
Sun-Moon sep (deg)  : 90.38
B (ring opening deg) : -0.75
PA of pole (deg)    : -13.78
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (" ) : 5.402
C/A sky separation (km) : 20433.8
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
    
```

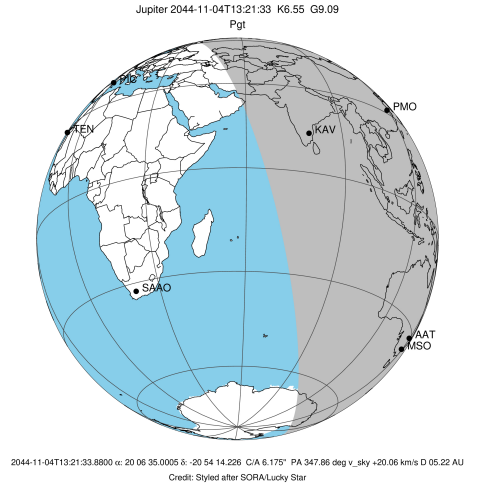


x: target alt < 5.0 deg or sun > -5.0 deg

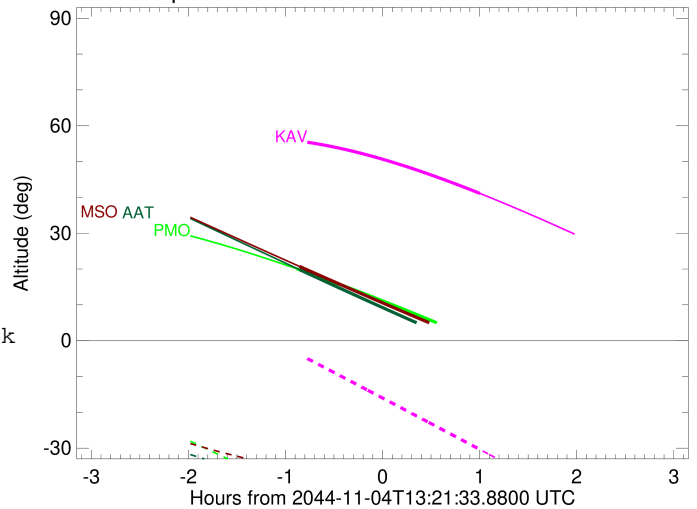
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-11-04T12:28:32.534	20.05	-42.00	71491.9	-17.79	-20.13
Jupiter	E	2044-11-04T14:23:13.638	-0.37x	-64.79	71491.9	-15.42	-17.49

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-04T13:23:55.170
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      : 6865908404124358272
2Mass ID (if available) : 20063497-2054141
ICRS Star Coord at Epoch: 20h 06m 35.00047s -20:54:14.22589s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 6.551
G magnitude          : 9.090
RP magnitude         : 8.310
BP magnitude         : 9.750
DUPflag             : 0
Distance (au)       : 5.216
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 20.06
Sun-Target sep (deg) : 77.20
Sun-Moon sep (deg)  : 90.95
B (ring opening deg) : -0.75
PA of pole (deg)    : -13.78
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (" ) : 5.442
C/A sky separation (km) : 20584.7
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
    
```



Jupiter 2044-11-04T13:21:33 K6.55 G9.09

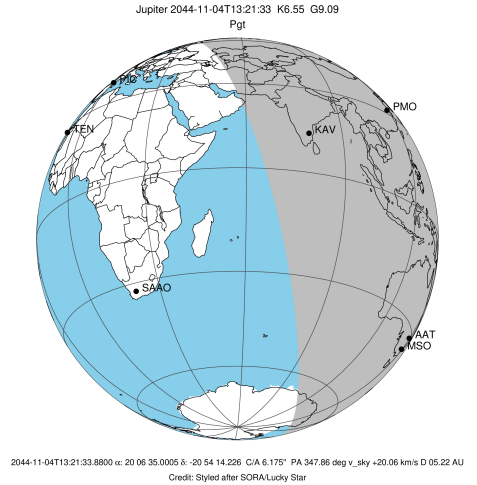


x: target alt < 5.0 deg or sun > -5.0 deg

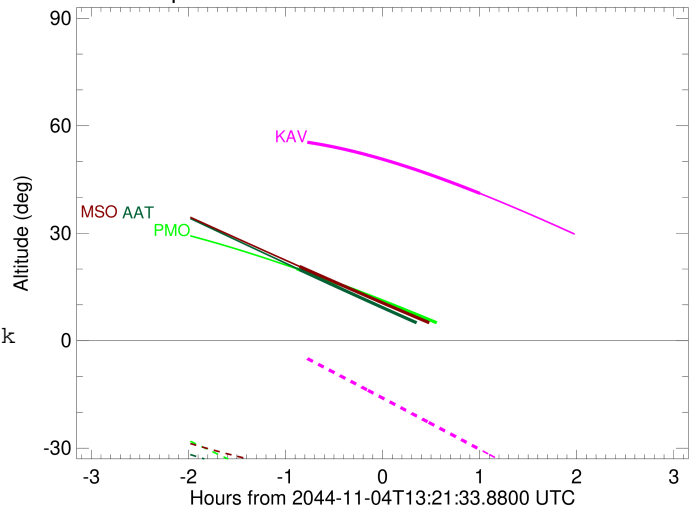
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-11-04T12:25:48.737	55.94	-2.80x	71491.9	-17.98	-20.35
Jupiter	E	2044-11-04T14:21:49.305	41.09	-30.39	71491.9	-15.56	-17.65

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2044-11-04T13:25:16.360
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        : 6865908404124358272
2Mass ID (if available) : 20063497-2054141
ICRS Star Coord at Epoch: 20h 06m 35.00047s -20:54:14.22589s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 6.551
G magnitude           : 9.090
RP magnitude          : 8.310
BP magnitude          : 9.750
DUPflag              : 0
Distance (au)         : 5.216
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 20.06
Sun-Target sep (deg)  : 77.20
Sun-Moon sep (deg)    : 90.34
B (ring opening deg) : -0.75
PA of pole (deg)      : -13.78
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (") : 7.297
C/A sky separation (km) : 27605.4
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
    
```



Jupiter 2044-11-04T13:21:33 K6.55 G9.09

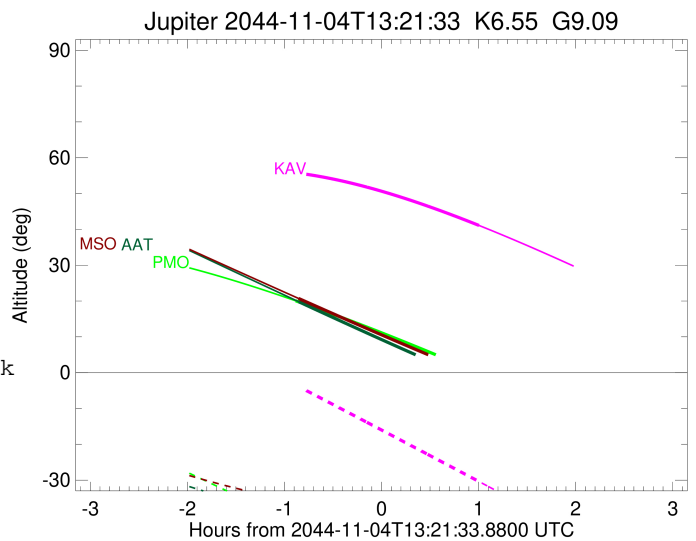
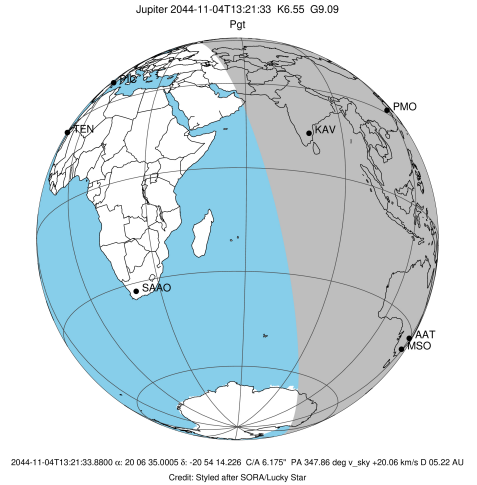


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2044-11-04T12:30:27.176	19.79	-39.73	71491.9	-23.94	-26.88
Jupiter	E	2044-11-04T14:19:47.572	-2.31x	-42.56	71491.9	-21.42	-24.13

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2044-11-04T13:25:01.050
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      : 6865908404124358272
2Mass ID (if available) : 20063497-2054141
ICRS Star Coord at Epoch: 20h 06m 35.00047s -20:54:14.22589s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 6.551
G magnitude          : 9.090
RP magnitude         : 8.310
BP magnitude         : 9.750
DUPflag             : 0
Distance (au)       : 5.216
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 20.06
Sun-Target sep (deg) : 77.20
Sun-Moon sep (deg)  : 90.37
B (ring opening deg) : -0.75
PA of pole (deg)    : -13.78
Pole direction: RA (deg): 268.05693
Dec (deg): 64.49727
C/A sky separation (" ) : 7.372
C/A sky separation (km) : 27887.2
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	2044-11-04T12:30:17.668	20.72	-36.01	71491.9	-24.21	-27.17
Jupiter	E	2044-11-04T14:19:27.178	-0.43x	-38.62	71491.9	-21.65	-24.38