

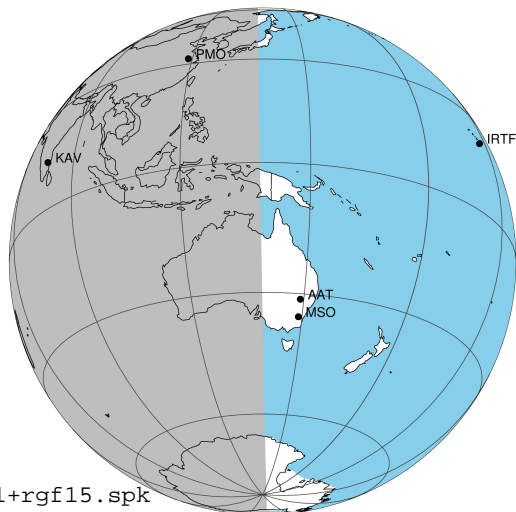
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-03-22T20:52:59.750
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4066597326511066880
 2Mass ID (if available) : 18073881-2258392

Jupiter 2043-03-22T20:52:59 K9.82 G13.11 Pgt

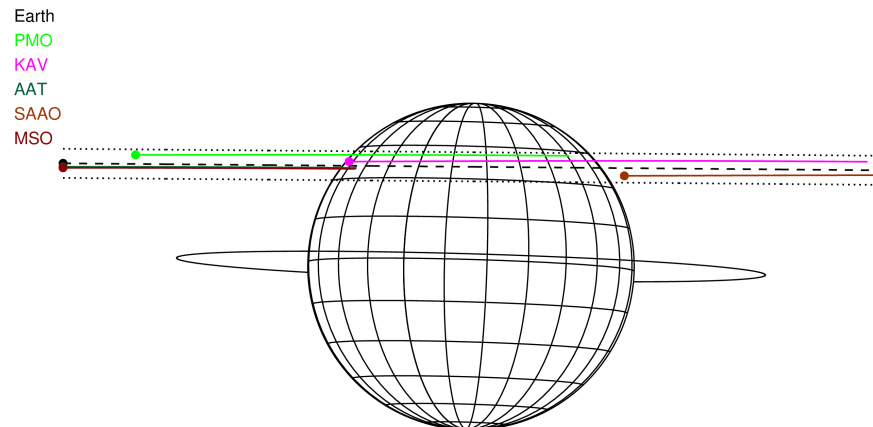
ICRS Star Coord at Epoch: 18h 07m 38.80320s -22:58:40.77018s

RUWE (>1.4 is poor) : 0.89
 K magnitude : 9.816
 G magnitude : 13.110
 RP magnitude : 12.168
 BP magnitude : 13.998
 DUPflag : 0
 Distance (au) : 5.206
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 13.30
 Sun-Target sep (deg) : 89.77
 Sun-Moon sep (deg) : 121.20
 B (ring opening deg) : -2.47
 PA of pole (deg) : -1.66
 Pole direction: RA (deg): 268.05664
 Dec (deg): 64.49732
 C/A sky separation (") : 11.566
 C/A sky separation (km) : 43671.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-03-22T20:52:59 K9.82 G13.11
 Pgt

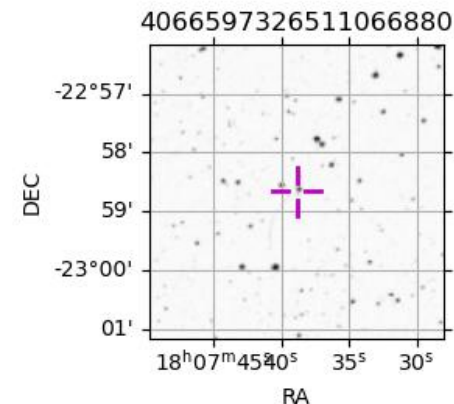


2043-03-22T20:52:59.7500 a: 18 07 38.8032 s: -22 58 40.770 C/A ***** PA 179.51 deg v_sky +13.30 km/s D 05.21 AU
 Credit: Styled after SORA/Lucky Star



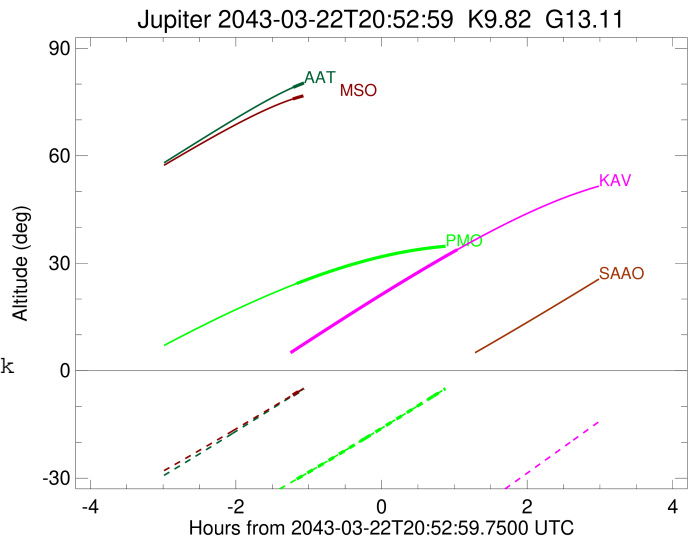
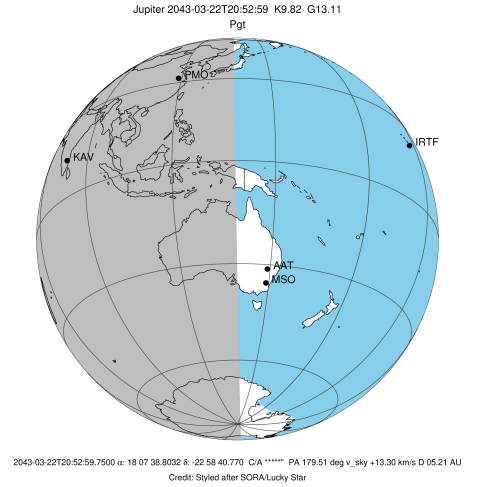
Observable events with sun below -5 deg and altitude above 5 deg

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 22 19:43 - MAR 22 19:43	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 22 21:55 - MAR 22 21:55	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 22 19:40 - MAR 22 19:40	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	MAR 22 19:39 - MAR 22 19:39	Pin



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-22T20:50:25.660
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      : 4066597326511066880
2Mass ID (if available) : 18073881-2258392
ICRS Star Coord at Epoch: 18h 07m 38.80320s -22:58:40.77018s
RUWE (>1.4 is poor) : 0.89
K magnitude          : 9.816
G magnitude          : 13.110
RP magnitude         : 12.168
BP magnitude         : 13.998
DUPflag             : 0
Distance (au)       : 5.206
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 13.30
Sun-Target sep (deg) : 89.77
Sun-Moon sep (deg)  : 121.78
B (ring opening deg) : -2.47
PA of pole (deg)    : -1.66
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 12.916
C/A sky separation (km) : 48769.3
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
    
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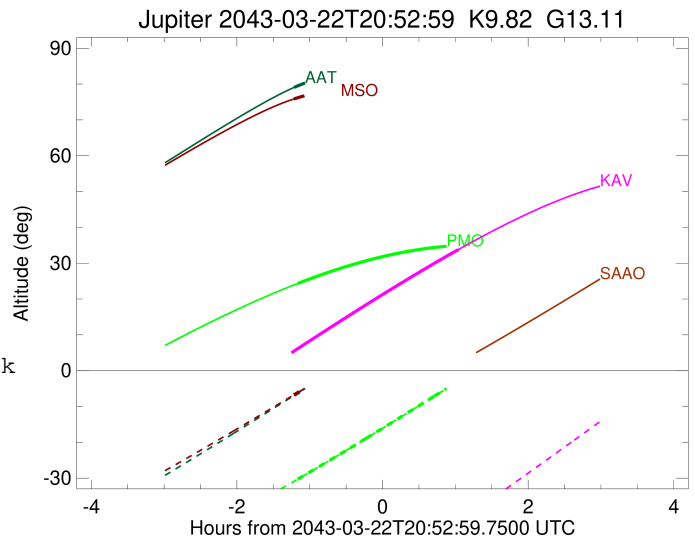
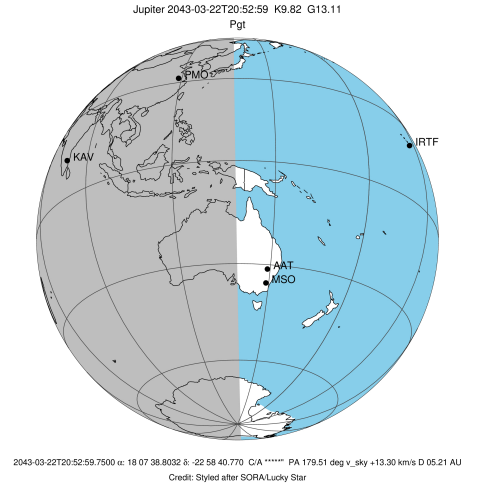


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-22T19:43:08.670	24.33	-30.28	71488.3	41.48	45.20
Jupiter	E	2043-03-22T21:58:03.301	35.00	-2.38x	71487.9	44.26	47.97

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-03-22T20:45:27.570
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       : 4066597326511066880
2Mass ID (if available) : 18073881-2258392
ICRS Star Coord at Epoch: 18h 07m 38.80320s -22:58:40.77018s
RUWE (>1.4 is poor) : 0.89
K magnitude           : 9.816
G magnitude           : 13.110
RP magnitude          : 12.168
BP magnitude          : 13.998
DUPflag              : 0
Distance (au)        : 5.206
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 13.30
Sun-Target sep (deg) : 89.77
Sun-Moon sep (deg)   : 121.91
B (ring opening deg) : -2.47
PA of pole (deg)     : -1.66
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation ("): 12.223
C/A sky separation (km): 46153.7
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
    
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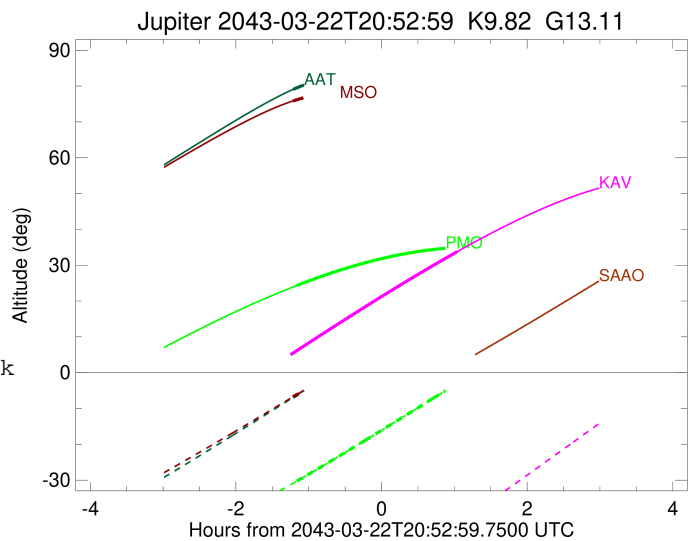
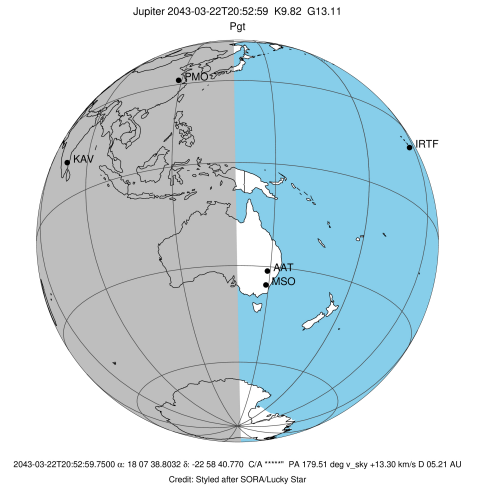


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-22T19:36:17.176	4.61x	-72.64	71488.8	38.28	41.96
Jupiter	E	2043-03-22T21:55:25.735	33.78	-42.43	71488.3	41.94	45.66

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-22T20:54:20.860
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      : 4066597326511066880
2Mass ID (if available) : 18073881-2258392
ICRS Star Coord at Epoch: 18h 07m 38.80320s -22:58:40.77018s
RUWE (>1.4 is poor) : 0.89
K magnitude          : 9.816
G magnitude          : 13.110
RP magnitude         : 12.168
BP magnitude         : 13.998
DUPflag             : 0
Distance (au)       : 5.206
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 13.30
Sun-Target sep (deg) : 89.77
Sun-Moon sep (deg)  : 121.89
B (ring opening deg) : -2.47
PA of pole (deg)    : -1.66
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 11.315
C/A sky separation (km) : 42721.8
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
    
```

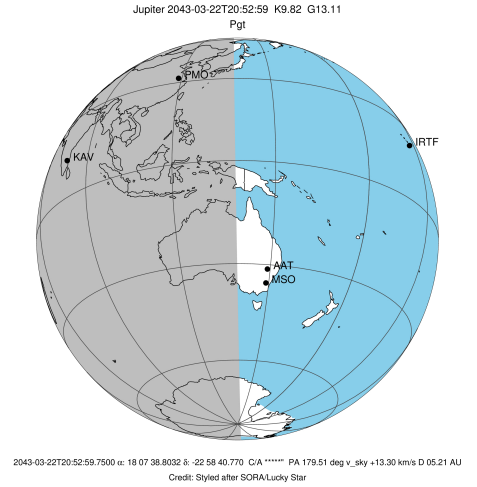


x: target alt < 5.0 deg or sun > -5.0 deg

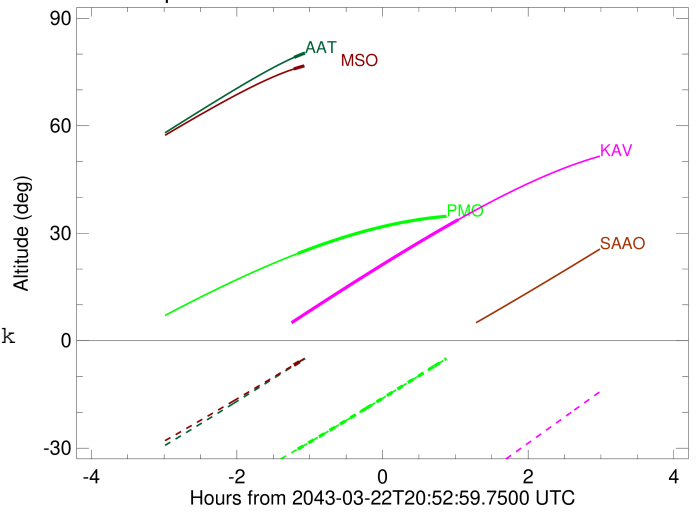
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-22T19:40:15.933	79.08	-6.89	71489.2	35.52	39.14
Jupiter	E	2043-03-22T22:08:26.281	63.07	24.44x	71488.9	37.58	41.24

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-22T20:54:16.060
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       : 4066597326511066880
2Mass ID (if available) : 18073881-2258392
ICRS Star Coord at Epoch: 18h 07m 38.80320s -22:58:40.77018s
RUWE (>1.4 is poor) : 0.89
K magnitude           : 9.816
G magnitude           : 13.110
RP magnitude          : 12.168
BP magnitude          : 13.998
DUPflag              : 0
Distance (au)         : 5.206
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 13.30
Sun-Target sep (deg) : 89.77
Sun-Moon sep (deg)   : 121.89
B (ring opening deg) : -2.47
PA of pole (deg)     : -1.66
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 11.198
C/A sky separation (km) : 42283.5
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
    
```



Jupiter 2043-03-22T20:52:59 K9.82 G13.11



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	2043-03-22T19:39:52.576	75.83	-6.78	71489.2	35.08	38.69
Jupiter	E	2043-03-22T22:08:40.490	62.08	23.20x	71489.0	37.15	40.81