

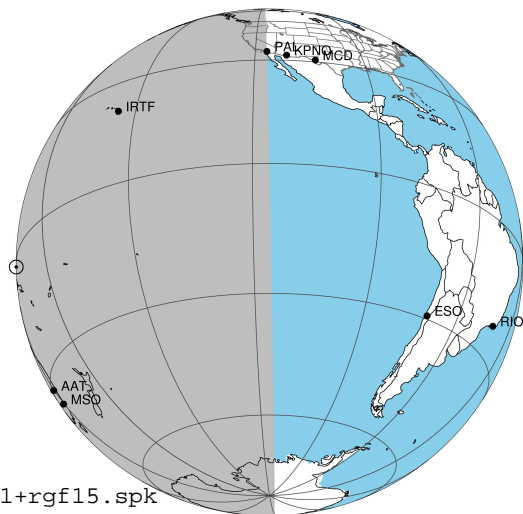
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-03-23T13:51:08.120
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4066595844693763200
 2Mass ID (if available) : 18075420-2258327

Jupiter 2043-03-23T13:51:08 K6.95 G12.34 Pgt

ICRS Star Coord at Epoch: 18h 07m 54.20004s -22:58:32.91380s

RUWE (>1.4 is poor) : 0.96
 K magnitude : 6.951
 G magnitude : 12.340
 RP magnitude : 11.009
 BP magnitude : 14.447
 DUPflag : 0
 Distance (au) : 5.195
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 12.97
 Sun-Target sep (deg) : 90.41
 Sun-Moon sep (deg) : 112.43
 B (ring opening deg) : -2.47
 PA of pole (deg) : -1.69
 Pole direction: RA (deg): 268.05664
 Dec (deg): 64.49732
 C/A sky separation (") : 17.600
 C/A sky separation (km) : 66307.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

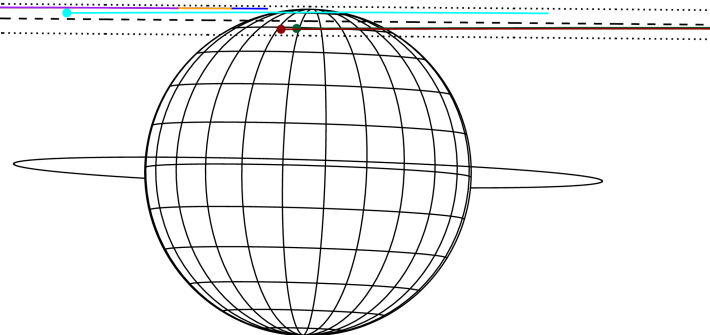
Jupiter 2043-03-23T13:51:08 K6.95 G12.34
 Pgt



2043-03-23T13:51:08.1200 a: 18 07 54.2000 s: -22 58 32.914 C/A ***** PA 179.49 deg v_sky +12.97 km/s D 05.19 AU
 Credit: Styled after SORA/Lucky Star

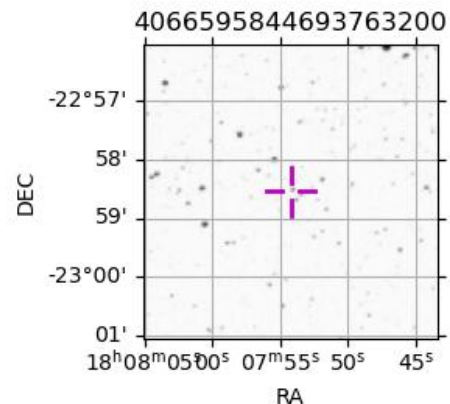
Earth

- PAL
- KPNO
- MCD
- IRTF
- ESO
- AAT
- MSO



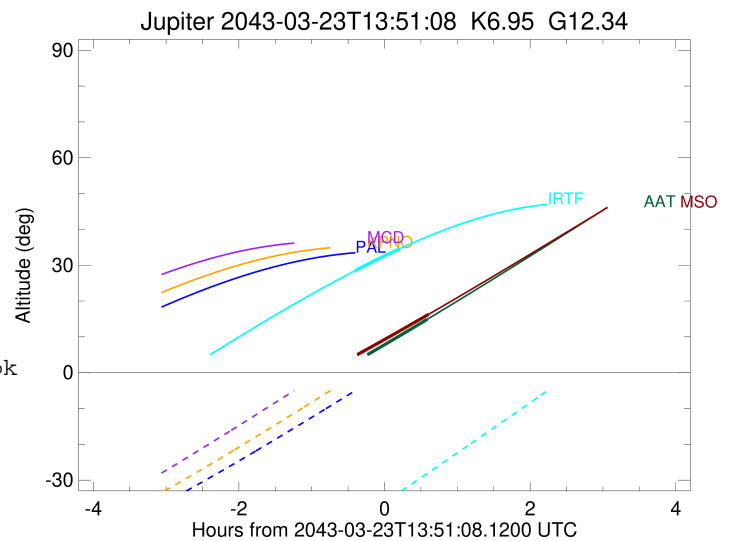
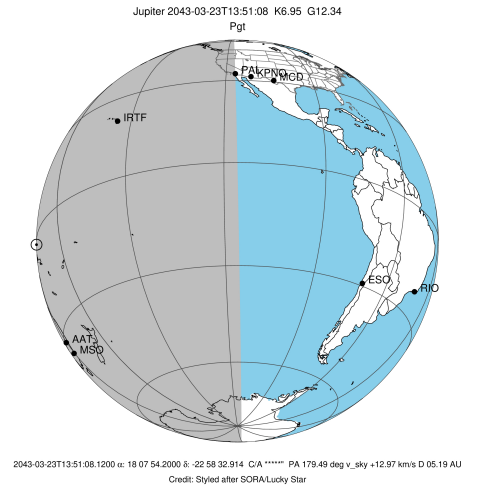
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
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	+ +	MAR 23 13:27 - MAR 23 14:03	Pie
KAV	Kavalur Observatory	12.6	78.8			Pnn
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 23 14:26 - MAR 23 14:26	Pne
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	MAR 23 14:27 - MAR 23 14:27	Pne



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-23T13:45:23.580
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : IRTF
Location             : Mauna Kea/IRTF
Latitude (deg)       : 19.82622
E. Longitude (deg)   : 204.52800
Altitude (km)        : 4.168
Gaia source ID       : 4066595844693763200
2Mass ID (if available) : 18075420-2258327
ICRS Star Coord at Epoch: 18h 07m 54.20004s -22:58:32.91380s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 6.951
G magnitude           : 12.340
RP magnitude         : 11.009
BP magnitude         : 14.447
DUPflag              : 0
Distance (au)        : 5.195
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 12.97
Sun-Target sep (deg) : 90.41
Sun-Moon sep (deg)   : 113.11
B (ring opening deg) : -2.47
PA of pole (deg)     : -1.69
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation ("): 18.611
C/A sky separation (km): 70117.8
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
    
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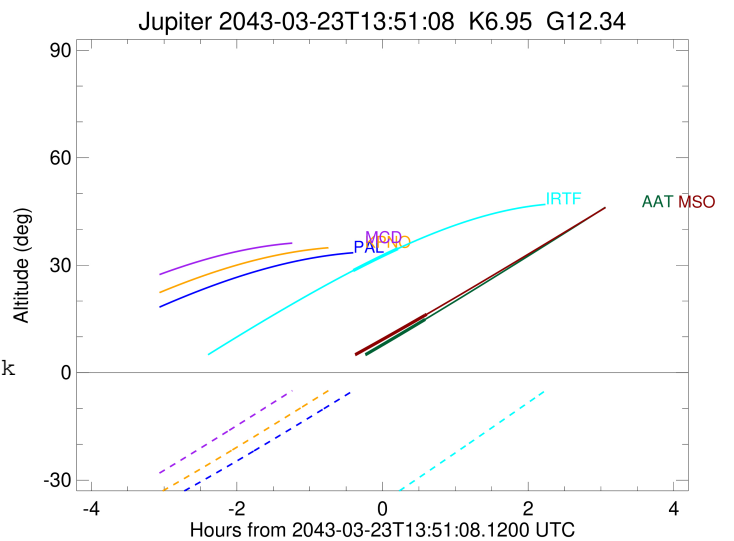
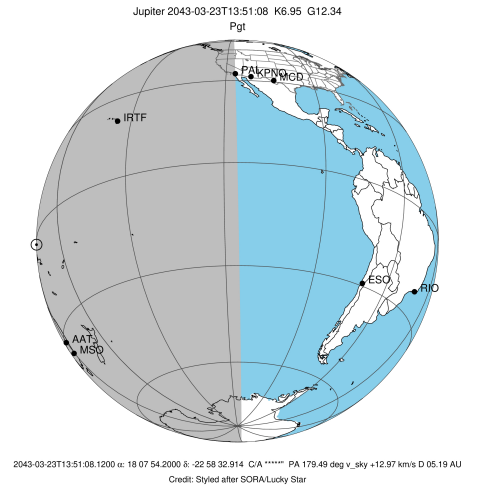


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-23T13:27:01.759	28.50	-41.53	71484.1	76.86	78.38
Jupiter	E	2043-03-23T14:03:48.026	34.62	-33.27	71483.9	80.11	81.26

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-23T13:43:08.980
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       : 4066595844693763200
2Mass ID (if available) : 18075420-2258327
ICRS Star Coord at Epoch: 18h 07m 54.20004s -22:58:32.91380s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 6.951
G magnitude           : 12.340
RP magnitude         : 11.009
BP magnitude         : 14.447
DUPflag              : 0
Distance (au)        : 5.195
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 12.97
Sun-Target sep (deg) : 90.41
Sun-Moon sep (deg)   : 112.84
B (ring opening deg) : -2.47
PA of pole (deg)     : -1.69
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation ("): 16.748
C/A sky separation (km): 63101.1
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
    
```

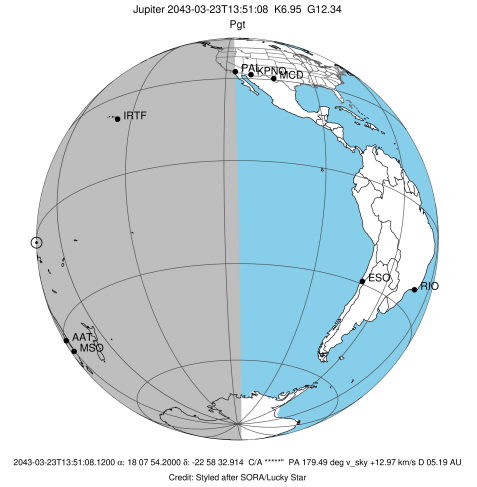


x: target alt < 5.0 deg or sun > -5.0 deg

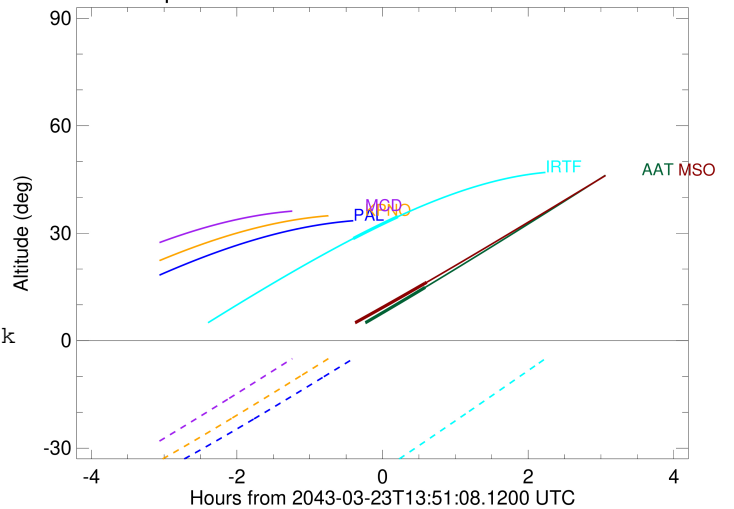
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-23T13:00:17.458	-2.07x	-55.74	71485.7	60.03	63.09
Jupiter	E	2043-03-23T14:26:18.823	14.88	-59.79	71485.3	63.73	66.51

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-23T13:43:30.370
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      : 4066595844693763200
2Mass ID (if available) : 18075420-2258327
ICRS Star Coord at Epoch: 18h 07m 54.20004s -22:58:32.91380s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 6.951
G magnitude          : 12.340
RP magnitude         : 11.009
BP magnitude         : 14.447
DUPflag             : 0
Distance (au)       : 5.195
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 12.97
Sun-Target sep (deg) : 90.41
Sun-Moon sep (deg)  : 112.85
B (ring opening deg) : -2.47
PA of pole (deg)    : -1.69
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 16.659
C/A sky separation (km) : 62765.1
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
    
```



Jupiter 2043-03-23T13:51:08 K6.95 G12.34



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	2043-03-23T12:59:50.382	-0.26x	-52.21	71485.8	59.49	62.59
Jupiter	E	2043-03-23T14:27:28.671	16.28	-55.77	71485.4	63.13	65.96