

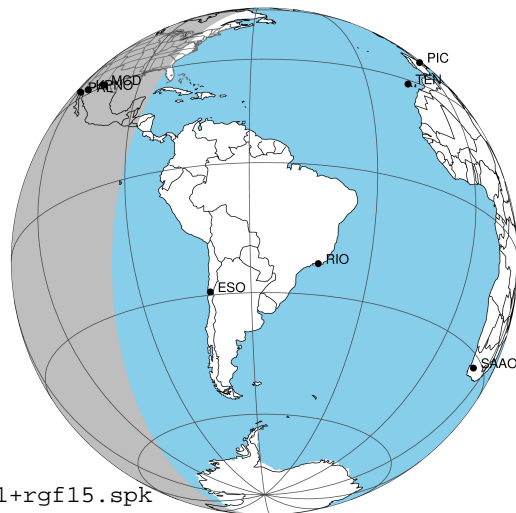
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-08T12:17:25.440
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116880806400516224
 2Mass ID (if available) : 17425360-2254461

Jupiter 2043-02-08T12:17:25 K9.20 G14.96 Pgt

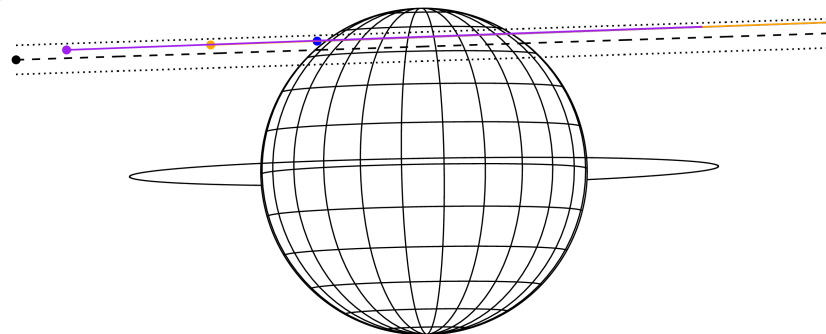
ICRS Star Coord at Epoch: 17h 42m 53.58802s -22:54:46.51700s

RUWE (>1.4 is poor) : 1.02
 K magnitude : 9.201
 G magnitude : 14.963
 RP magnitude : 13.532
 BP magnitude : 17.410
 DUPflag : 0
 Distance (au) : 5.846
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 31.15
 Sun-Target sep (deg) : 52.96
 Sun-Moon sep (deg) : 35.97
 B (ring opening deg) : -2.57
 PA of pole (deg) : 1.01
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 12.905
 C/A sky separation (km) : 54714.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-08T12:17:25 K9.20 G14.96
 Pgt



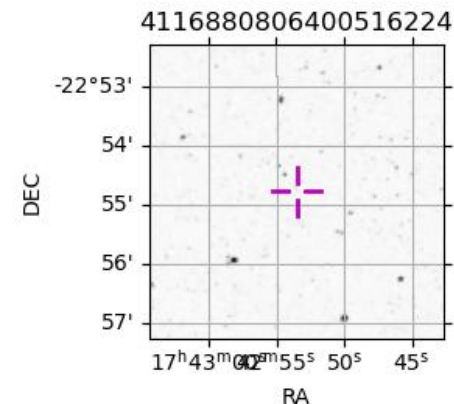
Earth
 PAL
 KPNO
 MCD



2043-02-08T12:17:25.4400 a: 17 42 53.5880 s: -22 54 46.517 C/A ***** PA 181.87 deg v_sky +31.15 km/s D 05.85 AU
 Credit: Styled after SORA/Lucky Star

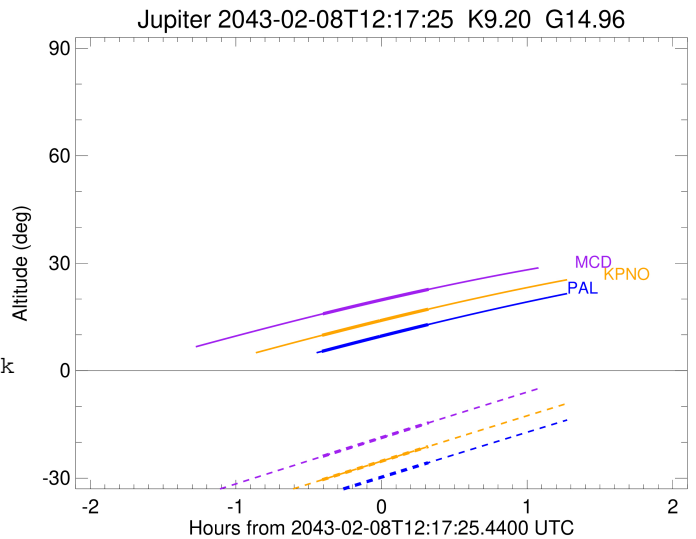
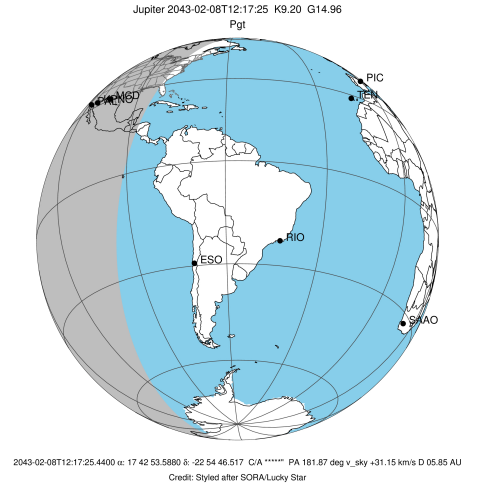
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	FEB 08 11:52 - FEB 08 12:36	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	FEB 08 11:52 - FEB 08 12:36	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	FEB 08 11:53 - FEB 08 12:36	Pie
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			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			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-08T12:14:43.500
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 4116880806400516224
2Mass ID (if available) : 17425360-2254461
ICRS Star Coord at Epoch: 17h 42m 53.58802s -22:54:46.51700s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 9.201
G magnitude          : 14.963
RP magnitude         : 13.532
BP magnitude         : 17.410
DUPflag             : 0
Distance (au)        : 5.846
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.15
Sun-Target sep (deg) : 52.96
Sun-Moon sep (deg)  : 36.71
B (ring opening deg) : -2.57
PA of pole (deg)    : 1.01
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (" ) : 13.869
C/A sky separation (km) : 58801.9
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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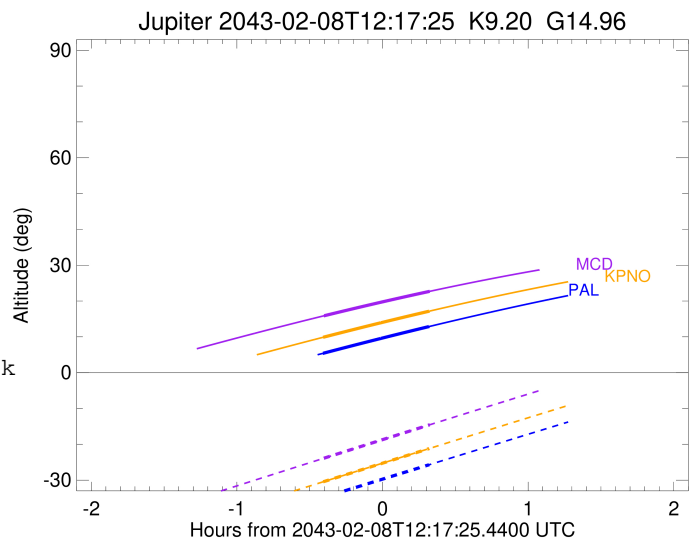
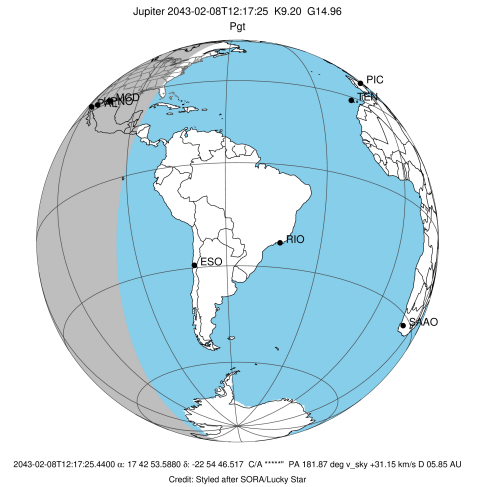


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-08T11:52:51.581	5.39	-34.86	71486.1	54.14	57.56
Jupiter	E	2043-02-08T12:36:37.094	12.87	-25.70	71485.7	56.36	59.66

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-08T12:14:49.760
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : KPNO
Location              : Kitt Peak Natl Obs
Latitude (deg)        : 31.96333
E. Longitude (deg)    : 248.40000
Altitude (km)         : 2.120
Gaia source ID        : 4116880806400516224
2Mass ID (if available) : 17425360-2254461
ICRS Star Coord at Epoch: 17h 42m 53.58802s -22:54:46.51700s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 9.201
G magnitude           : 14.963
RP magnitude          : 13.532
BP magnitude          : 17.410
DUPflag              : 0
Distance (au)         : 5.846
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.15
Sun-Target sep (deg) : 52.96
Sun-Moon sep (deg)   : 36.73
B (ring opening deg) : -2.57
PA of pole (deg)     : 1.01
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (" ) : 13.885
C/A sky separation (km) : 58869.3
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
    
```

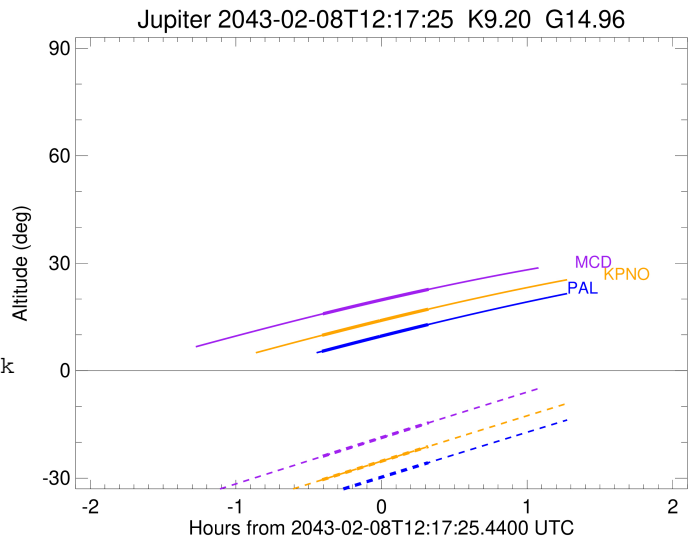
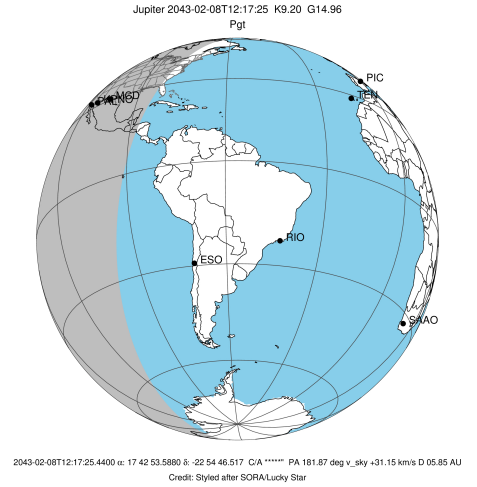


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-08T11:52:59.473	9.88	-30.46	71486.1	54.24	57.65
Jupiter	E	2043-02-08T12:36:41.652	17.16	-21.18	71485.7	56.45	59.74

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-08T12:15:02.700
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : MCD
Location              : McDonald Obs. 2.7m
Latitude (deg)        : 30.67158
E. Longitude (deg)    : 255.97844
Altitude (km)         : 2.075
Gaia source ID        : 4116880806400516224
2Mass ID (if available) : 17425360-2254461
ICRS Star Coord at Epoch: 17h 42m 53.58802s -22:54:46.51700s
RUWE (>1.4 is poor) : 1.02
K magnitude           : 9.201
G magnitude           : 14.963
RP magnitude          : 13.532
BP magnitude          : 17.410
DUPflag              : 0
Distance (au)         : 5.846
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.15
Sun-Target sep (deg) : 52.96
Sun-Moon sep (deg)   : 36.74
B (ring opening deg) : -2.57
PA of pole (deg)     : 1.01
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 13.918
C/A sky separation (km) : 59007.9
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	2043-02-08T11:53:16.918	15.87	-23.88	71486.0	54.46	57.85
Jupiter	E	2043-02-08T12:36:49.976	22.69	-14.56	71485.7	56.63	59.91