

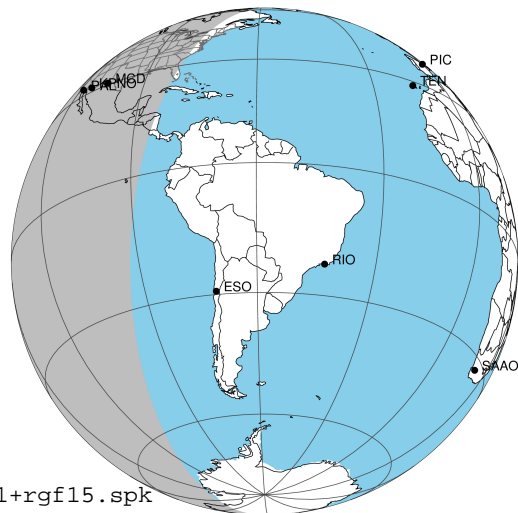
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-14T12:04:40.940
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068932311274935040
 2Mass ID (if available) : 17472107-2256483

Jupiter 2043-02-14T12:04:40 K9.93 G14.84 Pgt

ICRS Star Coord at Epoch: 17h 47m 21.06195s -22:56:48.48123s

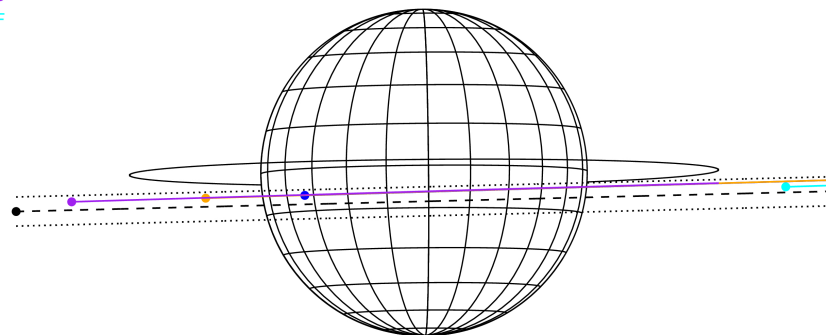
RUWE (>1.4 is poor) : 0.96
 K magnitude : 9.934
 G magnitude : 14.841
 RP magnitude : 13.568
 BP magnitude : 16.630
 DUPflag : 0
 Distance (au) : 5.765
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 28.97
 Sun-Target sep (deg) : 58.00
 Sun-Moon sep (deg) : 118.91
 B (ring opening deg) : -2.55
 PA of pole (deg) : 0.53
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 3.028
 C/A sky separation (km) : 12659.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-14T12:04:40 K9.93 G14.84
 Pgt



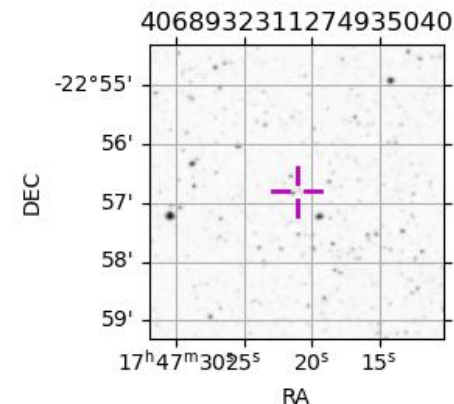
2043-02-14T12:04:40.9400 α: 17 47 21.0619 δ: -22 56 48.481 C/A 3.037" PA 1.42 deg v_sky +28.97 km/s D 05.77 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PAL
 KPNO
 MCD
 IRTF



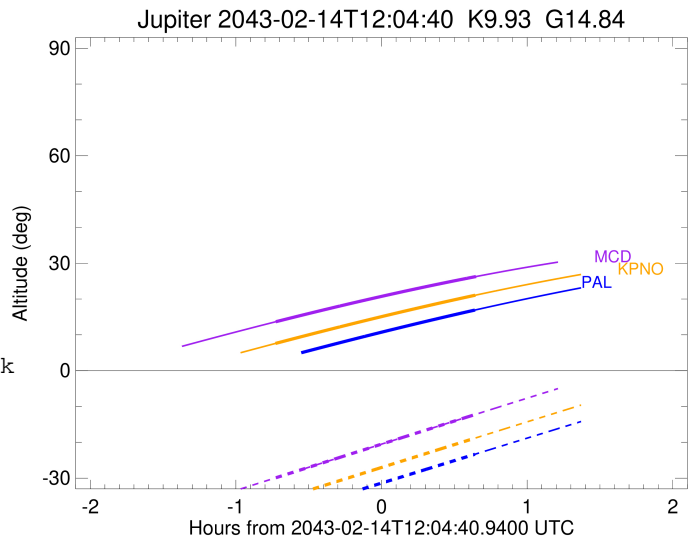
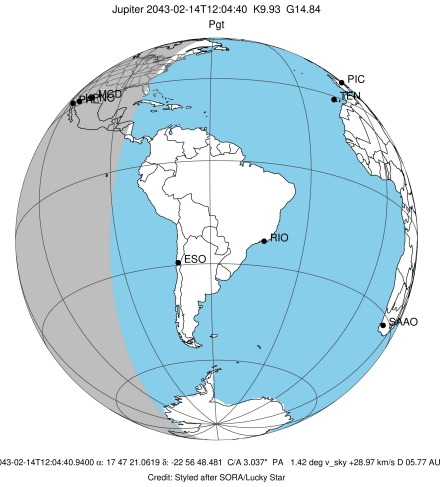
Observable events with sun below -5 deg and altitude above 5 deg

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 14 12:43 - FEB 14 12:43	Pne
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	FEB 14 11:21 - FEB 14 12:43	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	FEB 14 11:21 - FEB 14 12:43	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            : 2043-02-14T12:02:00.860
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       : 4068932311274935040
2Mass ID (if available) : 17472107-2256483
ICRS Star Coord at Epoch: 17h 47m 21.06195s -22:56:48.48123s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 9.934
G magnitude          : 14.841
RP magnitude         : 13.568
BP magnitude         : 16.630
DUPflag             : 0
Distance (au)        : 5.765
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 28.97
Sun-Target sep (deg) : 58.00
Sun-Moon sep (deg)   : 118.74
B (ring opening deg) : -2.55
PA of pole (deg)     : 0.53
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 2.029
C/A sky separation (km) : 8483.1
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
    
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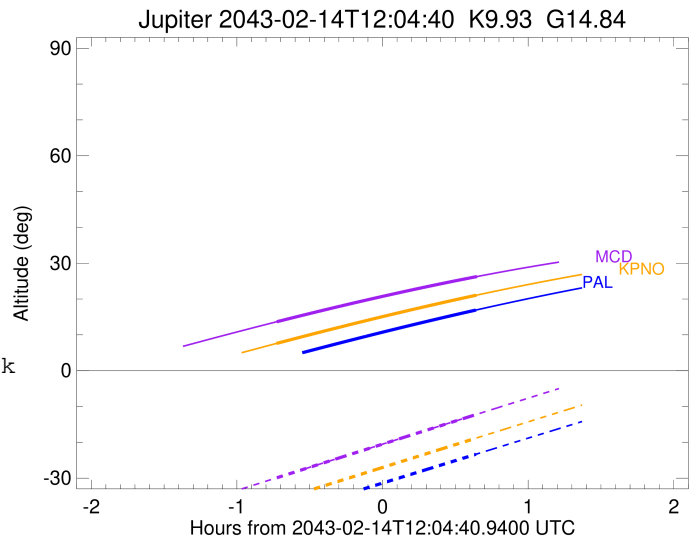
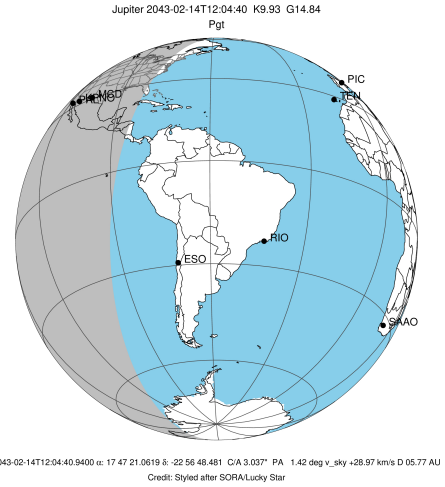


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-14T11:20:57.610	3.08x	-40.44	71491.8	-7.98	-9.11
Jupiter	E	2043-02-14T12:43:10.361	16.92	-23.33	71491.9	-5.66	-6.47

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-14T12:02:07.730
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        : 4068932311274935040
2Mass ID (if available) : 17472107-2256483
ICRS Star Coord at Epoch: 17h 47m 21.06195s -22:56:48.48123s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 9.934
G magnitude           : 14.841
RP magnitude          : 13.568
BP magnitude          : 16.630
DUPflag              : 0
Distance (au)         : 5.765
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.97
Sun-Target sep (deg)  : 58.00
Sun-Moon sep (deg)   : 118.82
B (ring opening deg) : -2.55
PA of pole (deg)     : 0.53
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 2.013
C/A sky separation (km) : 8418.7
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
    
```

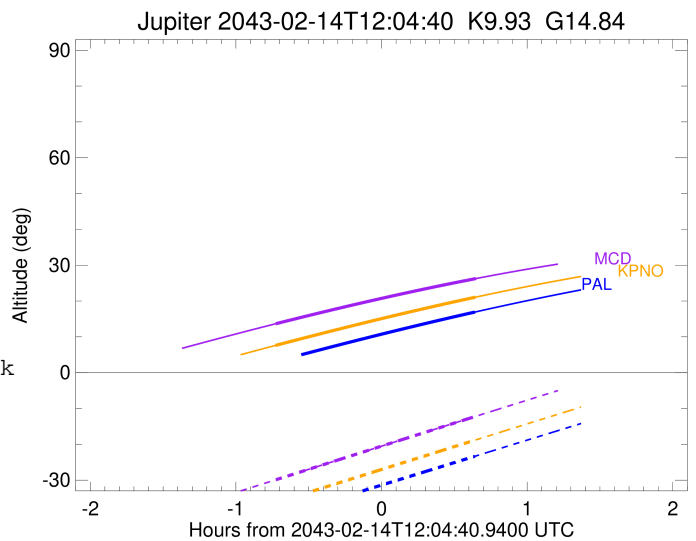
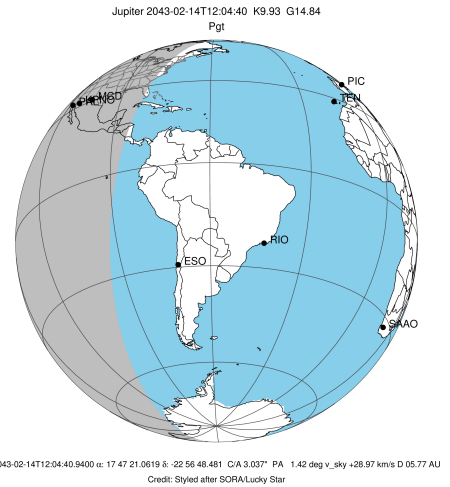


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-14T11:21:01.242	7.60	-36.28	71491.8	-7.92	-9.04
Jupiter	E	2043-02-14T12:43:20.269	21.06	-18.81	71491.9	-5.62	-6.42

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-14T12:02:21.550
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       : 4068932311274935040
2Mass ID (if available) : 17472107-2256483
ICRS Star Coord at Epoch: 17h 47m 21.06195s -22:56:48.48123s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 9.934
G magnitude          : 14.841
RP magnitude         : 13.568
BP magnitude         : 16.630
DUPflag             : 0
Distance (au)        : 5.765
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 28.97
Sun-Target sep (deg) : 58.00
Sun-Moon sep (deg)   : 118.93
B (ring opening deg) : -2.55
PA of pole (deg)     : 0.53
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (" ) : 1.982
C/A sky separation (km) : 8286.6
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	2043-02-14T11:21:10.517	13.67	-29.89	71491.8	-7.80	-8.90
Jupiter	E	2043-02-14T12:43:38.222	26.27	-12.16	71491.9	-5.54	-6.33