

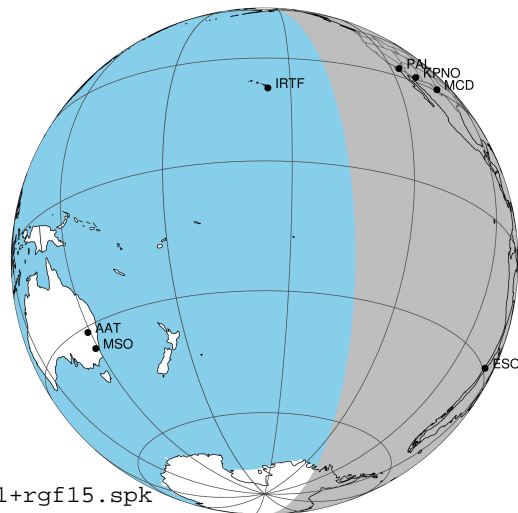
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-10-12T02:52:42.850  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4068770339473880192  
 2Mass ID (if available) : 17472973-2320101

Jupiter 2043-10-12T02:52:42 K8.99 G13.44 Pgt

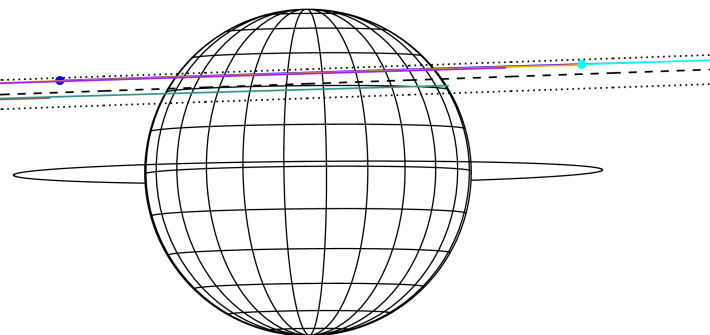
ICRS Star Coord at Epoch: 17h 47m 29.73317s -23°20'10.41235s

RUWE (>1.4 is poor) : 0.90  
 K magnitude : 8.994  
 G magnitude : 13.443  
 RP magnitude : 12.289  
 BP magnitude : 14.884  
 DUPflag : 0  
 Distance (au) : 5.499  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 23.81  
 Sun-Target sep (deg) : 69.05  
 Sun-Moon sep (deg) : 30.60  
 B (ring opening deg) : -2.16  
 PA of pole (deg) : 0.51  
 Pole direction: RA (deg): 268.05675  
 Dec (deg): 64.49731  
 C/A sky separation (") : 9.743  
 C/A sky separation (km) : 38859.5  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2043-10-12T02:52:42 K8.99 G13.44  
 Pgt



Earth  
 PAL  
 KPNO  
 MCD  
 IRTF  
 RIO  
 ESO

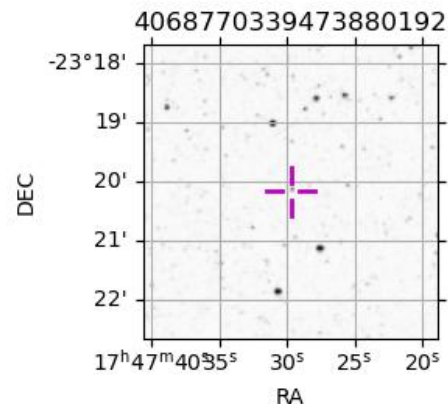


2043-10-12T02:52:42.8500 cc: 17 47 29.7332 s: -23 20 10.412 C/A 9.734" PA 182.02 deg v\_sky +23.81 km/s D 05.50 AU

Credit: Styled after SORA/Lucky Star

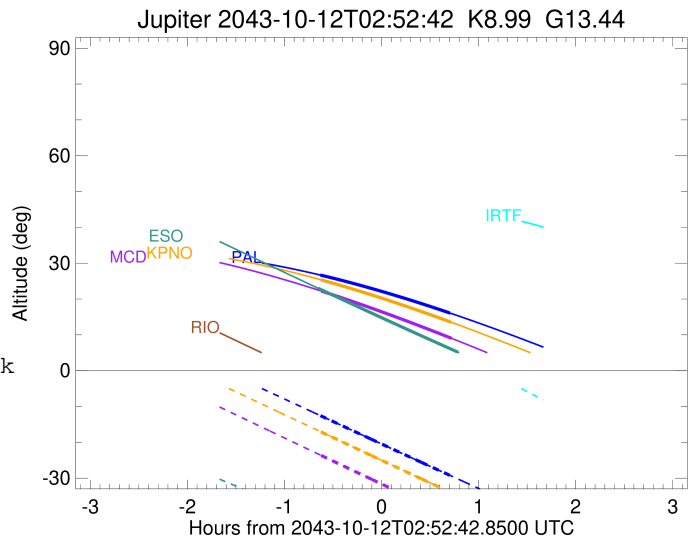
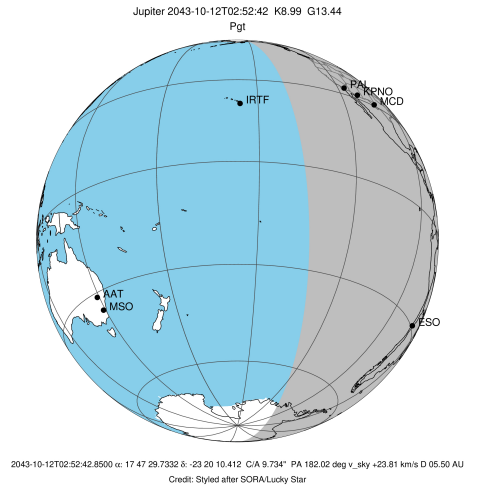
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	OCT 12 02:15 - OCT 12 03:35	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	OCT 12 02:15 - OCT 12 03:35	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	OCT 12 02:15 - OCT 12 03:36	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	+ +	OCT 12 02:13 - OCT 12 03:39	Pie
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             : 2043-10-12T02:55:07.600
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        : 4068770339473880192
2Mass ID (if available) : 17472973-2320101
ICRS Star Coord at Epoch: 17h 47m 29.73317s -23:20:10.41235s
RUWE (>1.4 is poor) : 0.90
K magnitude           : 8.994
G magnitude           : 13.443
RP magnitude          : 12.289
BP magnitude          : 14.884
DUPflag              : 0
Distance (au)         : 5.499
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 23.81
Sun-Target sep (deg) : 69.05
Sun-Moon sep (deg)   : 30.47
B (ring opening deg) : -2.16
PA of pole (deg)     : 0.51
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation ("): 10.977
C/A sky separation (km): 43784.8
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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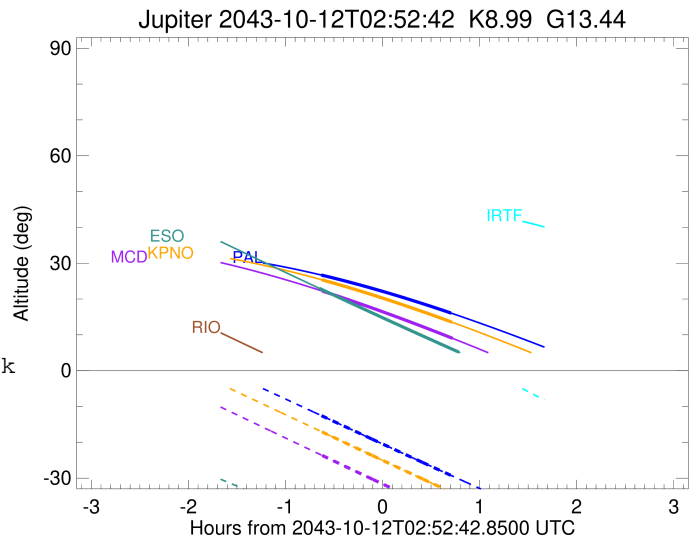
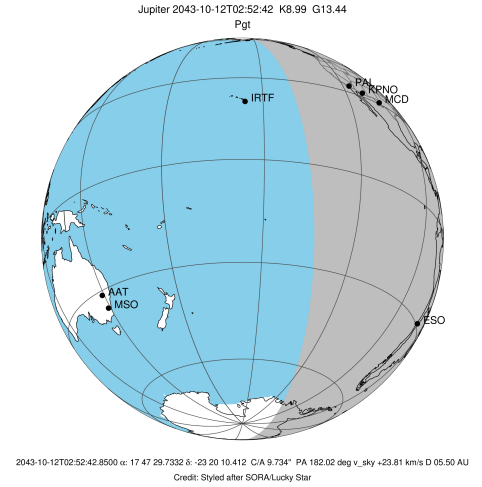


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-12T02:14:59.917	26.68	-12.56	71489.8	36.42	40.06
Jupiter	E	2043-10-12T03:35:09.414	16.07	-29.25	71489.5	39.00	42.70

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-12T02:55:26.710
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       : 4068770339473880192
2Mass ID (if available) : 17472973-2320101
ICRS Star Coord at Epoch: 17h 47m 29.73317s -23:20:10.41235s
RUWE (>1.4 is poor) : 0.90
K magnitude           : 8.994
G magnitude           : 13.443
RP magnitude          : 12.289
BP magnitude          : 14.884
DUPflag              : 0
Distance (au)        : 5.499
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.81
Sun-Target sep (deg) : 69.05
Sun-Moon sep (deg)   : 30.40
B (ring opening deg) : -2.16
PA of pole (deg)     : 0.51
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 10.923
C/A sky separation (km) : 43568.6
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
    
```



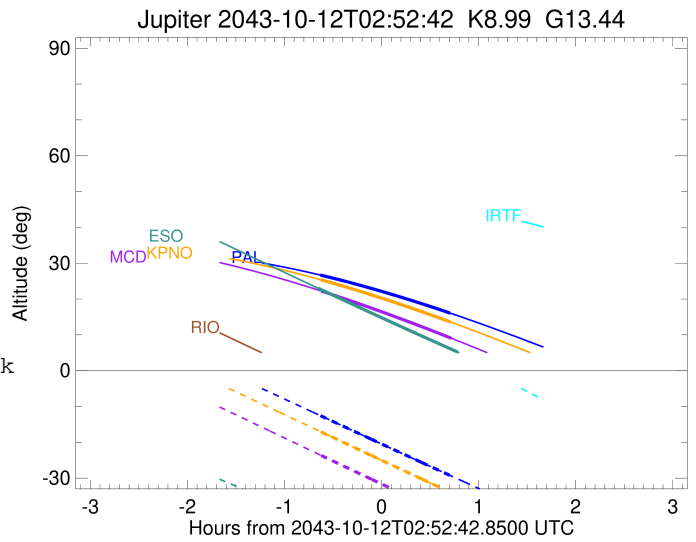
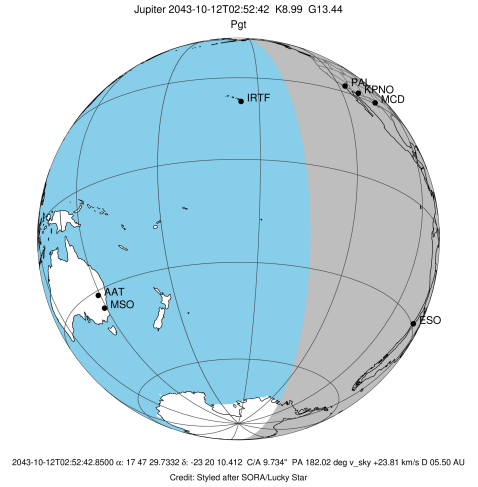
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-12T02:15:13.734	25.36	-17.07	71489.8	36.23	39.87
Jupiter	E	2043-10-12T03:35:33.233	13.56	-33.97	71489.5	38.75	42.44

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-12T02:55:50.730
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       : 4068770339473880192
2Mass ID (if available) : 17472973-2320101
ICRS Star Coord at Epoch: 17h 47m 29.73317s -23:20:10.41235s
RUWE (>1.4 is poor) : 0.90
K magnitude           : 8.994
G magnitude           : 13.443
RP magnitude          : 12.289
BP magnitude          : 14.884
DUPflag              : 0
Distance (au)         : 5.499
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 23.81
Sun-Target sep (deg) : 69.05
Sun-Moon sep (deg)   : 30.30
B (ring opening deg) : -2.16
PA of pole (deg)     : 0.51
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (" ) : 10.849
C/A sky separation (km) : 43273.0
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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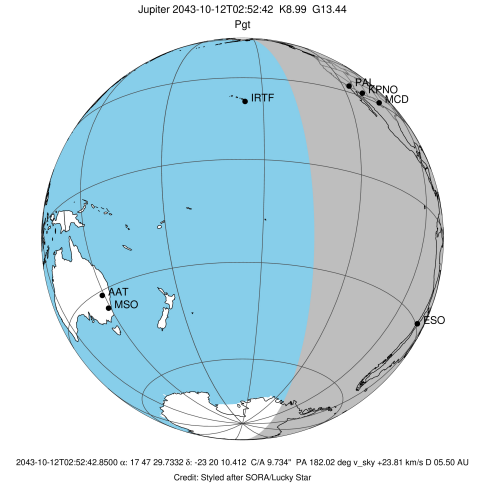


x: target alt < 5.0 deg or sun > -5.0 deg

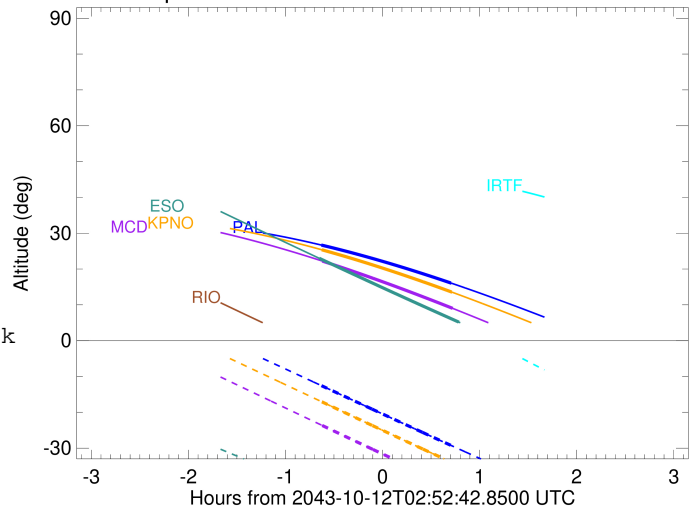
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-12T02:15:31.604	22.22	-23.69	71489.8	35.97	39.60
Jupiter	E	2043-10-12T03:36:02.667	9.02	-40.66	71489.5	38.42	42.10

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-12T02:56:50.050
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : ESO
Location              : European Southern Obs. (3.6m)
Latitude (deg)        : -29.26097
E. Longitude (deg)    : 289.26831
Altitude (km)         : 2.400
Gaia source ID        : 4068770339473880192
2Mass ID (if available) : 17472973-2320101
ICRS Star Coord at Epoch: 17h 47m 29.73317s -23:20:10.41235s
RUWE (>1.4 is poor) : 0.90
K magnitude           : 8.994
G magnitude           : 13.443
RP magnitude          : 12.289
BP magnitude          : 14.884
DUPflag              : 0
Distance (au)         : 5.499
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 23.81
Sun-Target sep (deg) : 69.05
Sun-Moon sep (deg)   : 29.97
B (ring opening deg) : -2.16
PA of pole (deg)     : 0.51
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation ("): 9.106
C/A sky separation (km): 36318.5
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 2043-10-12T02:52:42 K8.99 G13.44



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	2043-10-12T02:13:35.444	23.00	-41.07	71490.5	29.37	32.71
Jupiter	E	2043-10-12T03:39:54.671	5.17	-51.67	71490.2	31.63	35.09