

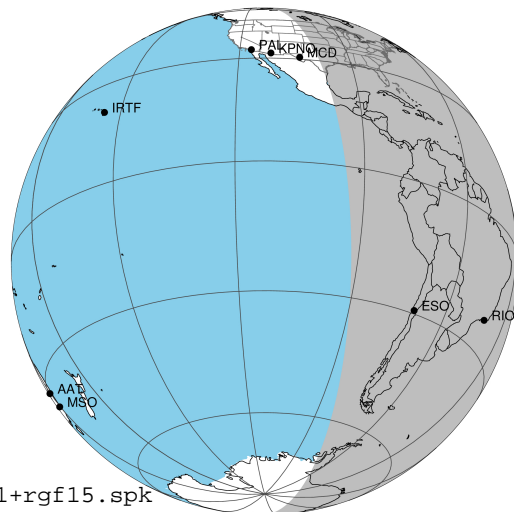
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-10-11T00:04:32.520
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068776970906242176
 2Mass ID (if available) : 17464826-2320000

Jupiter 2043-10-11T00:04:32 K9.20 G14.97 Pgt

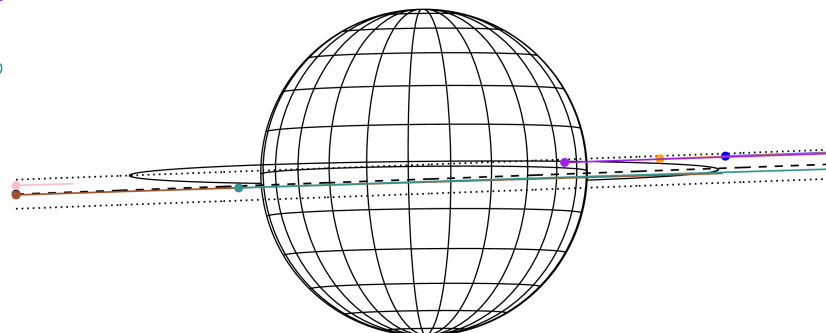
ICRS Star Coord at Epoch: 17h 46m 48.26411s -23:20:00.33190s

RUWE (>1.4 is poor) : 1.10
 K magnitude : 9.198
 G magnitude : 14.965
 RP magnitude : 13.511
 BP magnitude : 17.628
 DUPflag : 0
 Distance (au) : 5.483
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 23.34
 Sun-Target sep (deg) : 70.00
 Sun-Moon sep (deg) : 17.48
 B (ring opening deg) : -2.16
 PA of pole (deg) : 0.58
 Pole direction: RA (deg): 268.05675
 Dec (deg): 64.49731
 C/A sky separation (") : 0.737
 C/A sky separation (km) : 2932.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-10-11T00:04:32 K9.20 G14.97
 Pgt



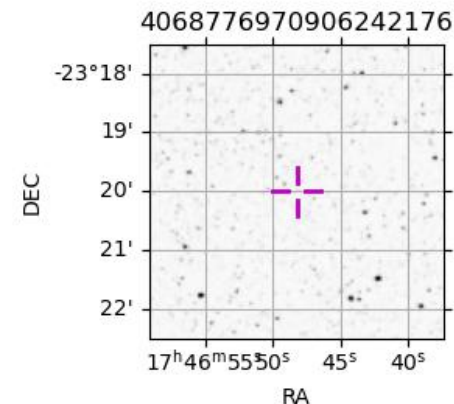
Earth
 PAL
 KPNO
 MCD
 TEN
 RIO
 ESO



2043-10-11T00:04:32.5200 @: 17 46 48.2641 & -23 20 00.332 C/A 0.746" PA 2.11 deg v_sky +23.34 km/s D 05.48 AU
 Credit: Styled after SORA/Lucky Star

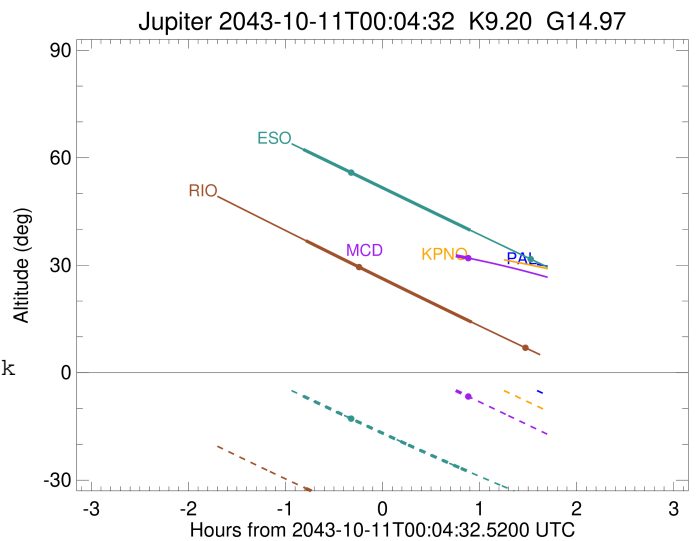
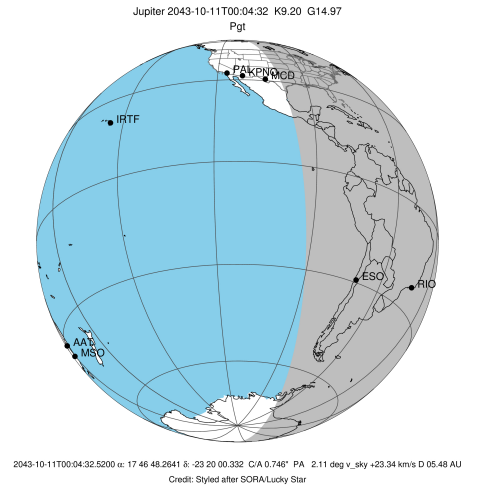
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0	+	OCT 11 00:56 - OCT 11 00:56	Pne
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	+ +	OCT 10 23:17 - OCT 11 00:59	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+ +	OCT 10 23:15 - OCT 11 00:58	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            : 2043-10-11T00:05:03.890
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      : 4068776970906242176
2Mass ID (if available) : 17464826-2320000
ICRS Star Coord at Epoch: 17h 46m 48.26411s -23:20:00.33190s
RUWE (>1.4 is poor) : 1.10
K magnitude          : 9.198
G magnitude          : 14.965
RP magnitude         : 13.511
BP magnitude         : 17.628
DUPflag             : 0
Distance (au)       : 5.483
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.34
Sun-Target sep (deg) : 70.00
Sun-Moon sep (deg)  : 17.77
B (ring opening deg) : -2.16
PA of pole (deg)    : 0.58
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 0.556
C/A sky separation (km) : 2211.9
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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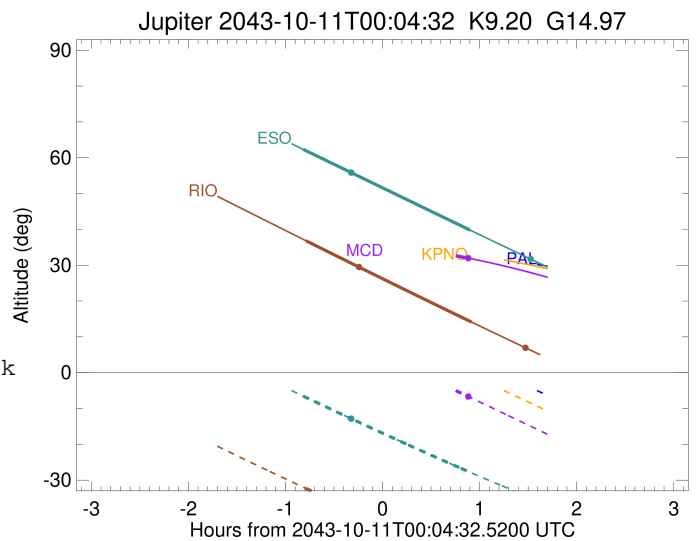
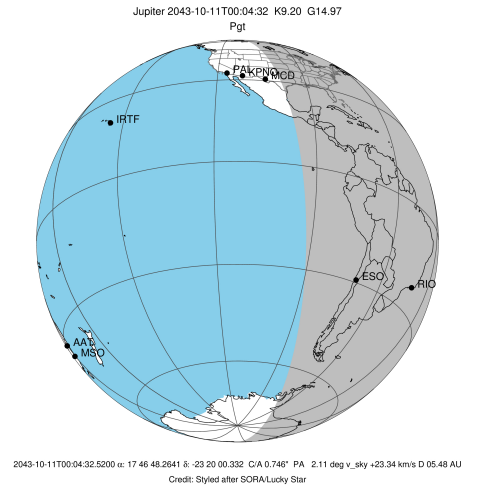


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-10T23:13:08.238	36.04	15.40x	71492.0	0.24	0.27
Jupiter	E	2043-10-11T00:56:55.370	32.02	-6.52	71492.0	3.21	3.67

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-11T00:08:31.430
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : RIO
Location             : Rio de Janeiro
Latitude (deg)       : -22.89506
E. Longitude (deg)  : 316.77708
Altitude (km)        : 0.033
Gaia source ID       : 4068776970906242176
2Mass ID (if available) : 17464826-2320000
ICRS Star Coord at Epoch: 17h 46m 48.26411s -23:20:00.33190s
RUWE (>1.4 is poor) : 1.10
K magnitude          : 9.198
G magnitude          : 14.965
RP magnitude         : 13.511
BP magnitude         : 17.628
DUPflag             : 0
Distance (au)        : 5.483
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.34
Sun-Target sep (deg) : 70.00
Sun-Moon sep (deg)  : 16.82
B (ring opening deg) : -2.16
PA of pole (deg)    : 0.58
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation ("): 1.071
C/A sky separation (km): 4261.0
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
    
```

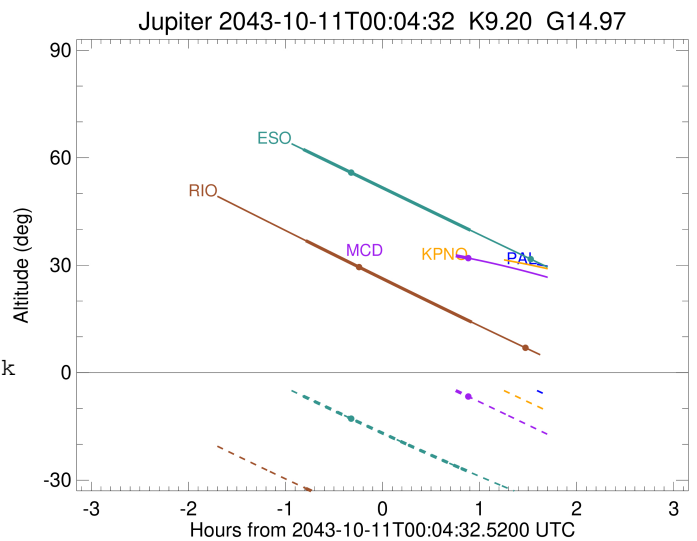
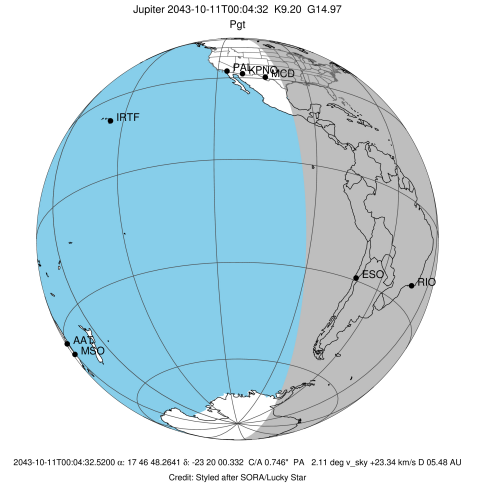


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-10T23:17:08.563	36.85	-32.29	71492.0	-4.57	-5.22
Jupiter	E	2043-10-11T00:59:40.116	14.11	-51.54	71492.0	-2.30	-2.62

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-11T00:07:16.840
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       : 4068776970906242176
2Mass ID (if available) : 17464826-2320000
ICRS Star Coord at Epoch: 17h 46m 48.26411s -23:20:00.33190s
RUWE (>1.4 is poor) : 1.10
K magnitude           : 9.198
G magnitude           : 14.965
RP magnitude         : 13.511
BP magnitude         : 17.628
DUPflag              : 0
Distance (au)        : 5.483
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.34
Sun-Target sep (deg) : 70.00
Sun-Moon sep (deg)   : 17.15
B (ring opening deg) : -2.16
PA of pole (deg)     : 0.58
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation ("): 1.018
C/A sky separation (km): 4047.3
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	2043-10-10T23:15:34.689	62.32	-6.55	71492.0	-4.55	-5.20
Jupiter	E	2043-10-11T00:58:48.421	39.77	-27.83	71492.0	-2.01	-2.29