

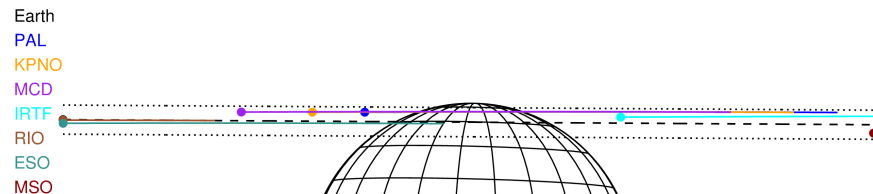
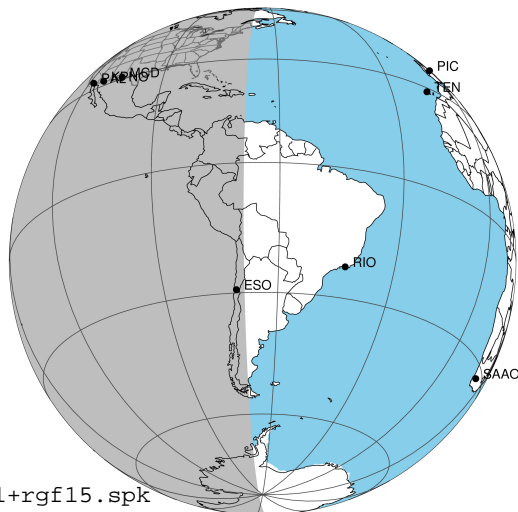
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-03-18T10:40:36.330
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4069579751769445504
 2Mass ID (if available) : 18055446-2258460

Jupiter 2043-03-18T10:40:36 K8.32 G12.77 Pgt

ICRS Star Coord at Epoch: 18h 05m 54.45396s -22:58:46.39062s

RUWE (>1.4 is poor) : 0.97
 K magnitude : 8.320
 G magnitude : 12.773
 RP magnitude : 11.616
 BP magnitude : 14.212
 DUPflag : 0
 Distance (au) : 5.278
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 15.36
 Sun-Target sep (deg) : 85.77
 Sun-Moon sep (deg) : 174.23
 B (ring opening deg) : -2.48
 PA of pole (deg) : -1.47
 Pole direction: RA (deg): 268.05663
 Dec (deg): 64.49732
 C/A sky separation (") : 16.515
 C/A sky separation (km) : 63215.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

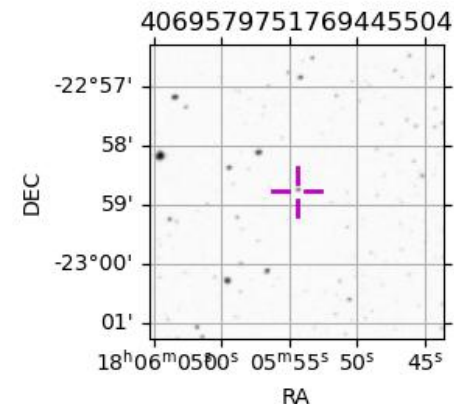
Jupiter 2043-03-18T10:40:36 K8.32 G12.77
 Pgt



2043-03-18T10:40:36.3300 a: 18 05 54.4540 d: -22 58 46.391 C/A ***** PA 179.64 deg v_sky +15.36 km/s D 05.28 AU
 Credit: Styled after SORA/Lucky Star

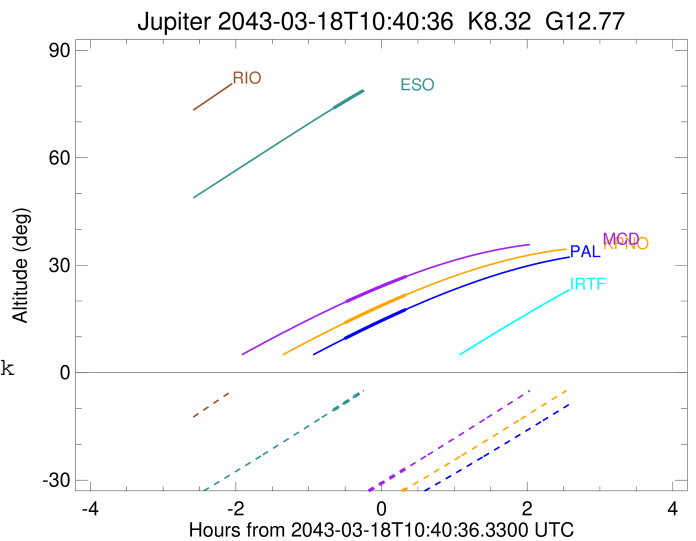
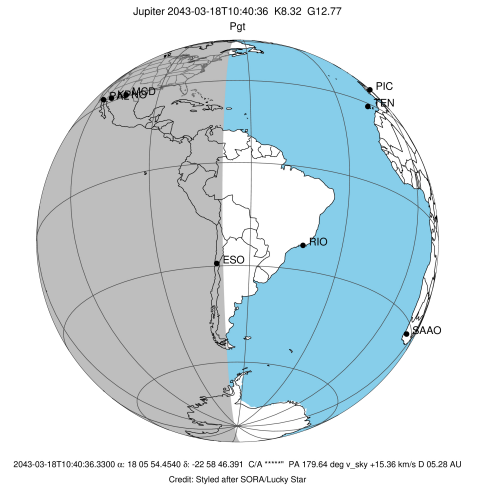
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	MAR 18 10:10 - MAR 18 11:00	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	MAR 18 10:10 - MAR 18 11:00	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	MAR 18 10:11 - MAR 18 11:01	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	+	MAR 18 10:01 - MAR 18 10:01	Pin
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            : 2043-03-18T10:35:22.600
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       : 4069579751769445504
2Mass ID (if available) : 18055446-2258460
ICRS Star Coord at Epoch: 18h 05m 54.45396s -22:58:46.39062s
RUWE (>1.4 is poor) : 0.97
K magnitude           : 8.320
G magnitude           : 12.773
RP magnitude          : 11.616
BP magnitude          : 14.212
DUPflag              : 0
Distance (au)         : 5.278
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 15.36
Sun-Target sep (deg) : 85.77
Sun-Moon sep (deg)   : 175.01
B (ring opening deg) : -2.48
PA of pole (deg)     : -1.47
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation ("): 17.685
C/A sky separation (km): 67692.8
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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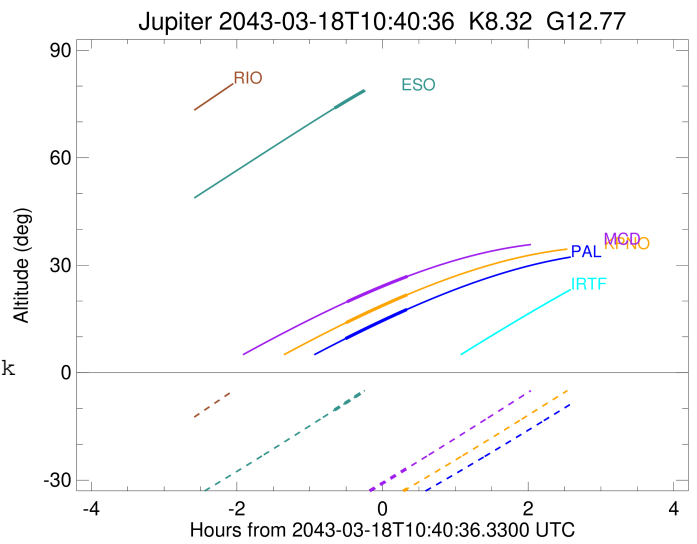
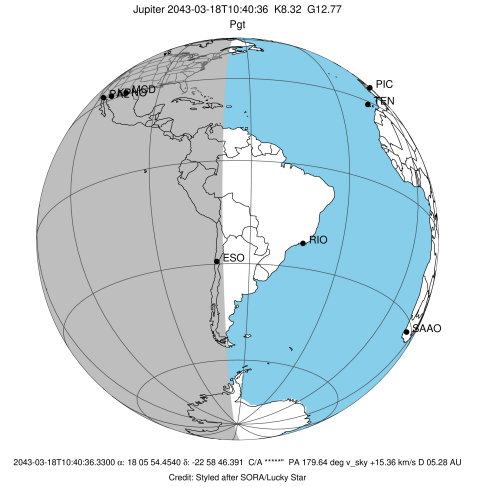


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-18T10:10:05.726	9.49	-44.85	71484.6	69.53	71.79
Jupiter	E	2043-03-18T11:00:43.986	17.64	-35.92	71484.3	72.63	74.59

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-18T10:35:40.680
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       : 4069579751769445504
2Mass ID (if available) : 18055446-2258460
ICRS Star Coord at Epoch: 18h 05m 54.45396s -22:58:46.39062s
RUWE (>1.4 is poor) : 0.97
K magnitude           : 8.320
G magnitude           : 12.773
RP magnitude         : 11.616
BP magnitude         : 14.212
DUPflag              : 0
Distance (au)        : 5.278
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 15.36
Sun-Target sep (deg) : 85.77
Sun-Moon sep (deg)   : 175.02
B (ring opening deg) : -2.48
PA of pole (deg)     : -1.47
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation (") : 17.698
C/A sky separation (km) : 67743.7
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
    
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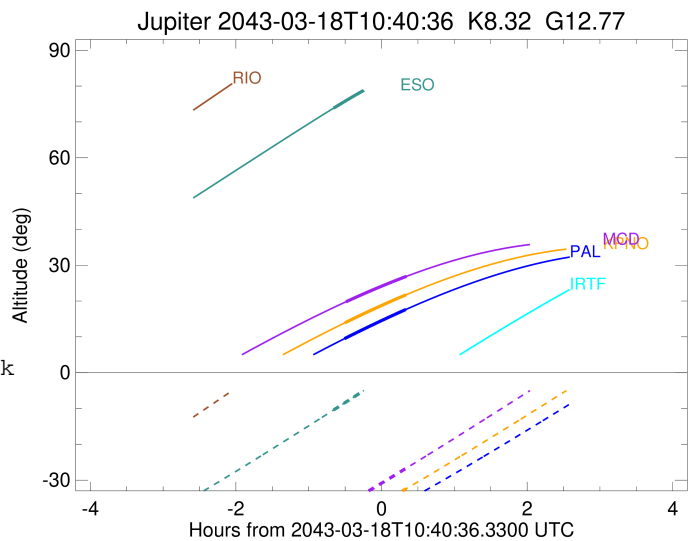
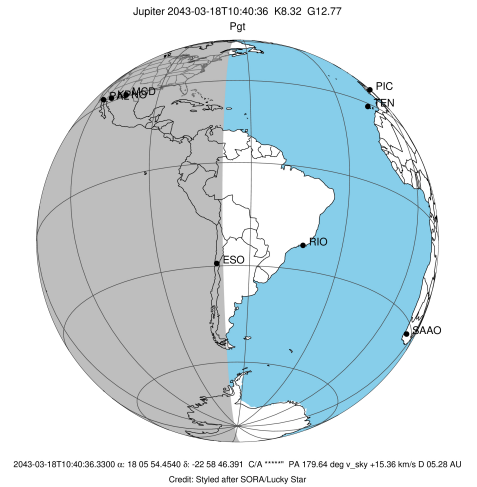


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-18T10:10:30.197	13.94	-41.97	71484.6	69.68	71.93
Jupiter	E	2043-03-18T11:00:55.434	21.75	-32.40	71484.3	72.73	74.68

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-18T10:36:15.000
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      : 4069579751769445504
2Mass ID (if available) : 18055446-2258460
ICRS Star Coord at Epoch: 18h 05m 54.45396s -22:58:46.39062s
RUWE (>1.4 is poor) : 0.97
K magnitude          : 8.320
G magnitude          : 12.773
RP magnitude         : 11.616
BP magnitude         : 14.212
DUPflag             : 0
Distance (au)       : 5.278
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 15.36
Sun-Target sep (deg) : 85.77
Sun-Moon sep (deg)  : 175.03
B (ring opening deg) : -2.48
PA of pole (deg)    : -1.47
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation (") : 17.725
C/A sky separation (km) : 67848.9
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
    
```

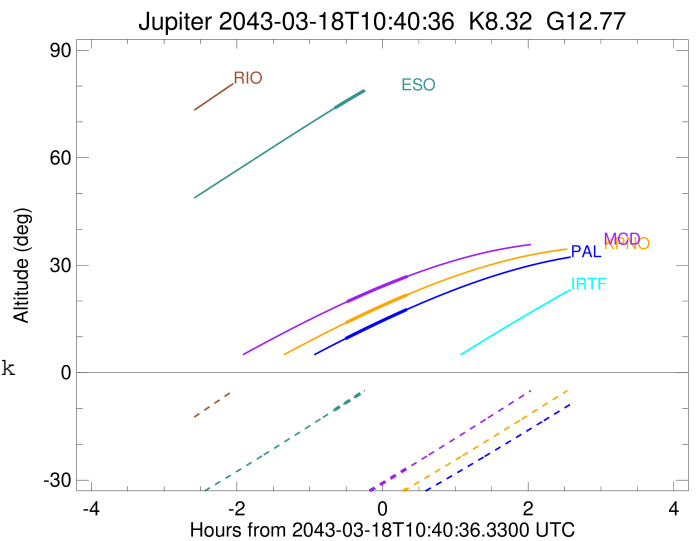
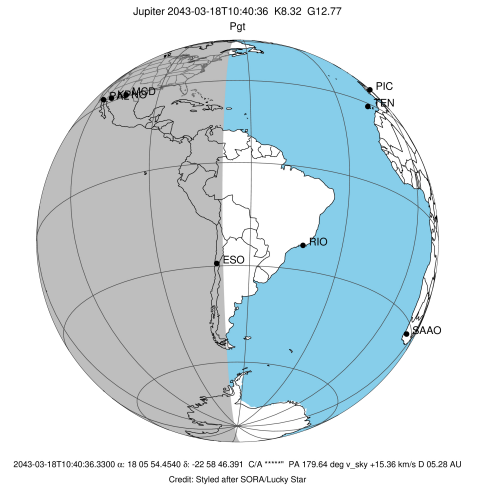


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-18T10:11:20.725	19.79	-36.71	71484.6	69.99	72.21
Jupiter	E	2043-03-18T11:01:13.091	26.89	-26.62	71484.3	72.94	74.87

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-03-18T10:39:47.570
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      : 4069579751769445504
2Mass ID (if available) : 18055446-2258460
ICRS Star Coord at Epoch: 18h 05m 54.45396s -22:58:46.39062s
RUWE (>1.4 is poor) : 0.97
K magnitude          : 8.320
G magnitude          : 12.773
RP magnitude         : 11.616
BP magnitude         : 14.212
DUPflag             : 0
Distance (au)       : 5.278
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 15.36
Sun-Target sep (deg) : 85.77
Sun-Moon sep (deg)  : 174.24
B (ring opening deg) : -2.48
PA of pole (deg)    : -1.47
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation ("): 16.335
C/A sky separation (km): 62527.0
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	2043-03-18T10:01:09.606	73.83	-10.41	71485.7	59.70	62.78
Jupiter	E	2043-03-18T11:18:28.942	83.42	6.44x	71485.4	62.02	64.94