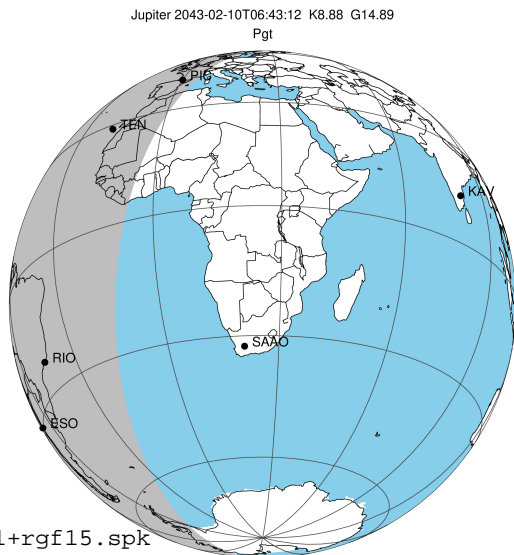


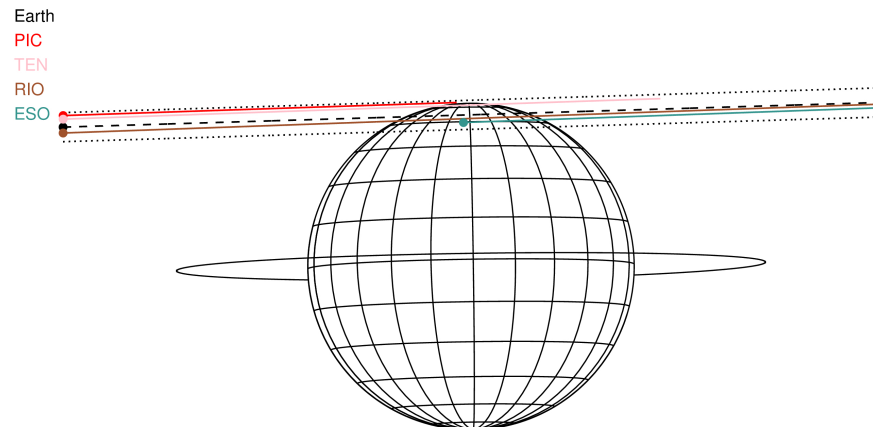
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-10T06:43:12.210
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116889568169933184
 2Mass ID (if available) : 17441414-2255183

Jupiter 2043-02-10T06:43:12 K8.88 G14.89 Pgt

ICRS Star Coord at Epoch: 17h 44m 14.13852s -22:55:18.67157s
 RUWE (>1.4 is poor) : 0.93
 K magnitude : 8.881
 G magnitude : 14.887
 RP magnitude : 13.412
 BP magnitude : 17.852
 DUPflag : 0
 Distance (au) : 5.823
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 30.53
 Sun-Target sep (deg) : 54.44
 Sun-Moon sep (deg) : 59.70
 B (ring opening deg) : -2.57
 PA of pole (deg) : 0.86
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 15.729
 C/A sky separation (km) : 66421.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

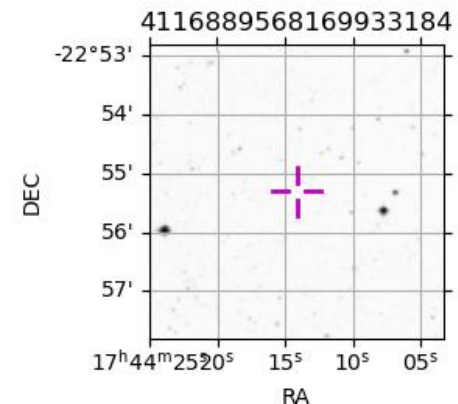


2043-02-10T06:43:12.2100 a: 17 44 14.1385 s: -22 55 18.672 C/A ***** PA 181.73 deg v_sky +30.53 km/s D 05.82 AU
 Credit: Styled after SORA/Lucky Star



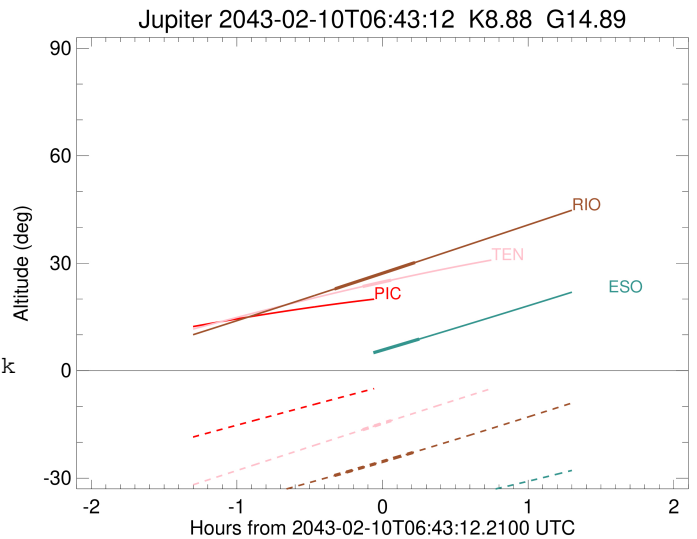
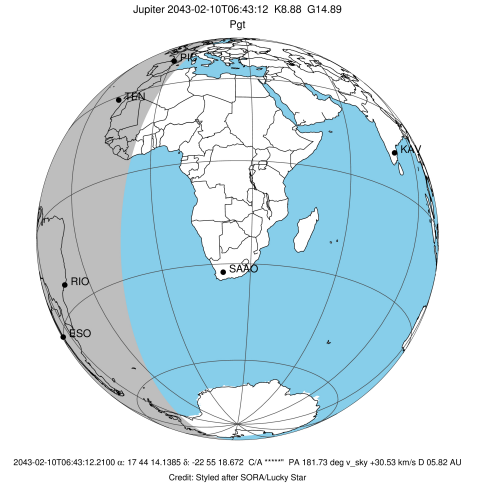
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5	+ +	FEB 10 06:35 - FEB 10 06:46	Pie
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	+ +	FEB 10 06:23 - FEB 10 06:56	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	FEB 10 06:58 - FEB 10 06:58	Pne
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



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-10T06:40:54.740
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : TEN
Location              : Teide Obs./Tenerife
Latitude (deg)        : 28.30050
E. Longitude (deg)    : 343.48909
Altitude (km)         : 2.395
Gaia source ID        : 4116889568169933184
2Mass ID (if available) : 17441414-2255183
ICRS Star Coord at Epoch: 17h 44m 14.13852s -22:55:18.67157s
RUWE (>1.4 is poor) : 0.93
K magnitude           : 8.881
G magnitude           : 14.887
RP magnitude          : 13.412
BP magnitude          : 17.852
DUPflag              : 0
Distance (au)         : 5.823
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 30.53
Sun-Target sep (deg) : 54.44
Sun-Moon sep (deg)   : 60.37
B (ring opening deg) : -2.57
PA of pole (deg)     : 0.86
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 16.742
C/A sky separation (km) : 70701.3
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
    
```

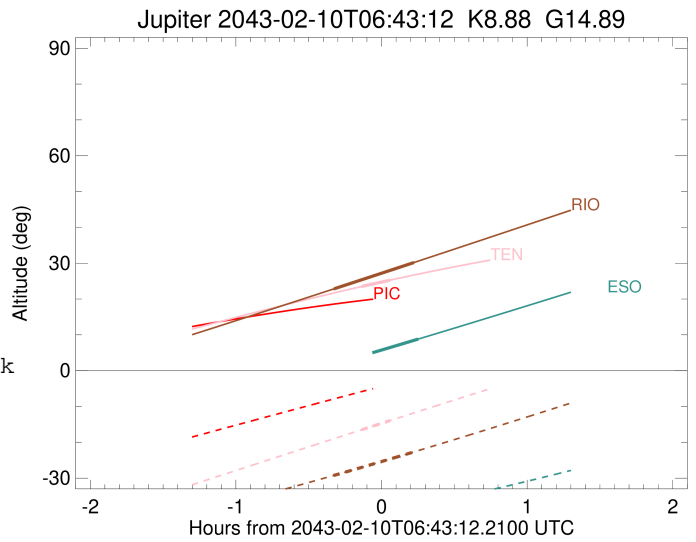
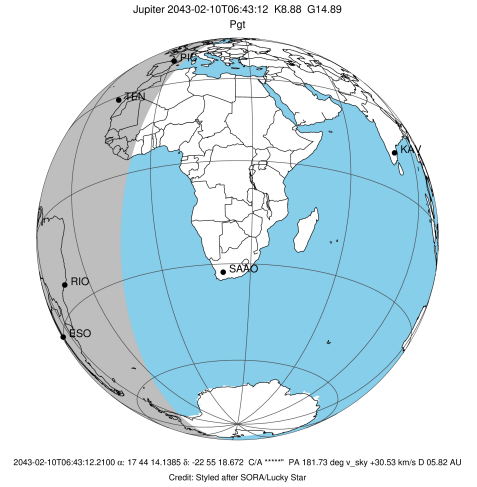


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-10T06:35:05.871	23.50	-16.48	71483.3	80.09	81.25
Jupiter	E	2043-02-10T06:46:43.695	25.26	-13.94	71483.2	82.17	83.09

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-10T06:40:01.730
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       : 4116889568169933184
2Mass ID (if available) : 17441414-2255183
ICRS Star Coord at Epoch: 17h 44m 14.13852s -22:55:18.67157s
RUWE (>1.4 is poor) : 0.93
K magnitude           : 8.881
G magnitude           : 14.887
RP magnitude          : 13.412
BP magnitude          : 17.852
DUPflag              : 0
Distance (au)        : 5.823
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.53
Sun-Target sep (deg) : 54.44
Sun-Moon sep (deg)   : 60.49
B (ring opening deg) : -2.57
PA of pole (deg)     : 0.86
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 15.346
C/A sky separation (km) : 64806.8
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
    
```

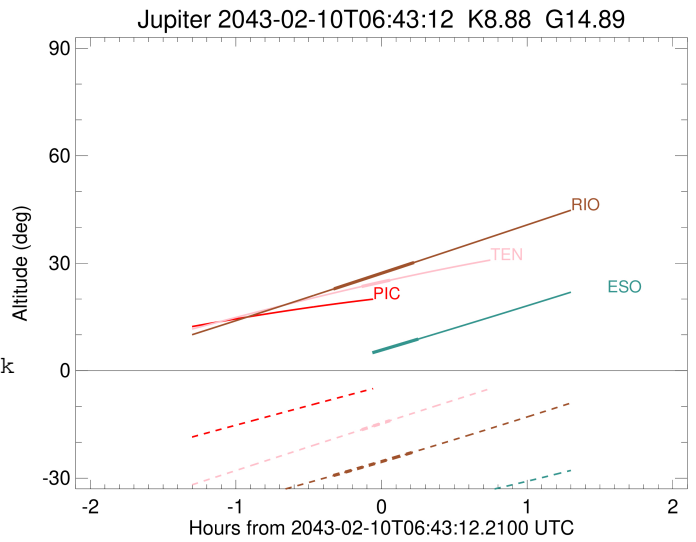
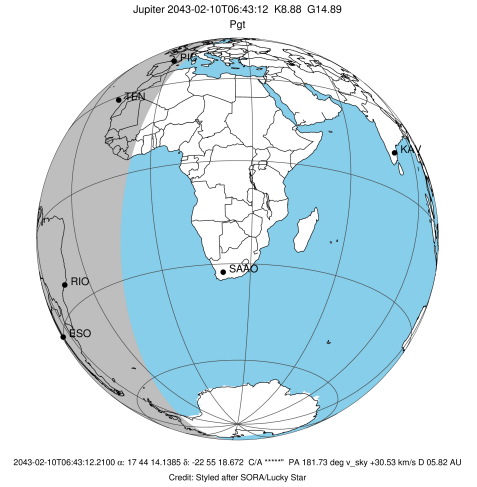


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-10T06:23:29.274	22.81	-29.25	71484.8	63.75	66.53
Jupiter	E	2043-02-10T06:56:35.306	30.19	-22.67	71484.5	66.08	68.66

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-10T06:40:03.300
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        : 4116889568169933184
2Mass ID (if available) : 17441414-2255183
ICRS Star Coord at Epoch: 17h 44m 14.13852s -22:55:18.67157s
RUWE (>1.4 is poor) : 0.93
K magnitude           : 8.881
G magnitude           : 14.887
RP magnitude          : 13.412
BP magnitude          : 17.852
DUPflag              : 0
Distance (au)         : 5.823
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 30.53
Sun-Target sep (deg) : 54.44
Sun-Moon sep (deg)   : 60.18
B (ring opening deg) : -2.57
PA of pole (deg)     : 0.86
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 14.955
C/A sky separation (km) : 63155.6
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	2043-02-10T06:21:49.071	1.49x	-41.96	71485.2	60.80	63.81
Jupiter	E	2043-02-10T06:58:18.869	8.82	-37.60	71484.9	63.11	65.94