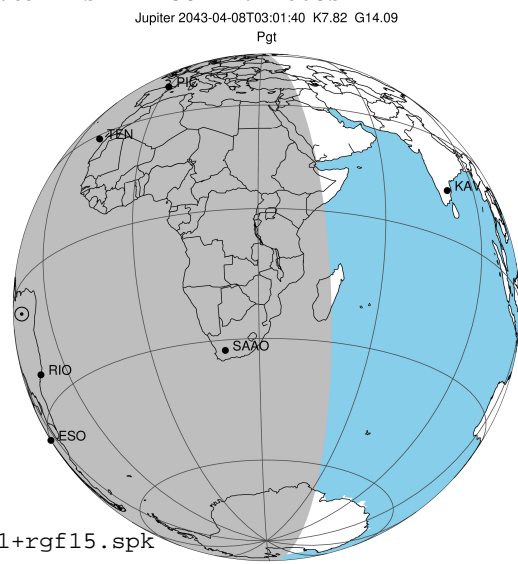


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-04-08T03:01:40.640
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4066625157910770816
 2Mass ID (if available) : 18115910-2258211

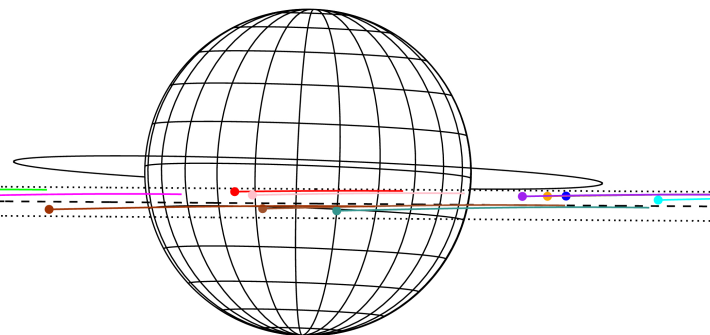
Jupiter 2043-04-08T03:01:40 K7.82 G14.09 Pgt

ICRS Star Coord at Epoch: 18h 11m 59.09772s -22:58:21.22068s
 RUWE (>1.4 is poor) : 0.92
 K magnitude : 7.822
 G magnitude : 14.092
 RP magnitude : 12.700
 BP magnitude : 16.476
 DUPflag : 0
 Distance (au) : 4.946
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 5.59
 Sun-Target sep (deg) : 104.83
 Sun-Moon sep (deg) : 81.67
 B (ring opening deg) : -2.45
 PA of pole (deg) : -2.13
 Pole direction: RA (deg): 268.05664
 Dec (deg): 64.49732
 C/A sky separation (") : 3.795
 C/A sky separation (km) : 13611.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



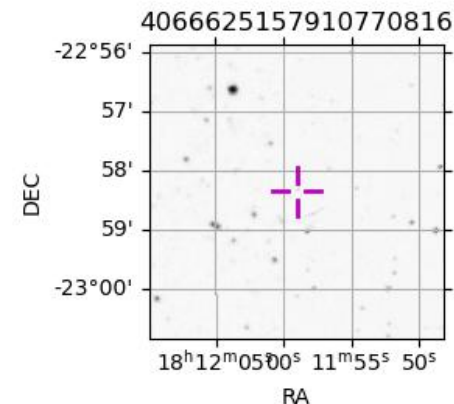
2043-04-08T03:01:40.6400 at: 18 11 59.0977 s: -22 58 21.221 C/A 3.805" PA 359.58 deg v_sky + 5.59 km/s D 04.95 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 PAL
 PMO
 KPNO
 MCD
 TEN
 IRTF
 KAV
 RIO
 ESO
 AAT
 SAAO
 MSO



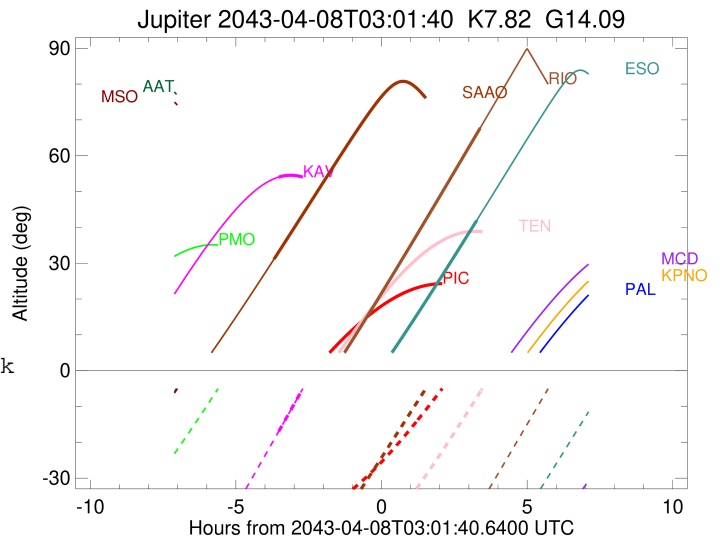
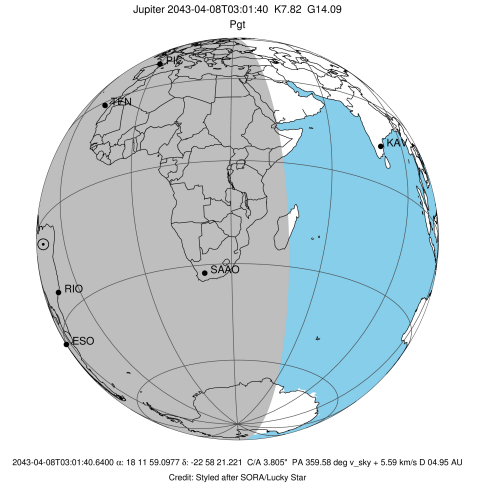
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	APR 07 23:29 - APR 07 23:29	Pin
RIO	Rio de Janeiro	-22.9	316.8	+	APR 08 06:25 - APR 08 06:25	Pne
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	APR 08 06:17 - APR 08 06:17	Pne
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+	APR 07 23:20 - APR 07 23:20	Pin
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-08T03:15:13.330
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)  : 78.83167
Altitude (km)       : 0.722
Gaia source ID      : 4066625157910770816
2Mass ID (if available) : 18115910-2258211
ICRS Star Coord at Epoch: 18h 11m 59.09772s -22:58:21.22068s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 7.822
G magnitude          : 14.092
RP magnitude         : 12.700
BP magnitude         : 16.476
DUPflag             : 0
Distance (au)       : 4.946
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 5.59
Sun-Target sep (deg) : 104.83
Sun-Moon sep (deg)  : 82.10
B (ring opening deg) : -2.45
PA of pole (deg)    : -2.13
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation ("): 3.025
C/A sky separation (km): 10850.1
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
    
```



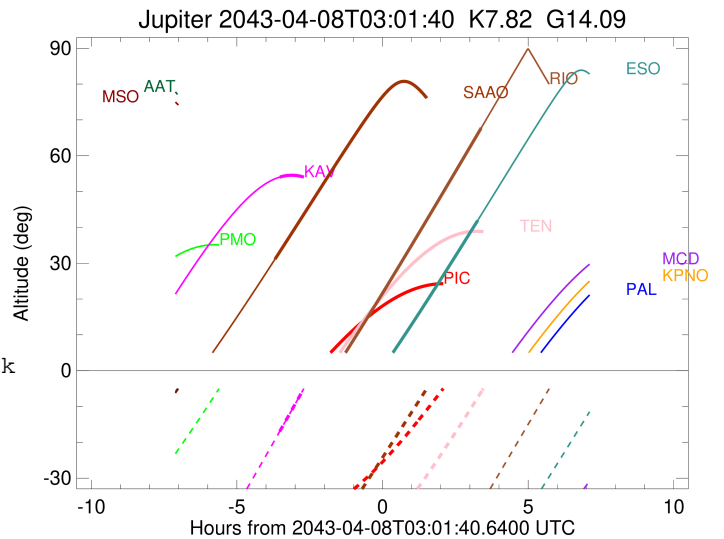
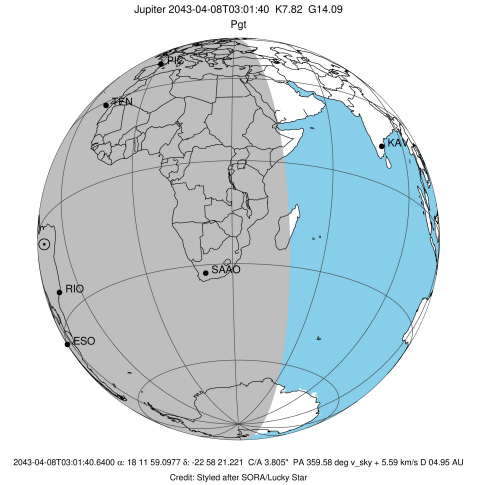
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-07T23:29:55.650	54.03	-16.96	71491.8	-9.67	-11.02
Jupiter	E	2043-04-08T06:51:05.180	-17.94x	84.58x	71491.8	-8.77	-10.00

```

target          : Jupiter
target radius (km) : 71492.00
C/A epoch       : 2043-04-08T02:45:45.200
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  : 4066625157910770816
2Mass ID (if available) : 18115910-2258211
ICRS Star Coord at Epoch: 18h 11m 59.09772s -22:58:21.22068s
RUWE (>1.4 is poor) : 0.92
K magnitude     : 7.822
G magnitude     : 14.092
RP magnitude    : 12.700
BP magnitude    : 16.476
DUPflag        : 0
Distance (au)   : 4.946
f0 (km)         : 0.00
g0 (km)         : 0.00
skyplane vel. (km/s) : 5.59
Sun-Target sep (deg) : 104.83
Sun-Moon sep (deg) : 82.15
B (ring opening deg) : -2.45
PA of pole (deg) : -2.13
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (" ) : 4.290
C/A sky separation (km) : 15388.5
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

```

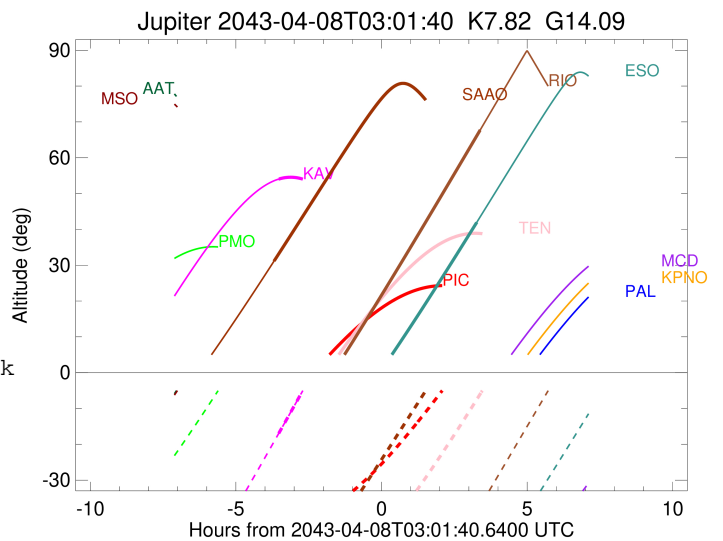
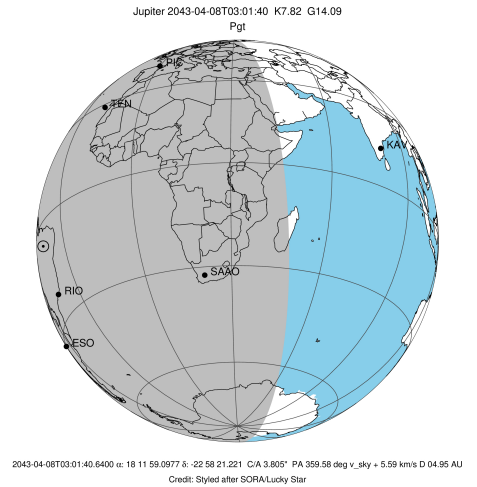


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-07T23:22:37.227	-23.30x	-36.70	71491.4	-15.70	-17.80
Jupiter	E	2043-04-08T06:25:06.645	67.76	-37.18	71491.8	-9.38	-10.69

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-08T02:46:58.610
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       : 4066625157910770816
2Mass ID (if available) : 18115910-2258211
ICRS Star Coord at Epoch: 18h 11m 59.09772s -22:58:21.22068s
RUWE (>1.4 is poor) : 0.92
K magnitude           : 7.822
G magnitude           : 14.092
RP magnitude          : 12.700
BP magnitude          : 16.476
DUPflag              : 0
Distance (au)        : 4.946
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 5.59
Sun-Target sep (deg) : 104.83
Sun-Moon sep (deg)   : 81.80
B (ring opening deg) : -2.45
PA of pole (deg)     : -2.13
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 4.745
C/A sky separation (km) : 17020.5
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
    
```

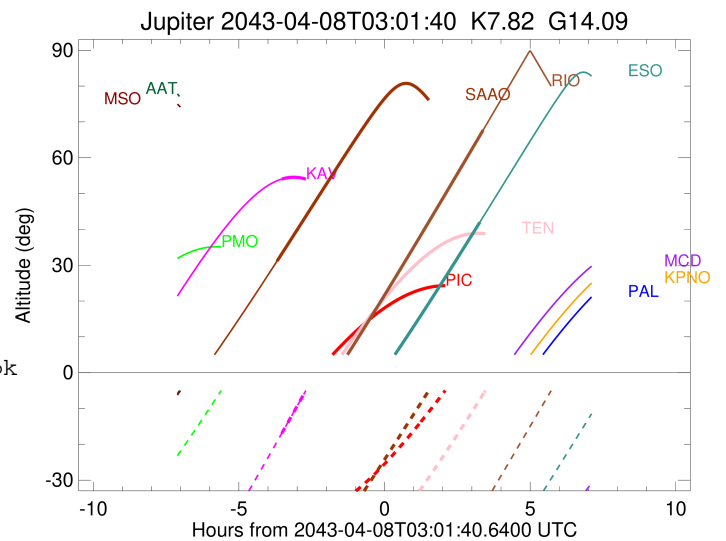
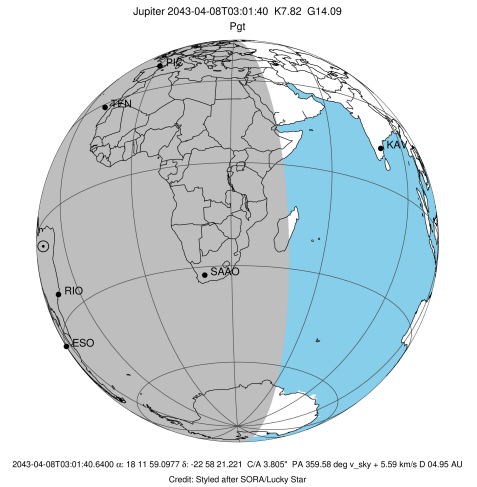


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-07T23:29:56.285	-32.94x	-13.26	71491.3	-16.62	-18.83
Jupiter	E	2043-04-08T06:17:57.706	41.97	-59.00	71491.7	-10.49	-11.95

```

target           : Jupiter
target radius (km) : 71492.00
C/A epoch       : 2043-04-08T02:58:32.820
Event type      : Pgt
                 : Jupiter occs: geocentric, topocentric
                 : Not a ringed target
Observer code   : SAAO
Location        : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)  : -32.37953
E. Longitude (deg) : 20.81070
Altitude (km)  : 1.768
Gaia source ID  : 4066625157910770816
2Mass ID (if available) : 18115910-2258211
ICRS Star Coord at Epoch: 18h 11m 59.09772s -22:58:21.22068s
RUWE (>1.4 is poor) : 0.92
K magnitude     : 7.822
G magnitude     : 14.092
RP magnitude    : 12.700
BP magnitude    : 16.476
DUPflag        : 0
Distance (au)  : 4.946
f0 (km)        : 0.00
g0 (km)        : 0.00
skyplane vel. (km/s) : 5.59
Sun-Target sep (deg) : 104.83
Sun-Moon sep (deg) : 82.65
B (ring opening deg) : -2.45
PA of pole (deg) : -2.13
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 4.089
C/A sky separation (km) : 14667.7
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	2043-04-07T23:20:19.081	31.15	-63.07	71491.5	-14.49	-16.46
Jupiter	E	2043-04-08T06:42:46.262	49.95	21.47x	71491.7	-10.62	-12.09