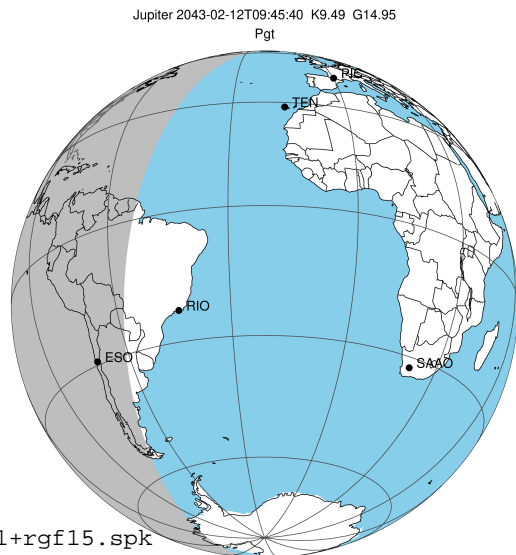


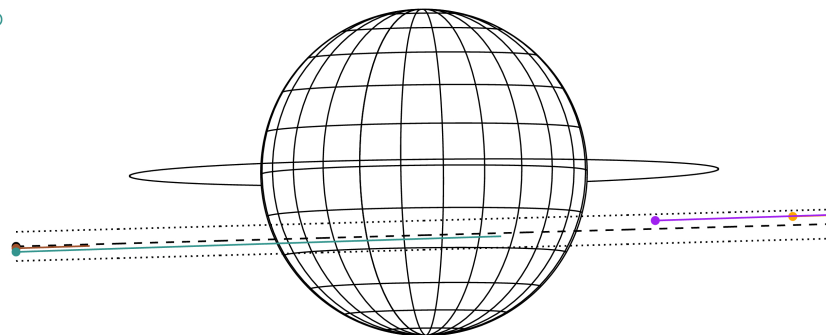
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-12T09:45:40.800
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068853868027958016
 2Mass ID (if available) : 17454923-2256184

Jupiter 2043-02-12T09:45:40 K9.49 G14.95 Pgt

ICRS Star Coord at Epoch: 17h 45m 49.22254s -22:56:18.84517s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 9.493
 G magnitude : 14.948
 RP magnitude : 13.531
 BP magnitude : 17.061
 DUPflag : 0
 Distance (au) : 5.794
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 29.75
 Sun-Target sep (deg) : 56.23
 Sun-Moon sep (deg) : 89.34
 B (ring opening deg) : -2.56
 PA of pole (deg) : 0.69
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 6.534
 C/A sky separation (km) : 27455.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



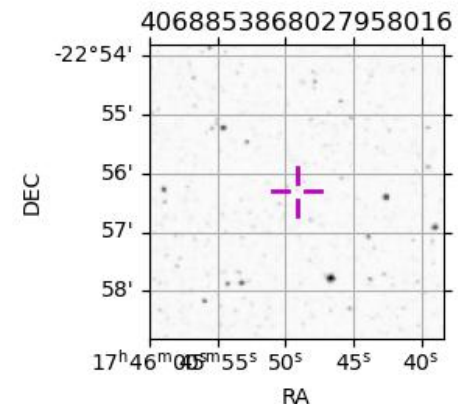
Earth
 KPNO
 MCD
 RIO
 ESO



2043-02-12T09:45:40.8000 α: 17 45 49.2225 δ: -22 56 18.845 C/A 6.543" PA 1.57 deg v_sky +29.75 km/s D 05.79 AU
 Credit: Styled after SORA/Lucky Star

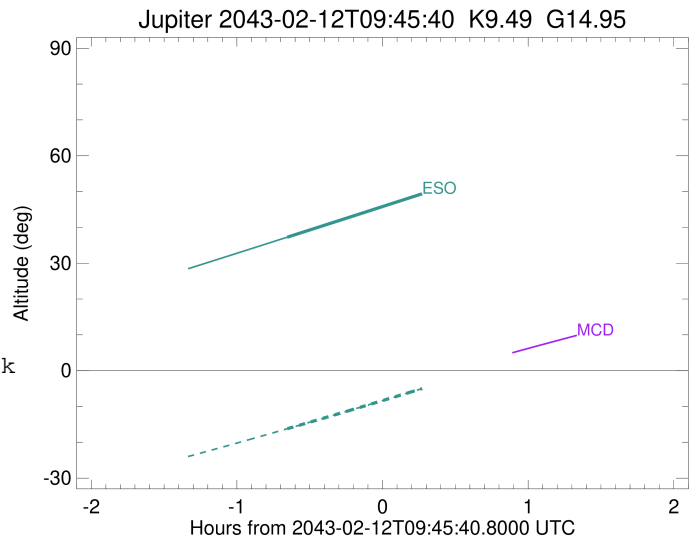
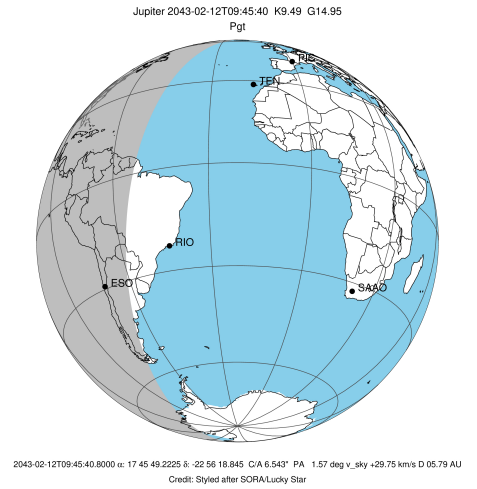
Observable events with sun below -5 deg and altitude above 5 deg

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			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	+	FEB 12 09:06 - FEB 12 09:06	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



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-12T09:43:23.500
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       : 4068853868027958016
2Mass ID (if available) : 17454923-2256184
ICRS Star Coord at Epoch: 17h 45m 49.22254s -22:56:18.84517s
RUWE (>1.4 is poor) : 1.09
K magnitude           : 9.493
G magnitude           : 14.948
RP magnitude         : 13.531
BP magnitude         : 17.061
DUPflag              : 0
Distance (au)        : 5.794
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 29.75
Sun-Target sep (deg) : 56.23
Sun-Moon sep (deg)   : 90.05
B (ring opening deg) : -2.56
PA of pole (deg)     : 0.69
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 6.901
C/A sky separation (km) : 29000.2
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	2043-02-12T09:06:30.694	37.27	-16.19	71490.4	-25.05	-28.08
Jupiter	E	2043-02-12T10:20:20.901	53.39	-1.18x	71490.7	-22.79	-25.63