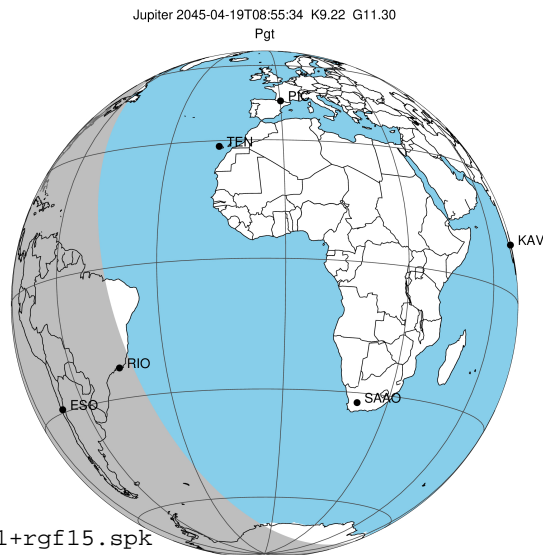


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2045-04-19T08:55:34.390
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 2602897172336866176
 2Mass ID (if available) : 22253806-1043514

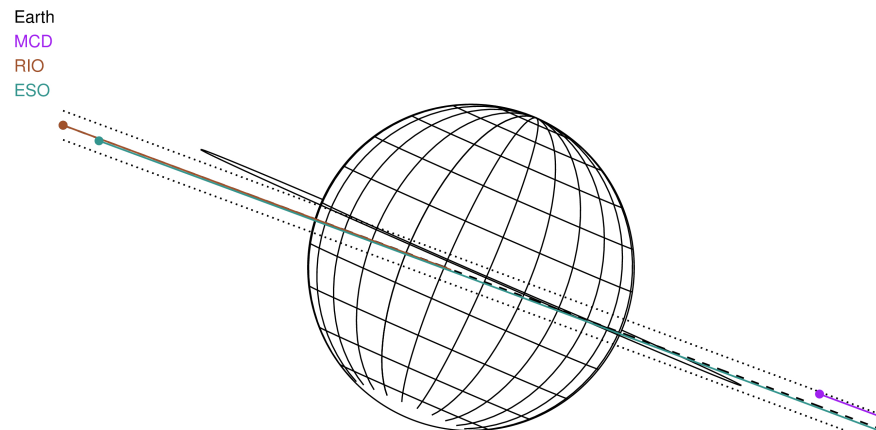
Jupiter 2045-04-19T08:55:34 K9.22 G11.30 Pgt

ICRS Star Coord at Epoch: 22h 25m 38.09936s -10:43:52.38253s

RUWE (>1.4 is poor) : 1.01
 K magnitude : 9.219
 G magnitude : 11.299
 RP magnitude : 10.639
 BP magnitude : 11.804
 DUPflag : 0
 Distance (au) : 5.549
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 30.84
 Sun-Target sep (deg) : 54.87
 Sun-Moon sep (deg) : 80.76
 B (ring opening deg) : 0.69
 PA of pole (deg) : -23.59
 Pole direction: RA (deg): 268.05699
 Dec (deg): 64.49725
 C/A sky separation (") : 0.953
 C/A sky separation (km) : 3836.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

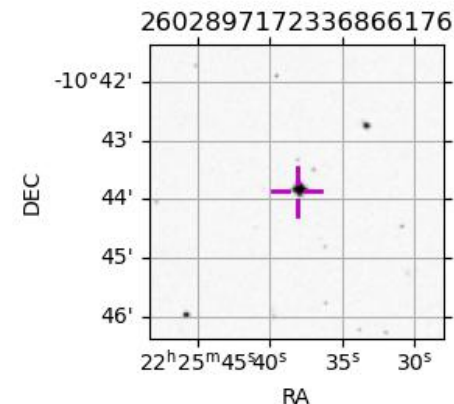


2045-04-19T08:55:34.3900 ex: 22 25 38.0994 s: -10 43 52.383 C/A 0.954" PA 339.61 deg v_sky +30.84 km/s D 05.55 AU
 Credit: Styled after SORA/Lucky Star



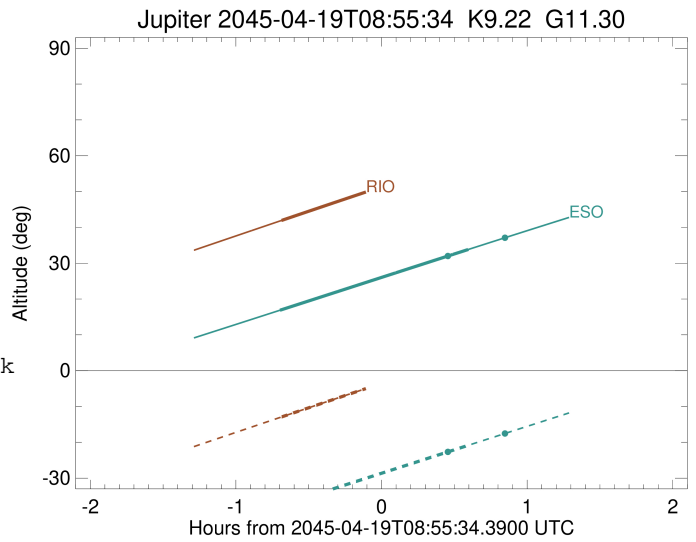
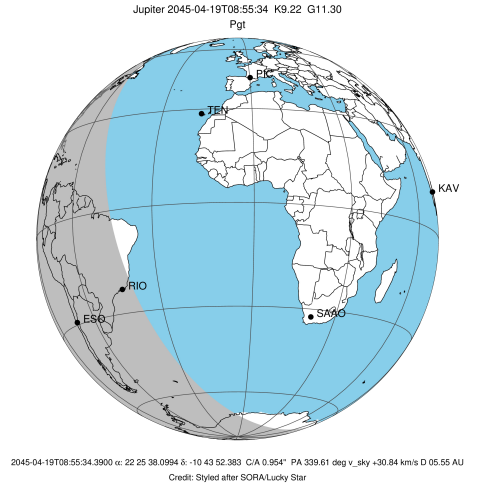
Observable events with sun below -5 deg and altitude above 5 deg

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	+	APR 19 08:14 - APR 19 08:14	Pin
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	APR 19 08:13 - APR 19 09:31	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



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2045-04-19T08:53:23.650
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       : 2602897172336866176
2Mass ID (if available) : 22253806-1043514
ICRS Star Coord at Epoch: 22h 25m 38.09936s -10:43:52.38253s
RUWE (>1.4 is poor) : 1.01
K magnitude          : 9.219
G magnitude          : 11.299
RP magnitude         : 10.639
BP magnitude         : 11.804
DUPflag             : 0
Distance (au)        : 5.549
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.84
Sun-Target sep (deg) : 54.87
Sun-Moon sep (deg)   : 81.59
B (ring opening deg) : 0.69
PA of pole (deg)     : -23.59
Pole direction: RA (deg): 268.05699
Dec (deg): 64.49725
C/A sky separation (") : 1.002
C/A sky separation (km) : 4033.1
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
    
```

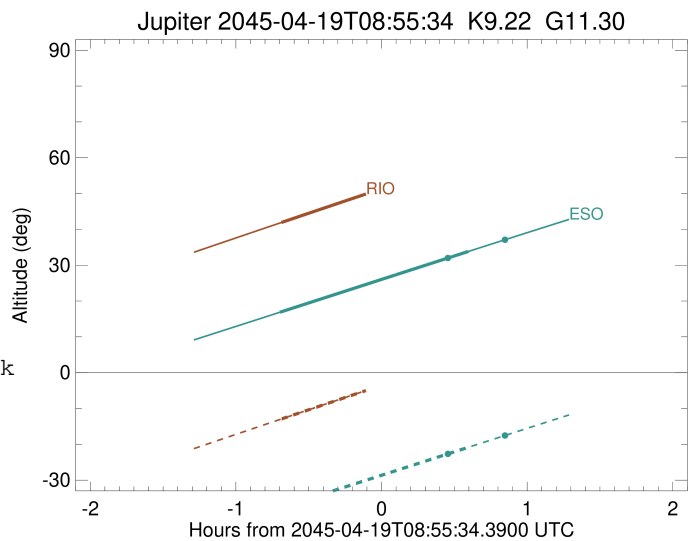
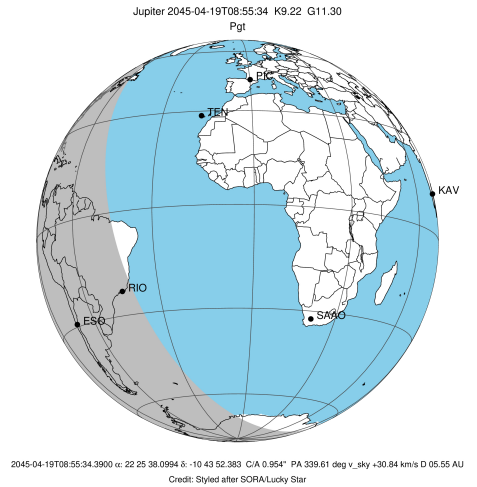


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2045-04-19T08:14:26.028	41.94	-12.91	71492.0	-6.33	-7.23
Jupiter	E	2045-04-19T09:32:25.142	59.53	4.74x	71492.0	-0.18	-0.21

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2045-04-19T08:52:28.910
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       : 2602897172336866176
2Mass ID (if available) : 22253806-1043514
ICRS Star Coord at Epoch: 22h 25m 38.09936s -10:43:52.38253s
RUWE (>1.4 is poor) : 1.01
K magnitude           : 9.219
G magnitude           : 11.299
RP magnitude         : 10.639
BP magnitude         : 11.804
DUPflag              : 0
Distance (au)        : 5.549
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.84
Sun-Target sep (deg) : 54.87
Sun-Moon sep (deg)   : 81.31
B (ring opening deg) : 0.69
PA of pole (deg)     : -23.59
Pole direction: RA (deg): 268.05699
Dec (deg): 64.49725
C/A sky separation (") : 1.124
C/A sky separation (km) : 4524.9
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	2045-04-19T08:13:44.713	16.87	-37.73	71492.0	-6.87	-7.85
Jupiter	E	2045-04-19T09:31:18.302	33.82	-20.84	71492.0	-0.43	-0.50