

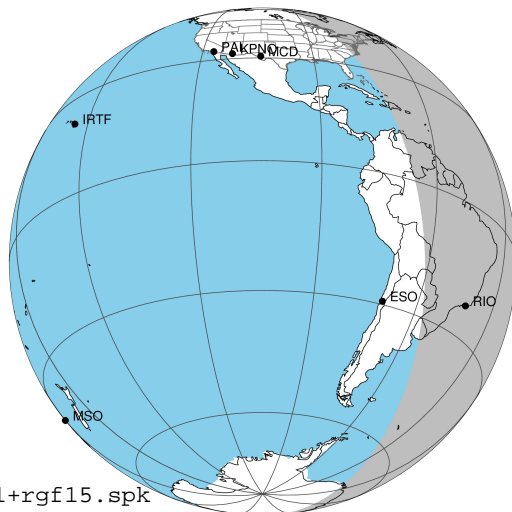
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-11-03T22:08:22.140
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4069184752215370112
 2Mass ID (if available) : 18035373-2324418

Jupiter 2043-11-03T22:08:22 K8.62 G13.39 Pgt

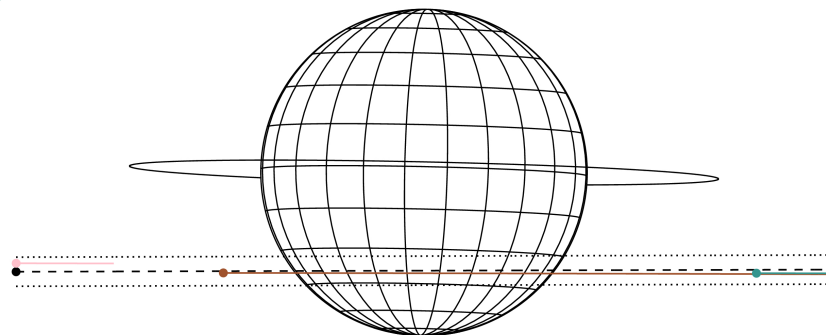
ICRS Star Coord at Epoch: 18h 03m 53.72503s -23:24:41.97492s

RUWE (>1.4 is poor) : 0.89
 K magnitude : 8.619
 G magnitude : 13.389
 RP magnitude : 12.180
 BP magnitude : 14.974
 DUPflag : 0
 Distance (au) : 5.798
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 32.37
 Sun-Target sep (deg) : 50.13
 Sun-Moon sep (deg) : 27.68
 B (ring opening deg) : -2.06
 PA of pole (deg) : -1.26
 Pole direction: RA (deg): 268.05676
 Dec (deg): 64.49731
 C/A sky separation (") : 10.224
 C/A sky separation (km) : 42997.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-11-03T22:08:22 K8.62 G13.39 Pgt



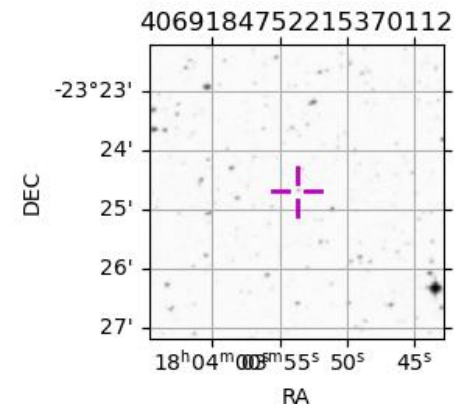
Earth
 TEN
 RIO
 ESO



2043-11-03T22:08:22.1400 α: 18 03 53.7250 δ: -23 24 41.975 C/A ***** PA 0.15 deg v_sky +32.37 km/s D 05.80 AU
 Credit: Styled after SORA/Lucky Star

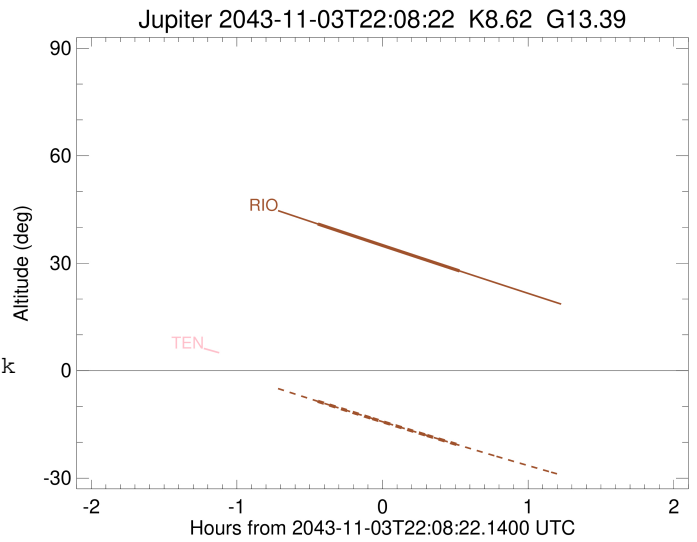
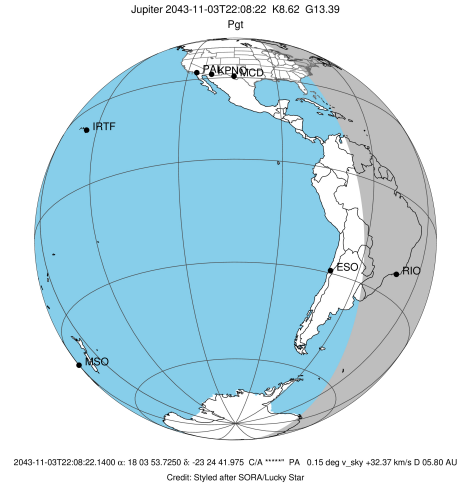
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	NOV 03 21:41 - NOV 03 22:40	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
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            : 2043-11-03T22:10:54.490
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      : 4069184752215370112
2Mass ID (if available) : 18035373-2324418
ICRS Star Coord at Epoch: 18h 03m 53.72503s -23:24:41.97492s
RUWE (>1.4 is poor) : 0.89
K magnitude          : 8.619
G magnitude          : 13.389
RP magnitude         : 12.180
BP magnitude         : 14.974
DUPflag             : 0
Distance (au)        : 5.798
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 32.37
Sun-Target sep (deg) : 50.13
Sun-Moon sep (deg)  : 28.52
B (ring opening deg) : -2.06
PA of pole (deg)    : -1.26
Pole direction: RA (deg): 268.05676
Dec (deg): 64.49731
C/A sky separation (" ) : 10.495
C/A sky separation (km) : 44137.7
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	2043-11-03T21:41:44.841	40.94	-8.56	71489.7	-39.25	-42.94
Jupiter	E	2043-11-03T22:40:01.152	27.86	-20.82	71489.9	-36.97	-40.62