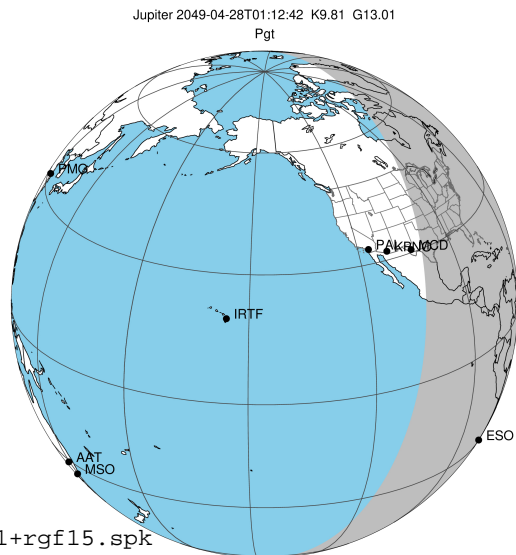


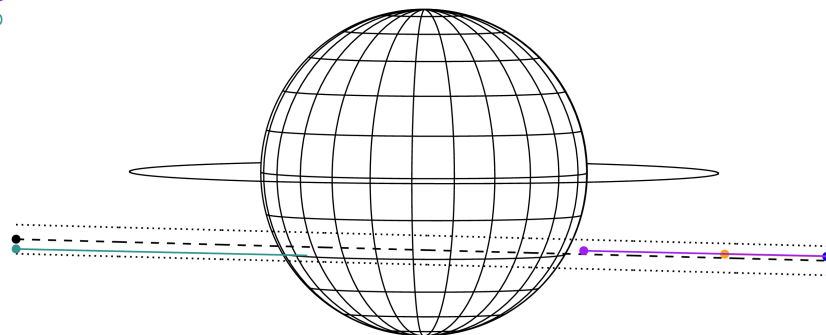
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2049-04-28T01:12:42.610
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3427464578873699840
 2Mass ID (if available) : 05504118+2320087

Jupiter 2049-04-28T01:12:42 K9.81 G13.01 Pgt

ICRS Star Coord at Epoch: 05h 50m 41.18296s +23:20:08.65019s
 RUWE (>1.4 is poor) : 1.32
 K magnitude : 9.811
 G magnitude : 13.005
 RP magnitude : 12.079
 BP magnitude : 13.873
 DUPflag : 0
 Distance (au) : 5.736
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 31.65
 Sun-Target sep (deg) : 50.35
 Sun-Moon sep (deg) : 99.15
 B (ring opening deg) : 2.17
 PA of pole (deg) : -0.17
 Pole direction: RA (deg): 268.05743
 Dec (deg): 64.49719
 C/A sky separation (") : 8.162
 C/A sky separation (km) : 33955.2
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



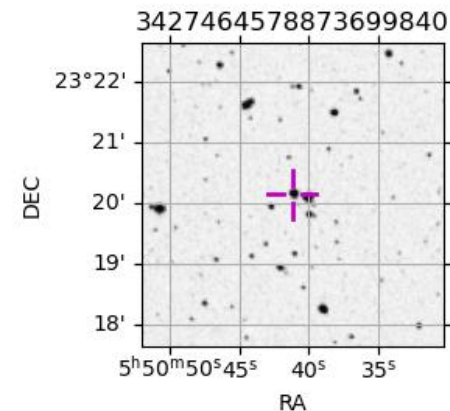
Earth
 PAL
 KPNO
 MCD
 ESO



2049-04-28T01:12:42.6100 cc: 05 50 41.1830 s: +23 20 08.650 C/A 8.155" PA 358.48 deg v_sky +31.65 km/s D 05.74 AU
 Credit: Styled after SORA/Lucky Star

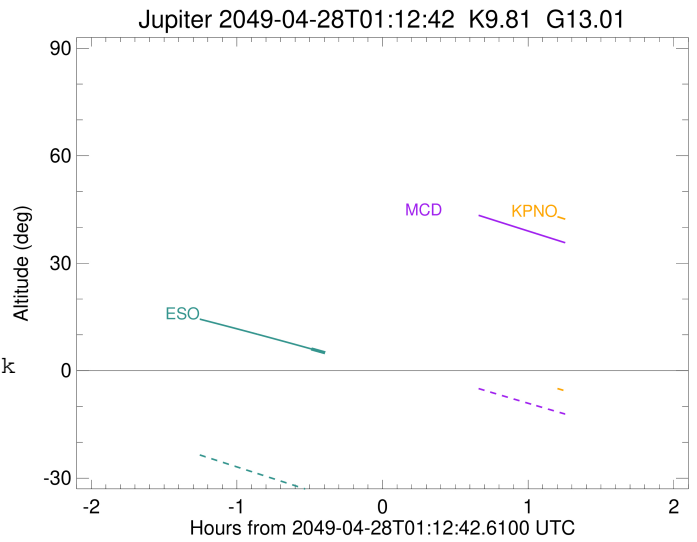
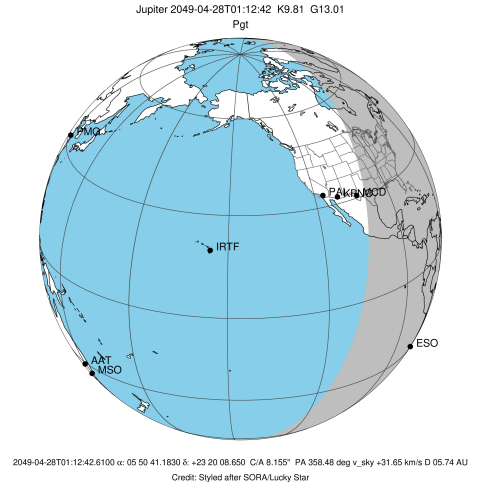
Observable events with sun below -5 deg and altitude above 5 deg

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	+	APR 28 00:43 - APR 28 00:43	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            : 2049-04-28T01:15:37.060
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       : 3427464578873699840
2Mass ID (if available) : 05504118+2320087
ICRS Star Coord at Epoch: 05h 50m 41.18296s +23:20:08.65019s
RUWE (>1.4 is poor) : 1.32
K magnitude          : 9.811
G magnitude          : 13.005
RP magnitude         : 12.079
BP magnitude         : 13.873
DUPflag             : 0
Distance (au)        : 5.736
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.65
Sun-Target sep (deg) : 50.35
Sun-Moon sep (deg)   : 99.03
B (ring opening deg) : 2.17
PA of pole (deg)     : -0.17
Pole direction: RA (deg): 268.05743
Dec (deg): 64.49719
C/A sky separation ("): 9.001
C/A sky separation (km): 37441.6
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	2049-04-28T00:43:24.649	6.06	-33.57	71490.3	-30.48	-33.88
Jupiter	E	2049-04-28T01:47:45.500	-6.49x	-47.54	71490.1	-32.62	-36.13