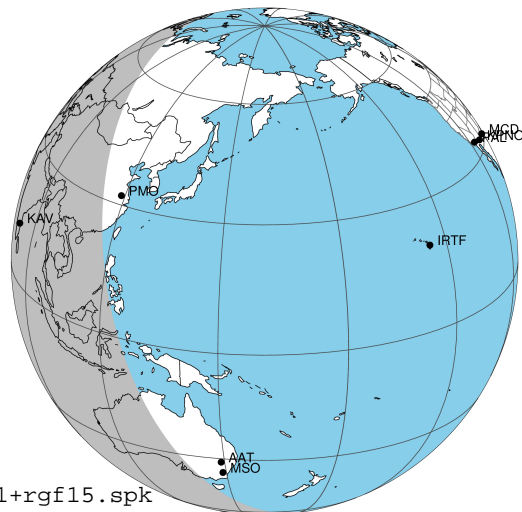


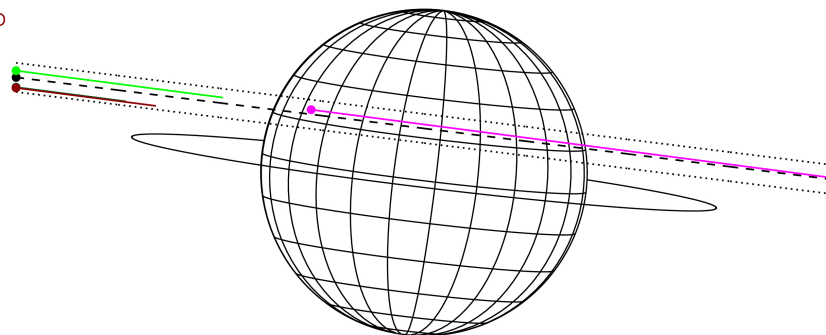
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2024-07-26T21:45:47.070  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3412721880292086016  
 2Mass ID (if available) : 04471312+2141137

Jupiter 2024-07-26T21:45:47 K9.25 G12.49 Pgt

ICRS Star Coord at Epoch: 04h 47m 13.12725s +21:41:13.55575s  
 RUWE (>1.4 is poor) : 1.02  
 K magnitude : 9.253  
 G magnitude : 12.490  
 RP magnitude : 11.565  
 BP magnitude : 13.387  
 DUPflag : 0  
 Distance (au) : 5.612  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 31.60  
 Sun-Target sep (deg) : 50.91  
 Sun-Moon sep (deg) : 55.05  
 B (ring opening deg) : 2.90  
 PA of pole (deg) : -6.93  
 Pole direction: RA (deg): 268.05791  
 Dec (deg): 64.49674  
 C/A sky separation (") : 4.705  
 C/A sky separation (km) : 19151.0  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



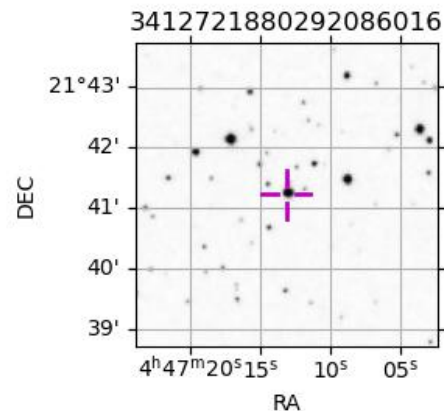
Earth  
 PMO  
 KAV  
 AAT  
 MSO



2024-07-26T21:45:47.0700 ex: 04 47 13.1272 8: +21 41 13.5556 C/A 4.714" PA 172.87 deg v\_sky +31.60 km/s D 05.61 AU  
 Credit: Styled after SORA/Lucky Star

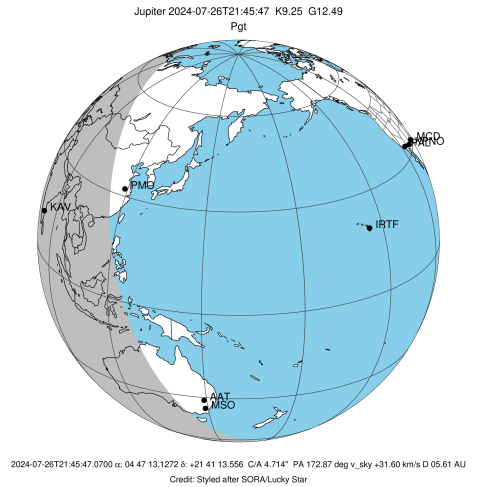
Observable events with sun below -5 deg and altitude above 5 deg

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	+	JUL 26 22:18 - JUL 26 22:18	Pne
RIO	Rio de Janeiro	-22.9	316.8			Pnn
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

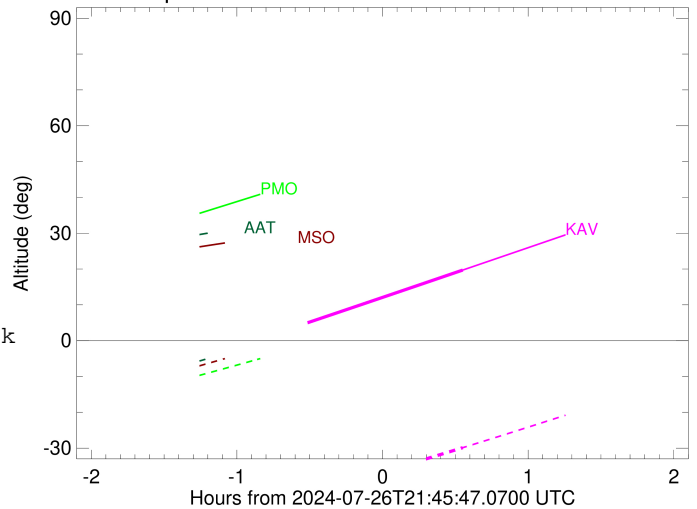


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-07-26T21:42:40.520
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      : 3412721880292086016
2Mass ID (if available) : 04471312+2141137
ICRS Star Coord at Epoch: 04h 47m 13.12725s +21:41:13.55575s
RUWE (>1.4 is poor) : 1.02
K magnitude          : 9.253
G magnitude          : 12.490
RP magnitude         : 11.565
BP magnitude         : 13.387
DUPflag             : 0
Distance (au)       : 5.613
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 31.60
Sun-Target sep (deg) : 50.91
Sun-Moon sep (deg)  : 54.67
B (ring opening deg) : 2.90
PA of pole (deg)    : -6.93
Pole direction: RA (deg): 268.05791
Dec (deg): 64.49674
C/A sky separation (") : 5.130
C/A sky separation (km) : 20880.3
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
    
```



Jupiter 2024-07-26T21:45:47 K9.25 G12.49



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	2024-07-26T21:06:36.990	3.11x	-44.02	71491.0	17.47	19.77
Jupiter	E	2024-07-26T22:18:49.552	19.70	-29.88	71491.1	16.44	18.64