

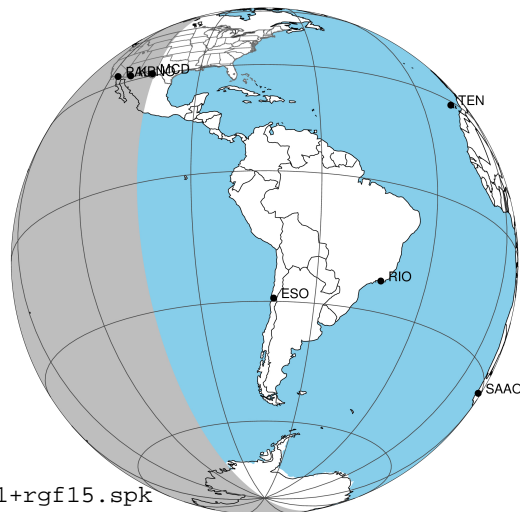
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2032-03-18T13:00:20.050  
 Event type : Pt  
 : Jupiter occs: topocentric, not geocentric  
 : Not a ringed target  
 Gaia source ID : 6865295151517159424  
 2Mass ID (if available) : 19524699-2102388

Jupiter 2032-03-18T13:00:20 K8.83 G11.30 Pt

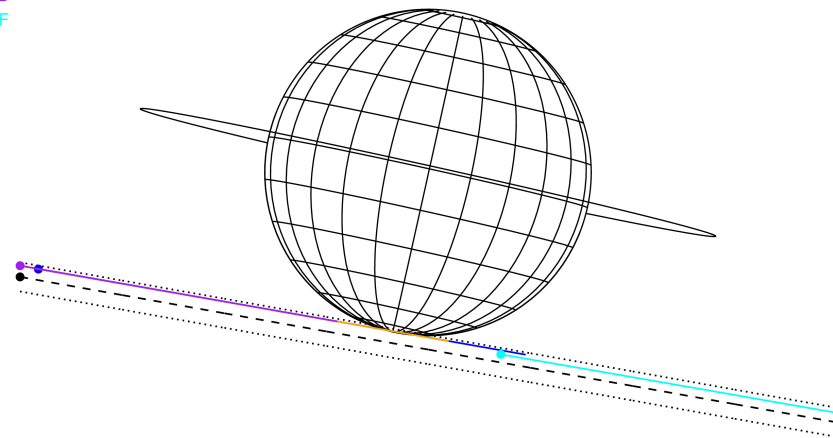
ICRS Star Coord at Epoch: 19h 52m 46.99298s -21:02:38.77518s

RUWE (>1.4 is poor) : 3.77  
 K magnitude : 8.828  
 G magnitude : 11.296  
 RP magnitude : 10.549  
 BP magnitude : 11.904  
 DUPflag : 0  
 Distance (au) : 5.576  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 27.54  
 Sun-Target sep (deg) : 61.88  
 Sun-Moon sep (deg) : 147.96  
 B (ring opening deg) : -1.34  
 PA of pole (deg) : -12.49  
 Pole direction: RA (deg): 268.05670  
 Dec (deg): 64.49654  
 C/A sky separation (") : 18.879  
 C/A sky separation (km) : 76349.2  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2032-03-18T13:00:20 K8.83 G11.30 Pt



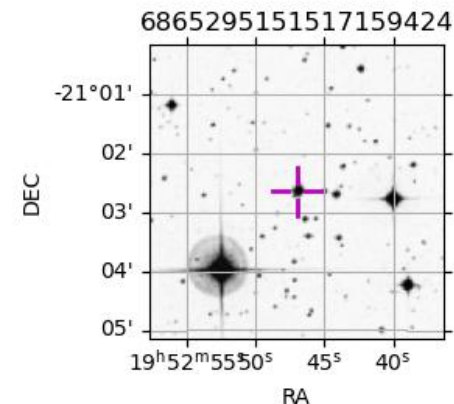
Earth  
 PAL  
 KPNO  
 MCD  
 IRTF



2032-03-18T13:00:20.0500 a: 19 52 46.9930 & -21 02 38.775 C/A \*\*\*\*\* PA 349.90 deg v\_sky +27.54 km/s D 05.58 AU  
 Credit: Styled after SORA/Lucky Star

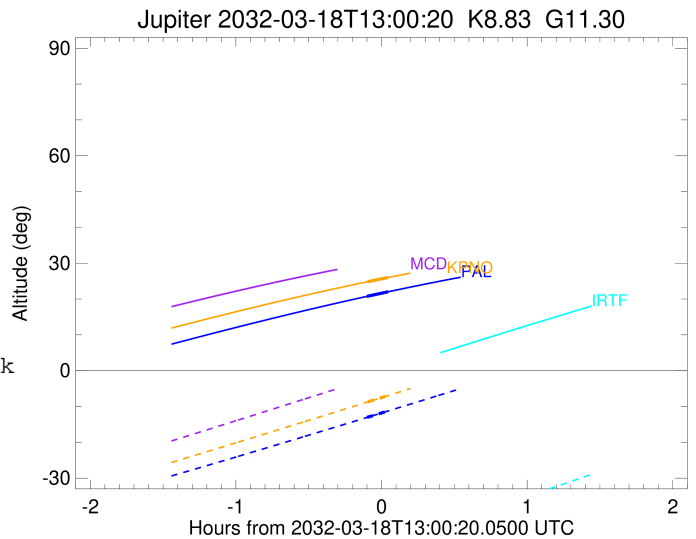
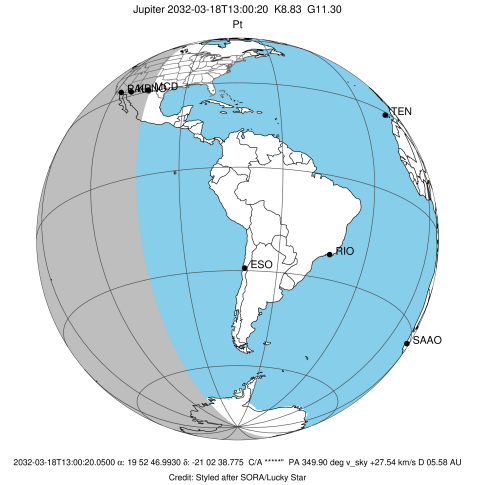
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	MAR 18 12:54 - MAR 18 13:03	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	MAR 18 12:54 - MAR 18 13:02	Pie
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			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



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-03-18T12:58:41.400
Event type            : Pt
: Jupiter occs: topocentric, not geocentric
: Not a ringed target
Observer code         : PAL
Location              : Palomar Mt (200")
Latitude (deg)        : 33.35622
E. Longitude (deg)    : 243.13601
Altitude (km)         : 1.706
Gaia source ID        : 6865295151517159424
2Mass ID (if available) : 19524699-2102388
ICRS Star Coord at Epoch: 19h 52m 46.99298s -21:02:38.77518s
RUWE (>1.4 is poor) : 3.77
K magnitude           : 8.828
G magnitude           : 11.296
RP magnitude          : 10.549
BP magnitude          : 11.904
DUPflag              : 0
Distance (au)         : 5.576
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 27.54
Sun-Target sep (deg)  : 61.88
Sun-Moon sep (deg)    : 147.72
B (ring opening deg) : -1.34
PA of pole (deg)      : -12.49
Pole direction: RA (deg): 268.05670
Dec (deg): 64.49654
C/A sky separation (") : 17.590
C/A sky separation (km) : 71135.7
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
    
```

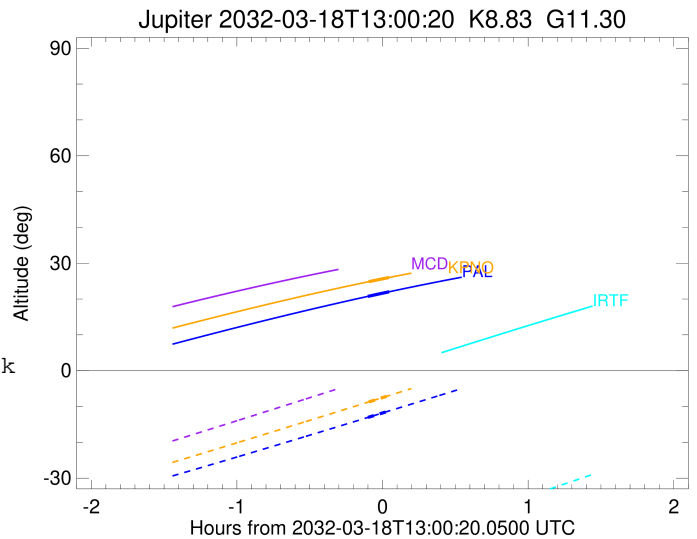
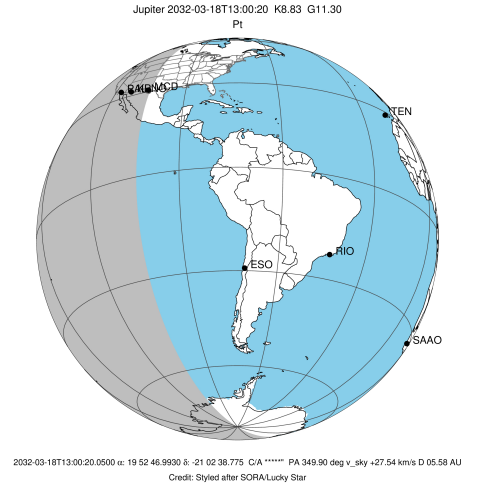


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-03-18T12:54:20.821	20.74	-13.05	71489.5	-86.52	-86.93
Jupiter	E	2032-03-18T13:03:02.043	22.01	-11.25	71489.6	-81.70	-82.67

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-03-18T12:58:51.600
Event type            : Pt
: Jupiter occs: topocentric, not geocentric
: Not a ringed target
Observer code         : KPNO
Location              : Kitt Peak Natl Obs
Latitude (deg)        : 31.96333
E. Longitude (deg)    : 248.40000
Altitude (km)         : 2.120
Gaia source ID        : 6865295151517159424
2Mass ID (if available) : 19524699-2102388
ICRS Star Coord at Epoch: 19h 52m 46.99298s -21:02:38.77518s
RUWE (>1.4 is poor) : 3.77
K magnitude           : 8.828
G magnitude           : 11.296
RP magnitude          : 10.549
BP magnitude          : 11.904
DUPflag              : 0
Distance (au)         : 5.576
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 27.54
Sun-Target sep (deg) : 61.88
Sun-Moon sep (deg)   : 147.79
B (ring opening deg) : -1.34
PA of pole (deg)     : -12.49
Pole direction: RA (deg): 268.05670
Dec (deg): 64.49654
C/A sky separation ("): 17.599
C/A sky separation (km): 71173.2
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	2032-03-18T12:54:44.957	24.85	-8.71	71489.5	-86.78	-87.16
Jupiter	E	2032-03-18T13:02:58.300	25.99	-6.97	71489.6	-82.04	-82.97