

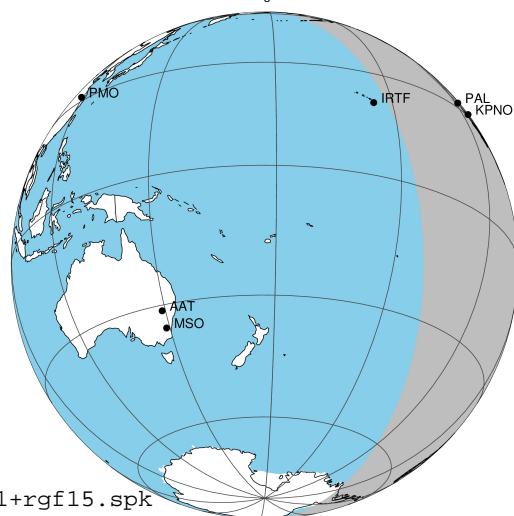
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2031-10-29T03:27:02.670
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068815282028208640
 2Mass ID (if available) : 17432679-2315476

Jupiter 2031-10-29T03:27:02 K9.15 G13.92 Pgt

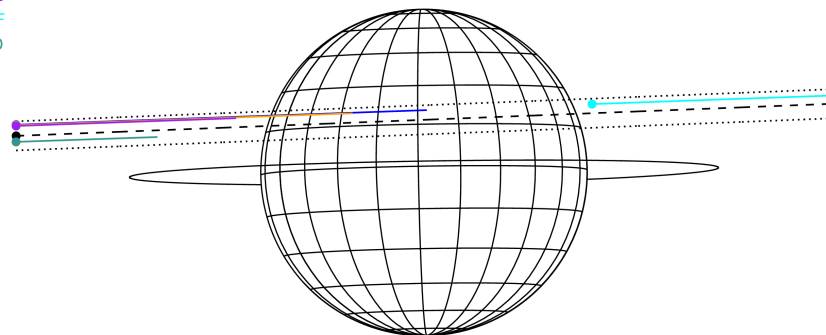
ICRS Star Coord at Epoch: 17h 43m 26.78998s -23:15:47.72644s

RUWE (>1.4 is poor) : 1.94
 K magnitude : 9.152
 G magnitude : 13.920
 RP magnitude : 12.697
 BP magnitude : 15.481
 DUPflag : 0
 Distance (au) : 5.799
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 31.90
 Sun-Target sep (deg) : 51.13
 Sun-Moon sep (deg) : 114.40
 B (ring opening deg) : -2.22
 PA of pole (deg) : 0.95
 Pole direction: RA (deg): 268.05681
 Dec (deg): 64.49652
 C/A sky separation (") : 5.481
 C/A sky separation (km) : 23052.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2031-10-29T03:27:02 K9.15 G13.92
 Pgt



Earth
 PAL
 KPNO
 MCD
 IRTF
 ESO

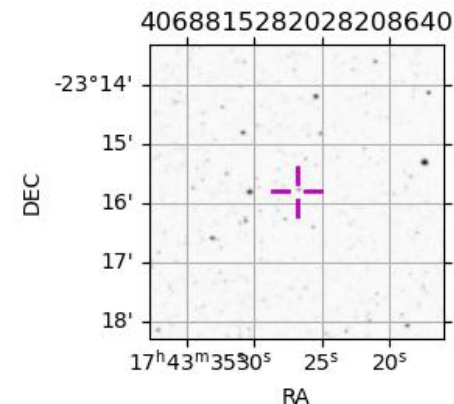


2031-10-29T03:27:02.6700 cc: 17 43 26.7900 s: -23 15 47.726 C/A 5.473° PA 182.25 deg v_sky +31.90 km/s D 05.80 AU

Credit: Styled after SORA/Lucky Star

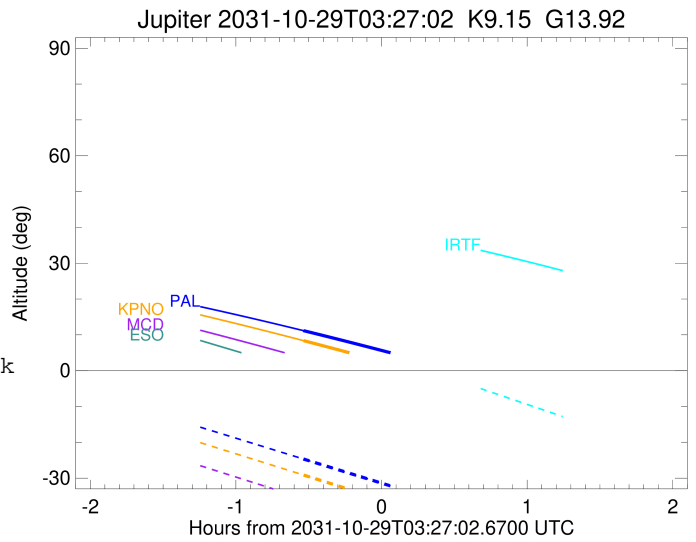
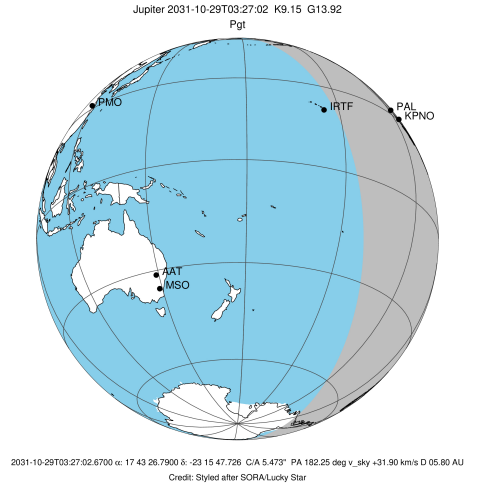
Observable events with sun below -5 deg and altitude above 5 deg

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	+	OCT 29 02:54 - OCT 29 02:54	Pin
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	OCT 29 02:54 - OCT 29 02:54	Pin
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             : 2031-10-29T03:29:34.950
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: 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        : 4068815282028208640
2Mass ID (if available) : 17432679-2315476
ICRS Star Coord at Epoch: 17h 43m 26.78998s -23:15:47.72644s
RUWE (>1.4 is poor) : 1.94
K magnitude           : 9.152
G magnitude           : 13.920
RP magnitude          : 12.697
BP magnitude          : 15.481
DUPflag              : 0
Distance (au)         : 5.799
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.90
Sun-Target sep (deg)  : 51.13
Sun-Moon sep (deg)    : 114.79
B (ring opening deg) : -2.22
PA of pole (deg)      : 0.95
Pole direction: RA (deg): 268.05681
Dec (deg): 64.49652
C/A sky separation (" ) : 6.484
C/A sky separation (km) : 27271.5
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
    
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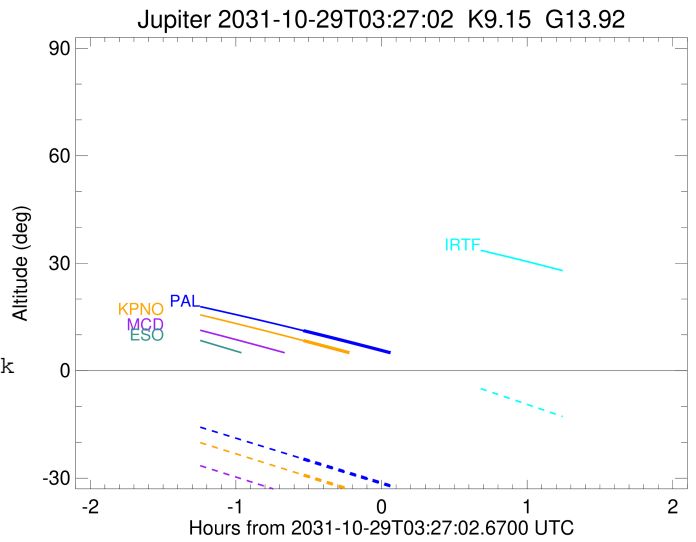
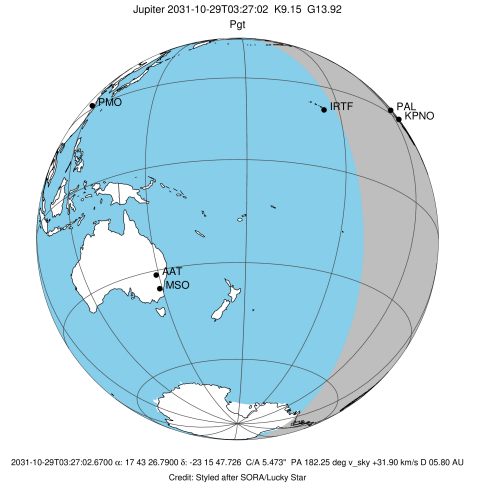


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-10-29T02:54:50.982	11.18	-24.65	71491.1	21.33	24.04
Jupiter	E	2031-10-29T04:04:14.731	-1.10x	-39.11	71490.9	23.46	26.36

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-10-29T03:29:43.460
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: 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        : 4068815282028208640
2Mass ID (if available) : 17432679-2315476
ICRS Star Coord at Epoch: 17h 43m 26.78998s -23:15:47.72644s
RUWE (>1.4 is poor) : 1.94
K magnitude           : 9.152
G magnitude           : 13.920
RP magnitude          : 12.697
BP magnitude          : 15.481
DUPflag              : 0
Distance (au)         : 5.799
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 31.90
Sun-Target sep (deg) : 51.13
Sun-Moon sep (deg)   : 114.76
B (ring opening deg) : -2.22
PA of pole (deg)     : 0.95
Pole direction: RA (deg): 268.05681
Dec (deg): 64.49652
C/A sky separation ("): 6.417
C/A sky separation (km): 26989.9
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	2031-10-29T02:54:57.841	8.37	-29.14	71491.1	21.11	23.79
Jupiter	E	2031-10-29T04:04:24.701	-4.52x	-43.77	71490.9	23.20	26.08