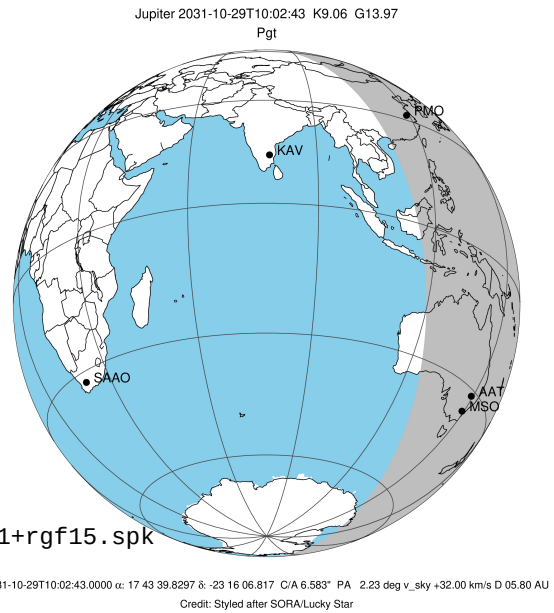
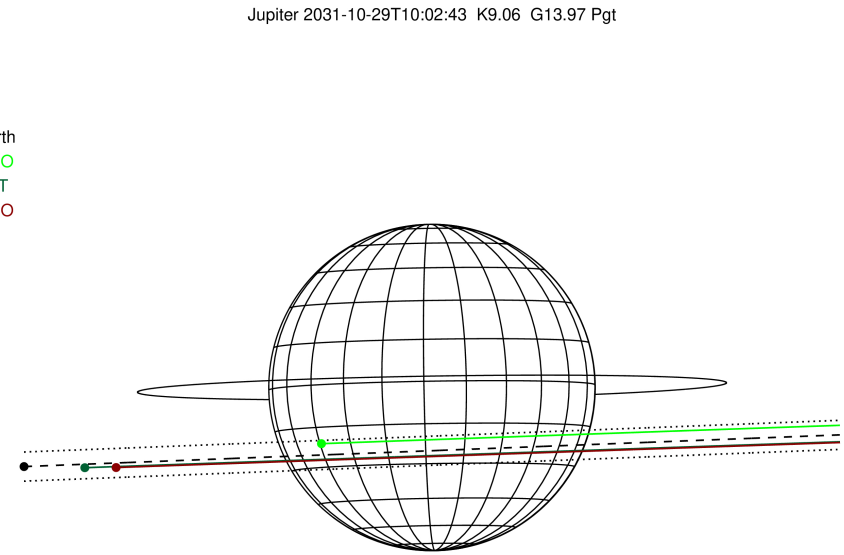
Stellar occultation prediction by rfrench@wellesley.edu Sun Jun 25 10:14:54 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2031-10-29T10:02:43.000
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Gaia source ID : 4068816445866553472
2Mass ID (if available) : 17433983-2316065

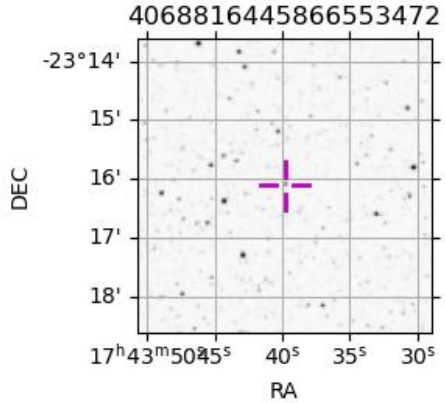
ICRS Star Coord at Epoch: 17h 43m 39.82973s -23:16:06.81715s
RUWE (>1.4 is poor) : 0.91
K magnitude : 9.061
G magnitude : 13.972
RP magnitude : 12.719
BP magnitude : 15.586
DUPflag : 0
Distance (au) : 5.802
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 32.00
Sun-Target sep (deg) : 50.91
Sun-Moon sep (deg) : 118.04
B (ring opening deg) : -2.22
PA of pole (deg) : 0.92
Pole direction: RA (deg): 268.05681
Dec (deg): 64.49652
C/A sky separation (") : 6.575
C/A sky separation (km) : 27669.4
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp



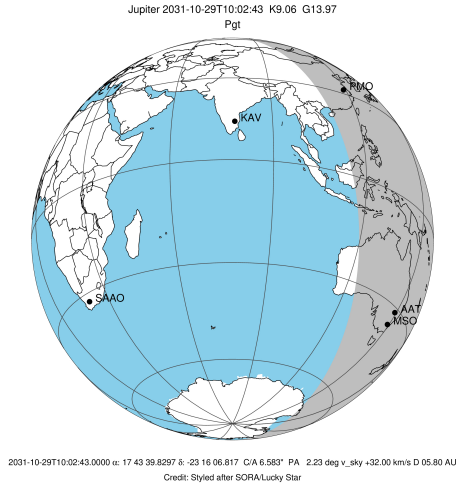


Observable events with sun below -5 deg and altitude above 5 deg

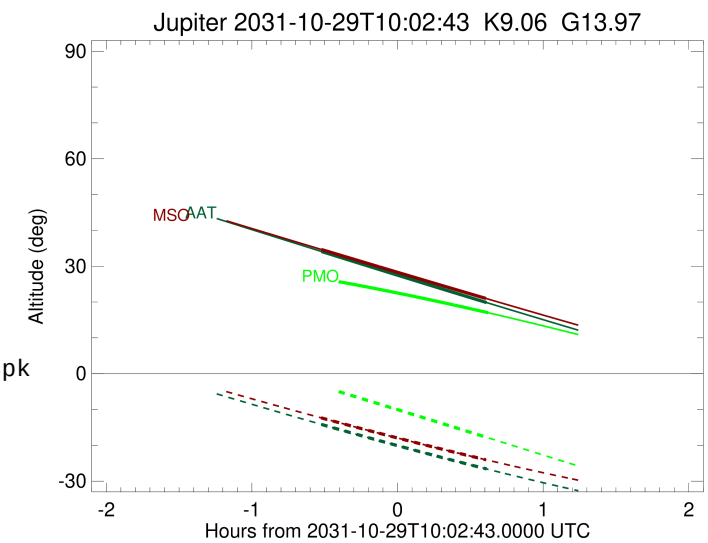
Obs	Location	lat	Elon	Target		Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1				Pnn
PAL	Palomar Mt (200")	33.4	243.1				Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8		+	OCT 29 10:40 - OCT 29 10:40	Pne
KPNO	Kitt Peak Natl Obs	32.0	248.4				Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0				Pnn
TEN	Teide 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				Pnn
AAT	Siding Spring (AAT)	-31.3	149.1	+	+	OCT 29 09:31 - OCT 29 10:39	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8				Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	+	OCT 29 09:31 - OCT 29 10:39	Pie



Jupiter_2031-10-29T10_02_43.0000_PMO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:18:15 2023




```
target                  : Jupiter
target radius (km)      :  71492.00
C/A epoch               : 2031-10-29T10:04:26.770
Event type              : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code           : PMO
Location                : Purple Mtn Obs. Nanking
Latitude (deg)          :  32.06667
E. Longitude (deg)      : 118.82089
Altitude (km)           :   0.364
Gaia source ID          : 4068816445866553472
2Mass ID (if available) : 17433983-2316065
ICRS Star Coord at Epoch: 17h 43m 39.82973s -23:16:06.81715s
RUWE (>1.4 is poor)     :   0.91
K magnitude             :  9.061
G magnitude             : 13.972
RP magnitude            : 12.719
BP magnitude            : 15.586
DUPflag                 : 0
Distance (au)           :  5.802
f0 (km)                 :       0.00
g0 (km)                 :       0.00
skyplane vel. (km/s)    :  32.00
Sun-Target sep (deg)    :   50.91
Sun-Moon sep (deg)      :  118.62
B (ring opening deg)    :   -2.22
PA of pole (deg)        :    0.92
Pole direction: RA (deg): 268.05681
Dec (deg):  64.49652
C/A sky separation (")  :   5.428
C/A sky separation (km) :  22841.9
NAIF SPICE kernels      : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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
```

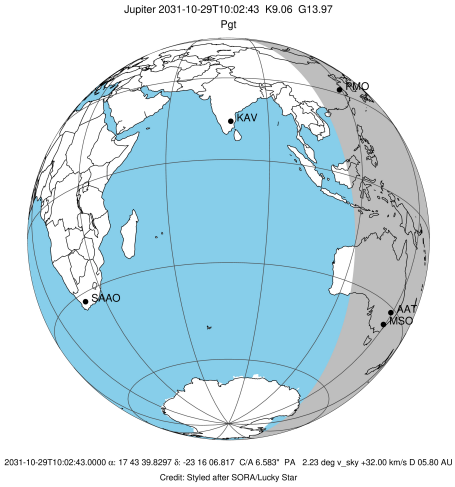


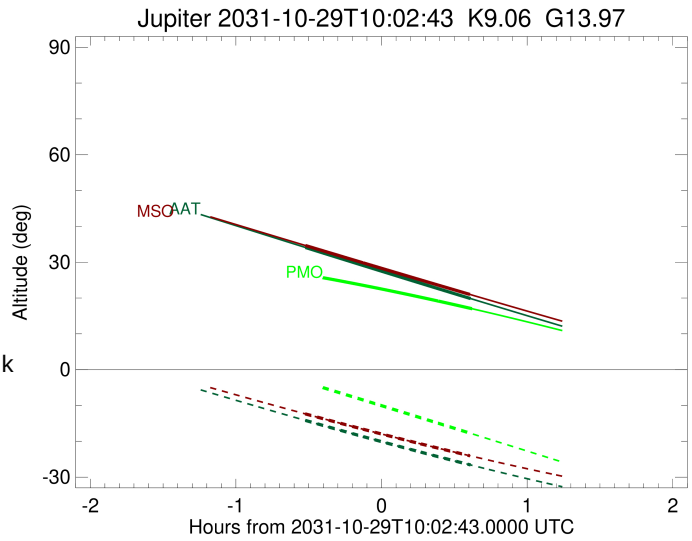
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-10-29T09:28:48.066	26.84	-2.99x	71491.2	-19.77	-22.33
Jupiter	E	2031-10-29T10:40:02.166	17.01	-17.90	71491.4	-17.50	-19.81

Jupiter_2031-10-29T10_02_43.0000_AAT.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:34:38 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2031-10-29T10:05:23.060
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code : AAT
Location : Siding Spring (AAT)
Latitude (deg) : -31.27703
E. Longitude (deg) : 149.06608
Altitude (km) : 1.164
Gaia source ID : 4068816445866553472
2Mass ID (if available) : 17433983-2316065
ICRS Star Coord at Epoch: 17h 43m 39.82973s -23:16:06.81715s
RUWE (>1.4 is poor) : 0.91
K magnitude : 9.061
G magnitude : 13.972
RP magnitude : 12.719
BP magnitude : 15.586
DUPflag : 0
Distance (au) : 5.802
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 32.00
Sun-Target sep (deg) : 50.91
Sun-Moon sep (deg) : 118.80
B (ring opening deg) : -2.22
PA of pole (deg) : 0.92
Pole direction: RA (deg): 268.05681
Dec (deg): 64.49652
C/A sky separation (") : 7.088
C/A sky separation (km) : 29827.4
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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



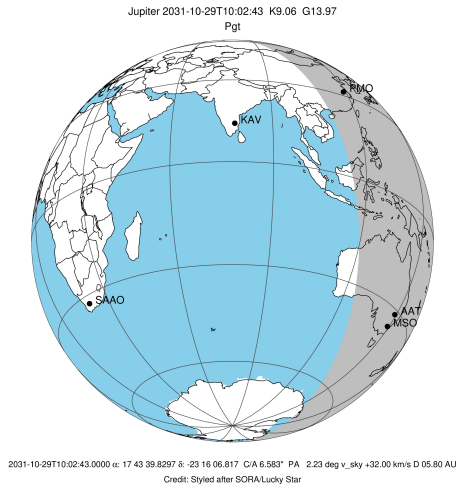


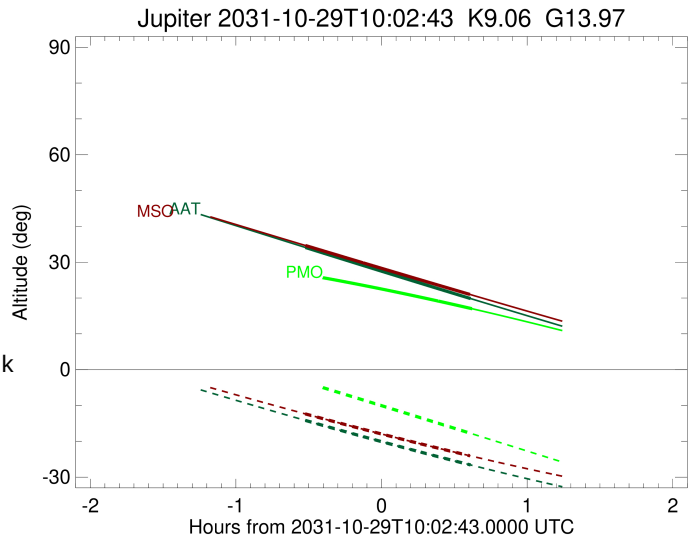
x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-10-29T09:31:22.244	34.10	-14.17	71490.7	-25.69	-28.77
Jupiter	E	2031-10-29T10:39:19.755	19.86	-26.58	71490.9	-23.61	-26.52

Jupiter_2031-10-29T10_02_43.0000_MSO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:38:46 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2031-10-29T10:05:16.230
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code : MSO
Location : Mt. Stromlo Observatory
Latitude (deg) : -35.32000
E. Longitude (deg) : 149.00833
Altitude (km) : 0.770
Gaia source ID : 4068816445866553472
2Mass ID (if available) : 17433983-2316065
ICRS Star Coord at Epoch: 17h 43m 39.82973s -23:16:06.81715s
RUWE (>1.4 is poor) : 0.91
K magnitude : 9.061
G magnitude : 13.972
RP magnitude : 12.719
BP magnitude : 15.586
DUPflag : 0
Distance (au) : 5.802
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 32.00
Sun-Target sep (deg) : 50.91
Sun-Moon sep (deg) : 118.79
B (ring opening deg) : -2.22
PA of pole (deg) : 0.92
Pole direction: RA (deg): 268.05681
Dec (deg): 64.49652
C/A sky separation (") : 7.178
C/A sky separation (km) : 30207.5
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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	2031-10-29T09:31:21.363	34.66	-12.35	71490.7	-26.04	-29.15
Jupiter	E	2031-10-29T10:39:07.168	21.00	-24.02	71490.9	-23.93	-26.87