

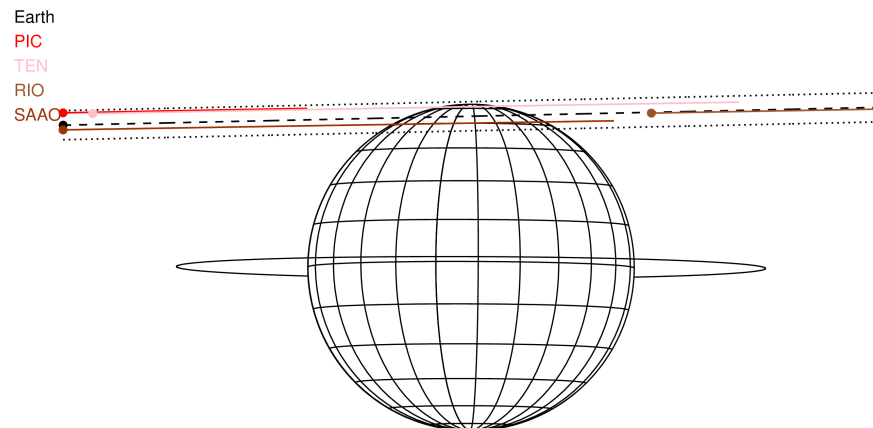
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-10-21T20:27:33.020  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4068626299081328768  
 2Mass ID (if available) : 17535909-2322361

Jupiter 2043-10-21T20:27:33 K7.00 G12.86 Pgt

ICRS Star Coord at Epoch: 17h 53m 59.09450s -23°22'36.22630s  
 RUWE (>1.4 is poor) : 1.03  
 K magnitude : 7.004  
 G magnitude : 12.862  
 RP magnitude : 11.413  
 BP magnitude : 15.686  
 DUPflag : 0  
 Distance (au) : 5.634  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 27.67  
 Sun-Target sep (deg) : 60.90  
 Sun-Moon sep (deg) : 165.05  
 B (ring opening deg) : -2.13  
 PA of pole (deg) : -0.19  
 Pole direction: RA (deg): 268.05675  
 Dec (deg): 64.49731  
 C/A sky separation (") : 16.209  
 C/A sky separation (km) : 66236.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

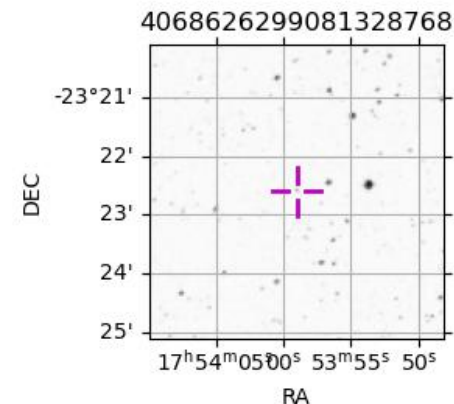


2043-10-21T20:27:33.0200 a: 17 53 59.0945 s: -23 22 36.226 C/A \*\*\*\*\* PA 181.25 deg v\_sky +27.67 km/s D 05.63 AU  
 Credit: Styled after SORA/Lucky Star



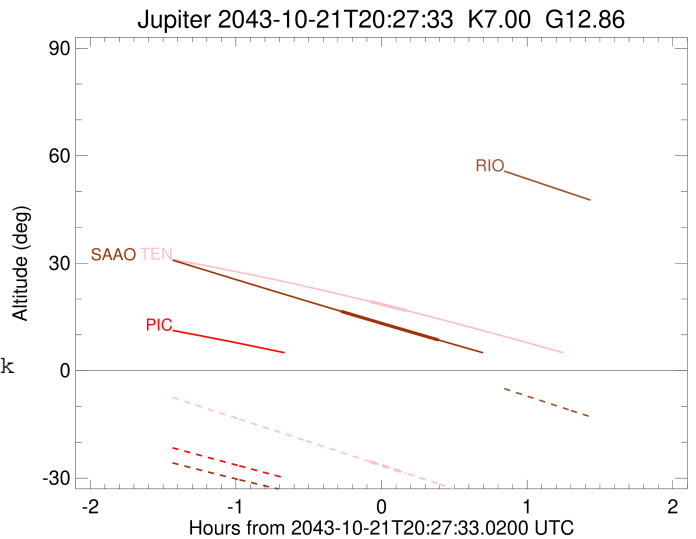
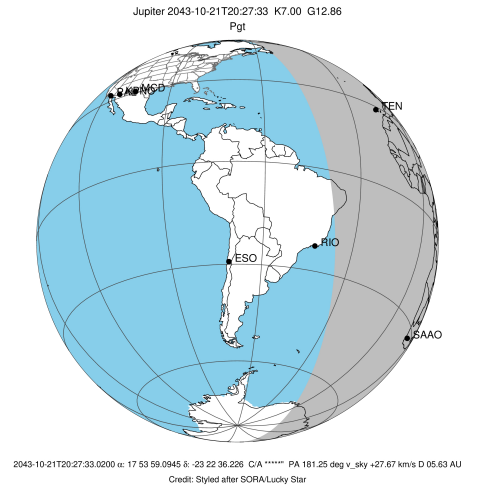
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
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	+ +	OCT 21 20:22 - OCT 21 20:37	Pie
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	+ +	OCT 21 20:10 - OCT 21 20:51	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-21T20:30:22.390
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : TEN
Location            : Teide Obs./Tenerife
Latitude (deg)      : 28.30050
E. Longitude (deg)  : 343.48909
Altitude (km)       : 2.395
Gaia source ID      : 4068626299081328768
2Mass ID (if available) : 17535909-2322361
ICRS Star Coord at Epoch: 17h 53m 59.09450s -23:22:36.22630s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 7.004
G magnitude          : 12.862
RP magnitude         : 11.413
BP magnitude         : 15.686
DUPflag             : 0
Distance (au)       : 5.634
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 27.67
Sun-Target sep (deg) : 60.90
Sun-Moon sep (deg)  : 165.97
B (ring opening deg) : -2.13
PA of pole (deg)    : -0.19
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (" ) : 17.238
C/A sky separation (km) : 70441.7
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
    
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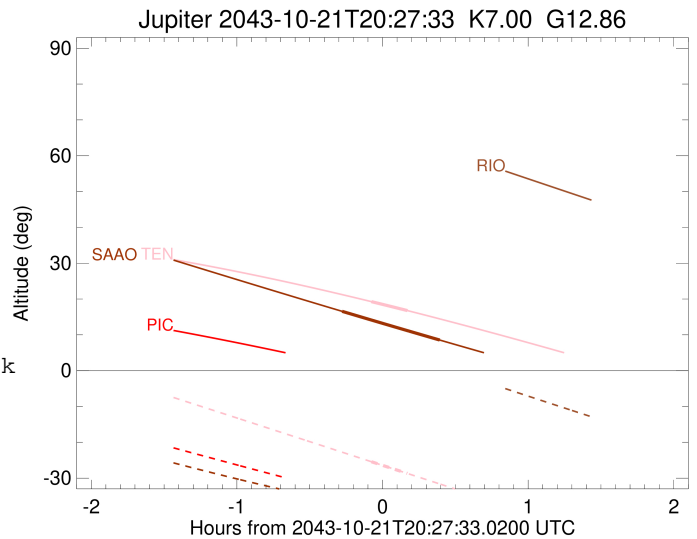
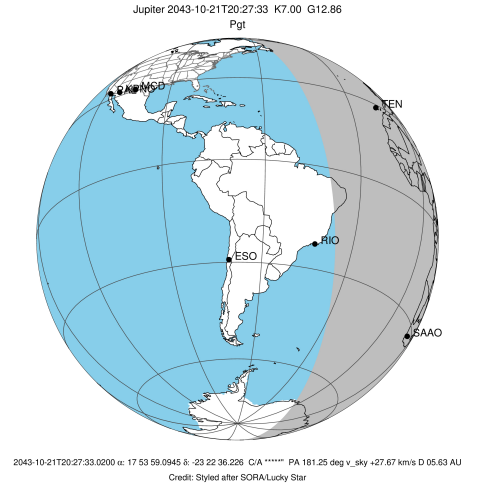


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-21T20:22:58.042	19.27	-25.41	71486.1	78.81	80.11
Jupiter	E	2043-10-21T20:37:46.507	16.78	-28.68	71486.0	81.12	82.16

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-21T20:31:02.720
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : SAAO
Location              : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)        : -32.37953
E. Longitude (deg)    : 20.81070
Altitude (km)         : 1.768
Gaia source ID        : 4068626299081328768
2Mass ID (if available) : 17535909-2322361
ICRS Star Coord at Epoch: 17h 53m 59.09450s -23:22:36.22630s
RUWE (>1.4 is poor)  : 1.03
K magnitude           : 7.004
G magnitude           : 12.862
RP magnitude          : 11.413
BP magnitude          : 15.686
DUPflag              : 0
Distance (au)         : 5.634
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 27.67
Sun-Target sep (deg)  : 60.90
Sun-Moon sep (deg)    : 165.70
B (ring opening deg) : -2.13
PA of pole (deg)      : -0.19
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 15.473
C/A sky separation (km) : 63227.0
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	2043-10-21T20:10:55.990	16.56	-36.85	71487.3	60.99	63.99
Jupiter	E	2043-10-21T20:51:07.617	8.55	-41.83	71487.1	63.22	66.04