

A New Double Star Observed During Lunar Occultation: HIP 18473

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Abstract: A lunar occultation observation by the author in March 2013 detected a new, previously unknown double star HIP 18473.

HIP 18473

On 2013 March 17, a lunar occultation disappearance of HIP 18473 was video-recorded at 25 frames/sec using a 30cm telescope. The waxing moon was 28% illuminated. The recorded light curve is shown in Figure 1 on the next page.

The intermediate step lasted for 0.32 secs, with the fainter star being occulted first. The position angle of the event at the moon's limb was 44° and the radial velocity of the moon at the location of the occultation was $0.258''/\text{second}$. The consequent separation of the components of this star is at least $0.083''$.

The magnitudes of HIP 18473 are M_v 8.79 and M_b 9.11. From the heights of the three portions of the light curve the V magnitudes of the components are derived as 9.5 and 9.6.

There are no previous observations of this star in the Archive of Lunar Occultation Observations that report double star effects.

There is no entry for this star in the hip_dm_g file.

Results for the observation are given below.

Star HIP 18473 = HD 24761 = SAO
93681 = TYC 1257-345-1 = PPM 93096
Coord. (J2000) 03h56m52.73s, $20^\circ 05' 01.02''$

Spectral type	A
Derived double data:	
Mag A	9.5 ± 0.1 (V)
Mag B	9.6 ± 0.1 (V)
Epoch	2013.21
Separation	$>0.083''$
PA at epoch	between 134 and 314 deg

Reference

Lunar Occultation Archive: VizieR Catalogue number VI/132A

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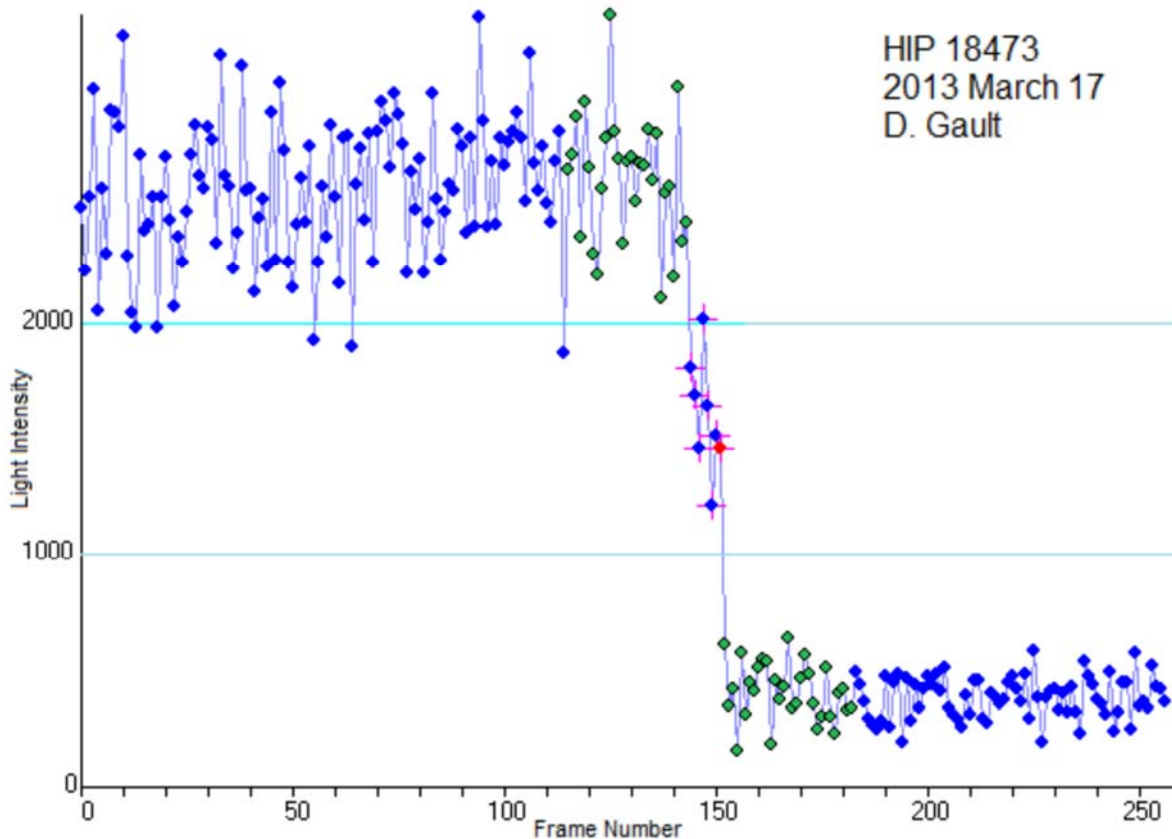


Figure 1. Light Curve of the Lunar Occultation.

