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DISCOVERY OF PULSATIONS IN THE DOUBLE STAR HD 13079

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Single-channel, time-series photometric observations of HD 13079 (BD+38°418 = HIC 10023 = CCDM 02090+3936) were acquired on nights 12/13 and 15/16 November 1997 using the 1-m telescope of the Uttar Pradesh State Observatory at Naini Tal. The measurements included the light of both components, which are separated by only 6.17 arcsec. The data were acquired as continuous 10-s integrations through a Johnson *B* filter. Since we were searching for oscillations in the range 5–16 min we did not observe HD 13079 differentially with respect to comparison stars. The data were corrected for coincidence counting losses, sky background and atmospheric extinction.

The light curves obtained on these two nights are shown in Fig. 1. The scale of the ordinates in the two panels is different and individual observations are not plotted in the top panel as the scatter makes the trend hard to follow. The first light curve had significantly higher noise than the second owing to misbehaviour of the photomultiplier tube. The second light curve was acquired with a new photomultiplier tube and it shows a convincing 72-minute variation. The slight difference in the amplitude of the two cycles suggests the possible presence of another frequency.

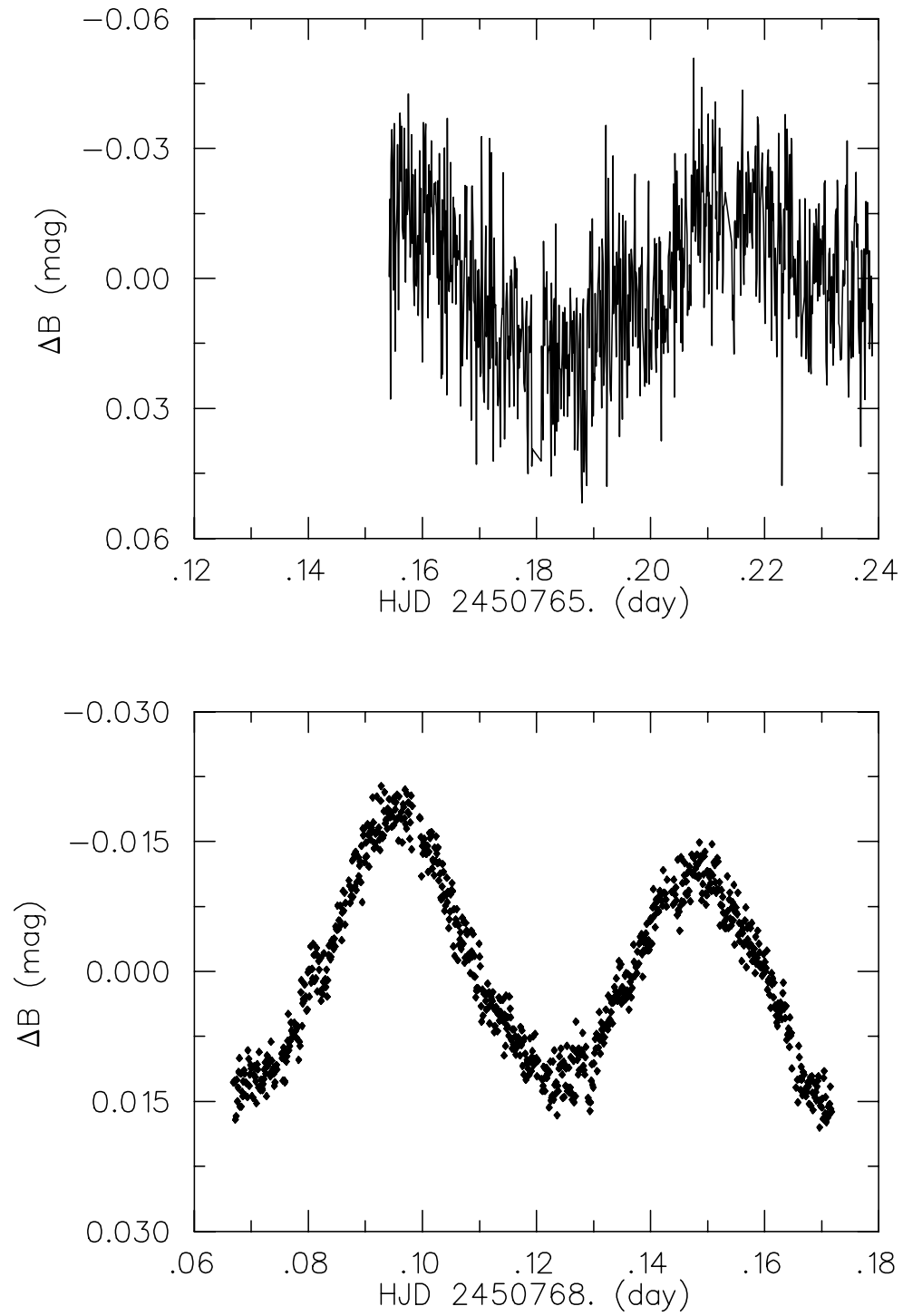


Figure 1.