

compounds, some of which efficiently radiate in the thermal ranges ( $\text{H}_2\text{O}$ ,  $\text{NH}_3$ ,  $\text{HCN}$ ...).

## OBSERVATIONS OF GALILEAN SATELLITES DURING THE COLLISIONS OF SHOEMAKER-LEVY 9 FRAGMENTS WITH JUPITER

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Observations of reflected light from Galilean satellites were carried out at Rozhen and Belogradchik observatories in Bulgaria during the collisions of A, H and Q fragments of Shoemaker-Levy 9 with Jupiter. The weather was unstable and often affected by clouds. V and U photoelectric observations were taken by 60cm telescopes of Rozhen and Belogradchik observatories with an integration time of 1 sec. In parallel, at Belogradchik observatory, CCD photometry in H-alpha was made with a 0.35m Celestron telescope. With the Coude spectrograph at the 2m telescope spectra of Io were taken in a range of 60Å around H-alpha with a spectral resolution of 0.1Å/pixel (1pixel=23 microns). The exposure time of the spectra was 10 min. The reduction was made but no significant difference could be detected in different spectra.

Here we present the analysis of the photoelectric light curve of Callisto taken with a V-Johnson filter on July 18 (UT: 19:07-20:45) at Belogradchik during the H impact. Peculiar variations in the brightness can be seen with an accuracy of  $\pm 0.03$  -  $\pm 0.05$ mag. The amplitude of these variations is about 0.4mag. Several rapid variations in the brightness appear at the beginning of the light curve, but later the increase of the brightness follows a steady rise. While the first peak could be considered within the noise level of the mean relative brightness, the next two peaks A and B at 19:31 and 19:45, respectively, are obviously real. Maximum of the brightness is at 20:10 and then it begins to decrease lightly. These changes in the light curve of Callisto during H impact were confirmed by parallel CCD-observations in H-alpha, where the above mentioned peaks A and B are sharply marked and precede those in V by about 5 minutes. Moreover, the ratio of the drop after the second minimum to the drop after the first one is equal for both kinds of observations. Probably more than one piece has hit Jupiter during this impact.

The analysis of the observations continues.