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INFRARED PHOTOMETRY OF THE DWARF NOVA AH Her

The variability of the dwarf nova AH Her (type Z Cam) was first reported by Jacchia (1941). Its magnitude shows a range of variation between 10.2 and 14.7 in visible (Kukarkin 1969), and a mean outburst period of 19.6 day (Beyer 1967).

We present infrared measurements during the rise to the outburst that took place in the third week of April 1986.

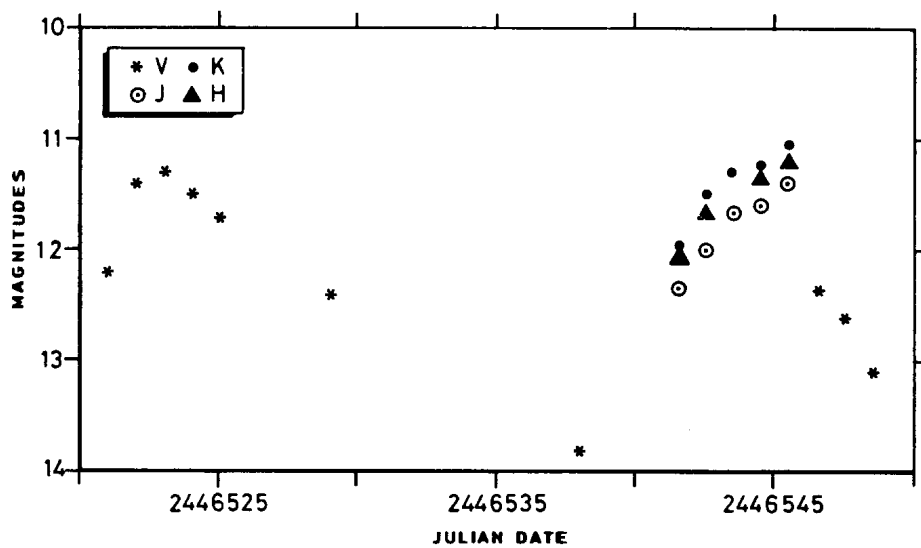
The observations were made with the 1.5 m Infrared Flux Collector at the Observatorio de Izaña (Tenerife) during a period of 5 nights from 20 to 25 April 1986, using the infrared single-channel photometer with an InSb detector cooled with liquid-Nitrogen and the broad-band filters J,H,K.

This photometer has a double beam, chopped at 10 Hz to monitor the sky. The star was exposed for 10 sec. in alternate beams until a good signal/noise was achieved. The uncertainty in each infrared measurement is about 0.07 magnitudes. The observed magnitudes were corrected for extinction by observation of standard stars and placed on Johnson's system.

Table I shows the initial and final Julian Date for each night of observation, the magnitude J, and the J-H, J-K colours.

Table I

| JD _{init} 2446000+ | JD _{fin} | J | J-H | J-K |
|--------------------------------|-------------------|-------|------|------|
| 541.639 | 541.683 | 12.39 | 0.33 | 0.49 |
| 542.660 | 542.718 | 12.02 | 0.34 | 0.50 |
| 543.726 | 543.741 | 11.64 | - | 0.28 |
| 544.716 | 544.743 | 11.61 | 0.29 | 0.34 |
| 545.630 | 545.666 | 11.49 | 0.24 | 0.34 |



In the figure the values of J, H, K magnitudes are plotted vs. the Julian Date along with the V magnitudes for the whole April given by 'The Astronomer' magazine.

It is important to point out that there are significant changes of colour during the rise to maximum and it is noted that the maximum in the IR could be delayed compared to the visible.

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