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**V1472 Aql: A MOST UNUSUAL ECLIPSER?**

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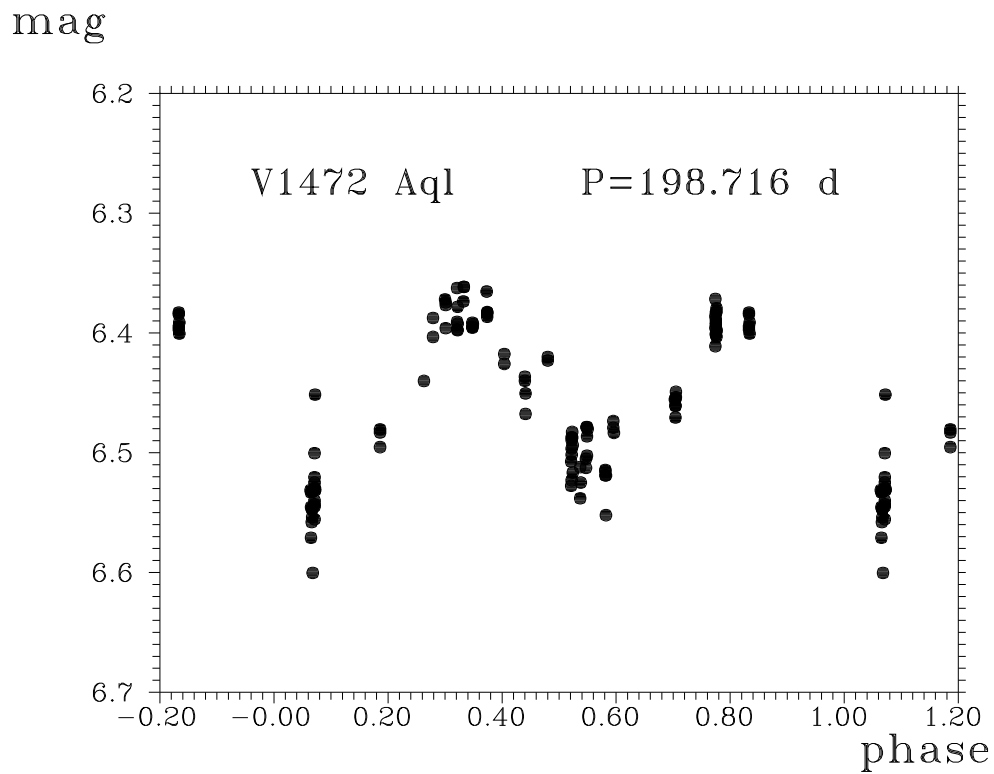
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The variable star V1472 Aql (HR 7680, HD 190658) was discovered by HIPPARCOS (ESA, 1997) and classified as a semiregular variable. It will enter the forthcoming Namelist of Variable Stars No. 74. The photometric observations by HIPPARCOS show a rather regular light curve with the range from 6.382 to 6.537 (HIPPARCOS magnitudes) and a period of 100<sup>d</sup>3727039. With its M2.5III spectral type, the star seems a good candidate to SRA variables.

However, Lucke and Mayor (1982), from 41 CORAVEL and 4 photographic radial velocities, found the star to be a spectroscopic binary with the orbital period equal to 198<sup>d</sup>716 (approximately twice the presently derived photometric period) and with  $a \sin i = (35.39 \pm 0.76) \times 10^6$  km. In the abstract of their paper, they state that “HD 190658 is an M2III giant which could fill its Roche lobe and eventually show eclipses. HD 190658 is also a high velocity star ( $V_0 = -112.1$  km s<sup>-1</sup>) and has the peculiarity of having the shortest period (198 days) of any binary of type MIII”.

If we plot the HIPPARCOS magnitudes folded with the spectroscopic period (see Figure 1), we find a reasonable light curve of an eclipsing or ellipsoidal variable star, with continuous brightness variation and a possible indication of different depths of primary and secondary minima. In the “primary” minimum, the scatter of data points is considerable; it may be a hint to a sharper eclipse overlapping ellipsoidal brightness changes. In this minimum, the red giant is in front of an unidentified companion, not revealed in CORAVEL radial velocity observations. If the eclipsing-binary interpretation of the star’s brightness variation is correct, this would make the star a quite unusual “ $\beta$  Lyrae” variable. The high-velocity red giant’s mass could be rather moderate, and the nature of the companion is not easy to guess. Note that the star is in fact a triple system: HIPPARCOS observations refer to both components of ADS 13344, which, according to the BS catalog (Hoffleit and Jaschek, 1982), is a common-proper-motion pair with  $\Delta m = 4^m0$  and  $2''7$  separation. Additional observations of this peculiar object are needed. Note that the next “primary” minimum is predicted approximately for August 15, 1997.

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**Figure 1.** The phased light curve of V1472 Aql from HIPPARCOS photometry and spectroscopic elements of Lucke and Mayor (1982)

References:

- ESA, 1997, The Hipparcos and Tycho Catalogues, SP-1200, Vol. 17  
Hoffleit, D., Jaschek, C., 1982, The Bright Star Catalogue, 4th Edition  
Lucke, P.B., Mayor, M., 1982, *Astron. and Astrophys.*, 105, 318