

Light curve of the variable star RR Lyrae

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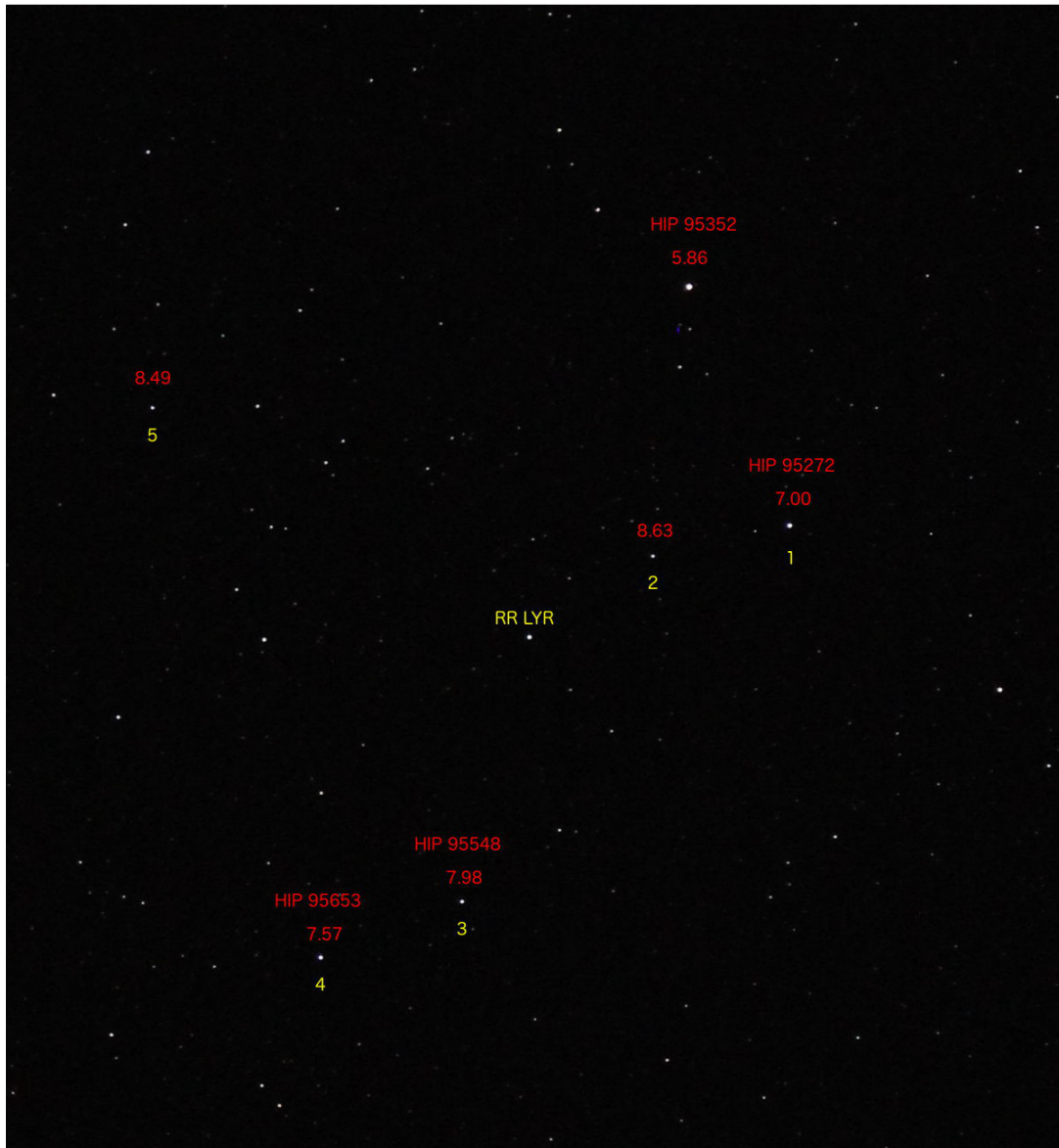


Fig. 1. Photographic image showing RR Lyrae and the reference stars.

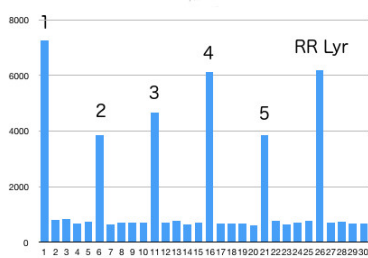


Fig. 2. Sum of RGB pixel values in a square area around the star and in four neighbouring background areas.

The images were taken with a CANON EOS 600D (150mm, f8, ISO 1600, t= 15 s, see Fig. 1.).

Star intensities were determined using the program AstrolmageJ (sum of rgb pixel values in a square area around the star, Fig 2.).

Knowing the magnitudes of the reference stars, the intensity of RR Lyr could be converted into a magnitude by linear interpolation or extrapolation using MATLAB.

The results are shown in Fig. 3.
The reference date for the maximum at phase zero is 23 september 2019 21:52:17 MESZ, JD 2458750.32797

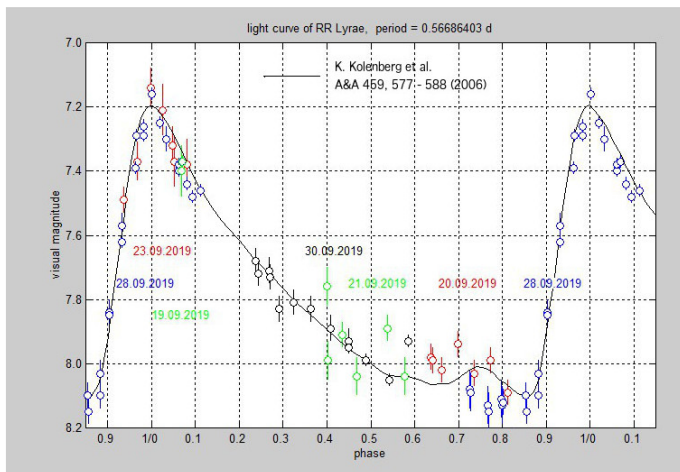


Fig. 3. Light curve of RR Lyrae measured in september 2019. The data of 28.09.2019 are plotted twice, shifted by one period. The measurements are compared with values reported in the literature (solid line: mean light curve fitted to many data points by K. Kolenberg et al, A&A 459, 577 - 588 (2006)