



Figure 1: Phase light curves of the stars studied

Results of research of LL Aqr

In investigation used eye estimations of Ivan S. Brukhanov for the star LL Aqr (HIP 111454, G0) carried out using Neiland - Blazko method on 354 photographic plates as well as 67 measurements of brightness LL Aqr on basis of "HIPPARCOS" data. Amplitude of fluctuations of brightness of the star LL Aqr founded: 9.3m - 10.0m in V rays.

As a result of search of period Ivan S. Brukhanov established using Lafler - Kinman method that the star LL Aqr is a variable of EA type with the following elements of brightness change:

$$H.J.D.min = 2439359.462 + 494.597 * E,$$

where $D = 0.05 P$ or approximately 25 days for the primary minimum as well as less than $D = 0.01 p$ or approximately 5 days for the secondary minimum. Below graph of the eclipse fluctuations of brightness of the star shown.

Epoches of moments of minimums has determined: 2439359.462 and 2448762.573 H. J. D. Authors suppose that the main eclipse is partial. This remains undecided.

Results of researches V1125 Tau

In investigation used eye estimations of Ivan S. Brukhanov for the star V1125 Tau (HIP 17024, G0) carried out using Neiland - Blazko method on 219 photographic plates as well as 83 measurements of brightness V1125 on basis of "HIPPARCOS" data. Amplitude of fluctuations of brightness of the star V1125 Tau founded: 8.7m - 9.6m in V rays. As a result of search of period Ivan S. Brukhanov established using Lafler - Kinman method that the star V1125 Tau is a variable of EA type with the following elements of brightness change:

$$H.J.D.min = 2445699.335 + 8.5912498 * E,$$

where $D = 0.02 P$ or approximately 3 hours for the primary minimum. Below graph of the eclipse fluctuations of brightness of the star shown.

Epoches of moments of minimums has determined: 2445699.335 and 2448336.806 H. J. D. Possibly we see the secondary minimum at phase 0.2. To confirm these period and type of variability we need long and precise photo-electric measurements of brightness of V1125 Tau.

Results of research of V1366 Ori

In investigation used eye estimations of Ivan S. Brukhanov for the star V1366 Ori (HIP 24552, A0) carried out using Neiland - Blazko method on 133 photographic plates as well as 82 measurements of brightness V1366 Ori on basis of "HIPPARCOS" data. Amplitude of fluctuations of brightness of the star V1366 Ori founded: 9.9m - 11.5m in V rays.

As a result of search of period I. Brukhanov established using Lafler - Kinman method that the star V1366 Ori is a variable of EA type with the following elements of brightness change:

$$H.J.D.min = 2444986.278 + 15.7298348 * E,$$

where $D = 0.06 P$ or approximately 23 hours, D approximately equal to $d = 0.03 P$ for the primary minimum. Below graph of the eclipse fluctuations of brightness of the star shown.

Epoches of moments of minimums has determined: 2444907.501 and 2444986.278 H. J. D. Variations of brightness noted outside eclipses within 9.9m - 10.8m. To confirm these period and type of variability we need long and precise photo-electric measurements of brightness of V1366 Ori.

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References

- Gur'yanov S. E.: 2000 April, "Stargazer", " new HIPPARCOS eclipse variables".
 Lafler J., Kinman T. D.: 1965, *Ap. J. Suppl.*, **11**, 216.
 Sinnott R. W.: 2000, Mining Hipparcos's Buried Treasure Here are 11 stars that need watching. http://skyandtelescope.com/observing/objects/variablestars/article291_1.asp.
 Sinnott R. W.: 2000, A Treasure-Trove of Variable Stars. Here are 11 variables seen by Hipparcos that require monitoring. http://skyandtelescope.com/observing/objects/variablestars/article_292_1.asp.