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New Spots Appears on V 728 Her?

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abstract: *New CCD observation of V728 Her shows asymmetric light curve near minimum. There is no asymmetry present in photometric B and V light curve obtained in 1988 by Agerer and col. New multicolor CCD observation of V728 Her is needed.*

V728 Her is close eclipsing binary system discovered by Kurochkin (1977) as SVS 2086. According to GCVS 2000, the system has the following parameters:
P = 0.4462587d
EPOCH = 41571.273
Type: EW / KW

Max (mag): 10.9
Min (mag): 11.5
Sec (mag): 11.4
Band: photographic

The spectrum is not given in GCVS, but we can suppose it is between F0-K becouse the EW/KW type of variability.

Newer light elemets is given by BRKA 2005 (~ B.R.N.O. catalogue):
P = 0.47128920 d
EPOCH = 51657.775

Position is the following (GCVS 2000):
RA 2000: 17 18 04.3
DE 2000: +41 50 39

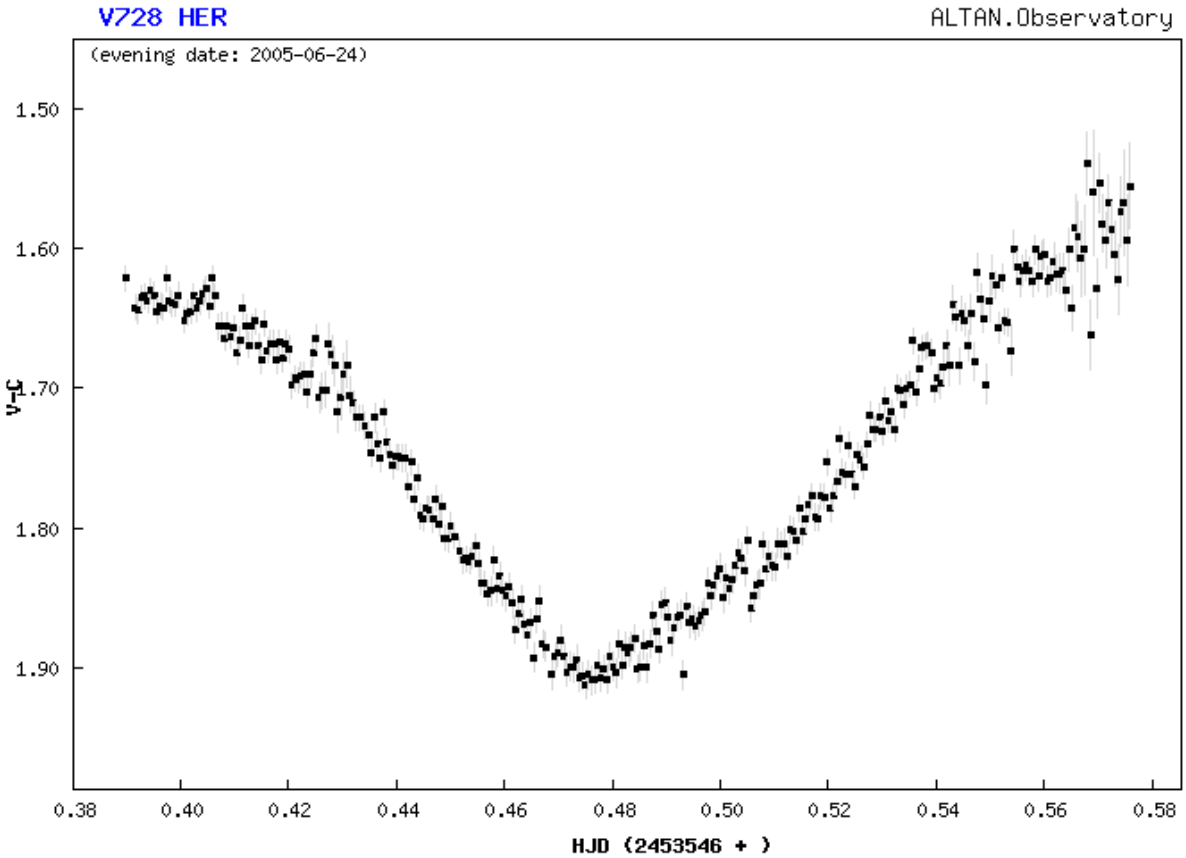
I have measured V728 Her by CCD ST8 + R filter at RL200 in night 24./25. 06. 2005 and 324 measurments was obtained. The primary goal of observation was to get precize time of minimum. But after data processing, the light curve shows in pic #1 appear.

The minimum is pretty asymmetric and the light curve looks same with two other comparison stars. In such binary systems, the asymmetric light curve used to be an effect of spots on one or on both stars.

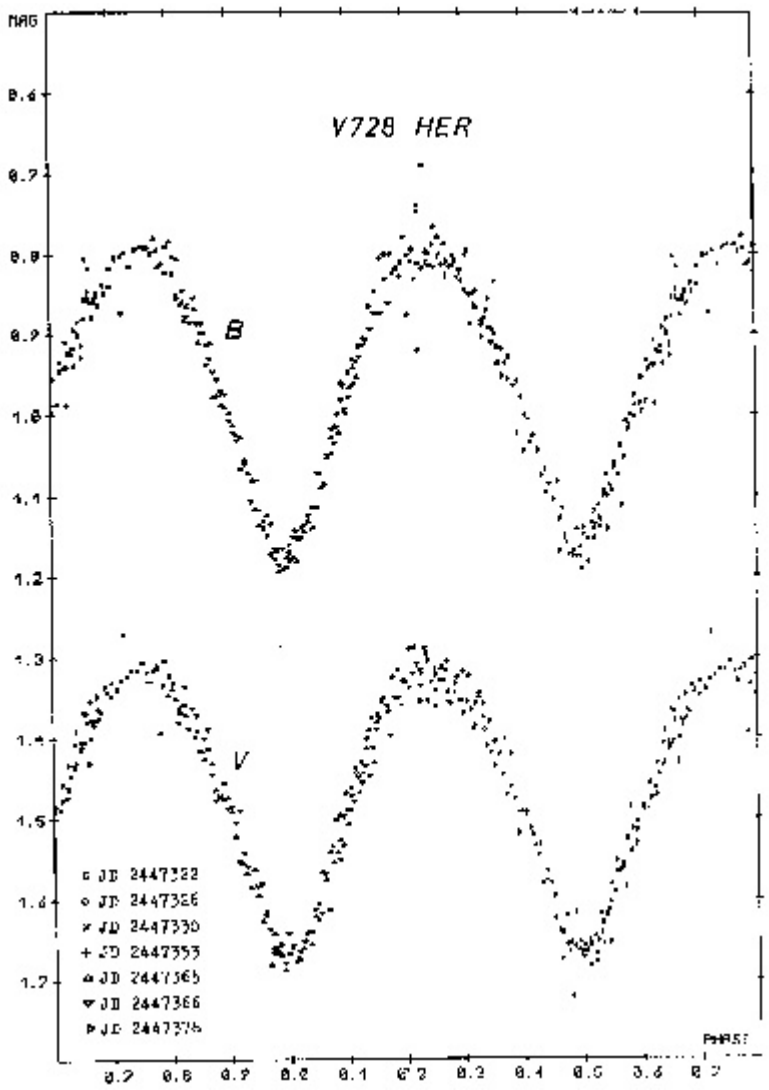
I have found one older paper about V728 Her – IBVS# 3234 by Agerer, Kamper and Lichtenknecker (BAV Mitteilungen Nr. 51), but the phased light curve in filters B and V in this paper don't shows any asymmetry in year 1988. The B and V phased light curve from IBVS# 3234 is in pic #2.

The comparison of latest light curve from 2005 and those from 1988 is shown in pic # 3.

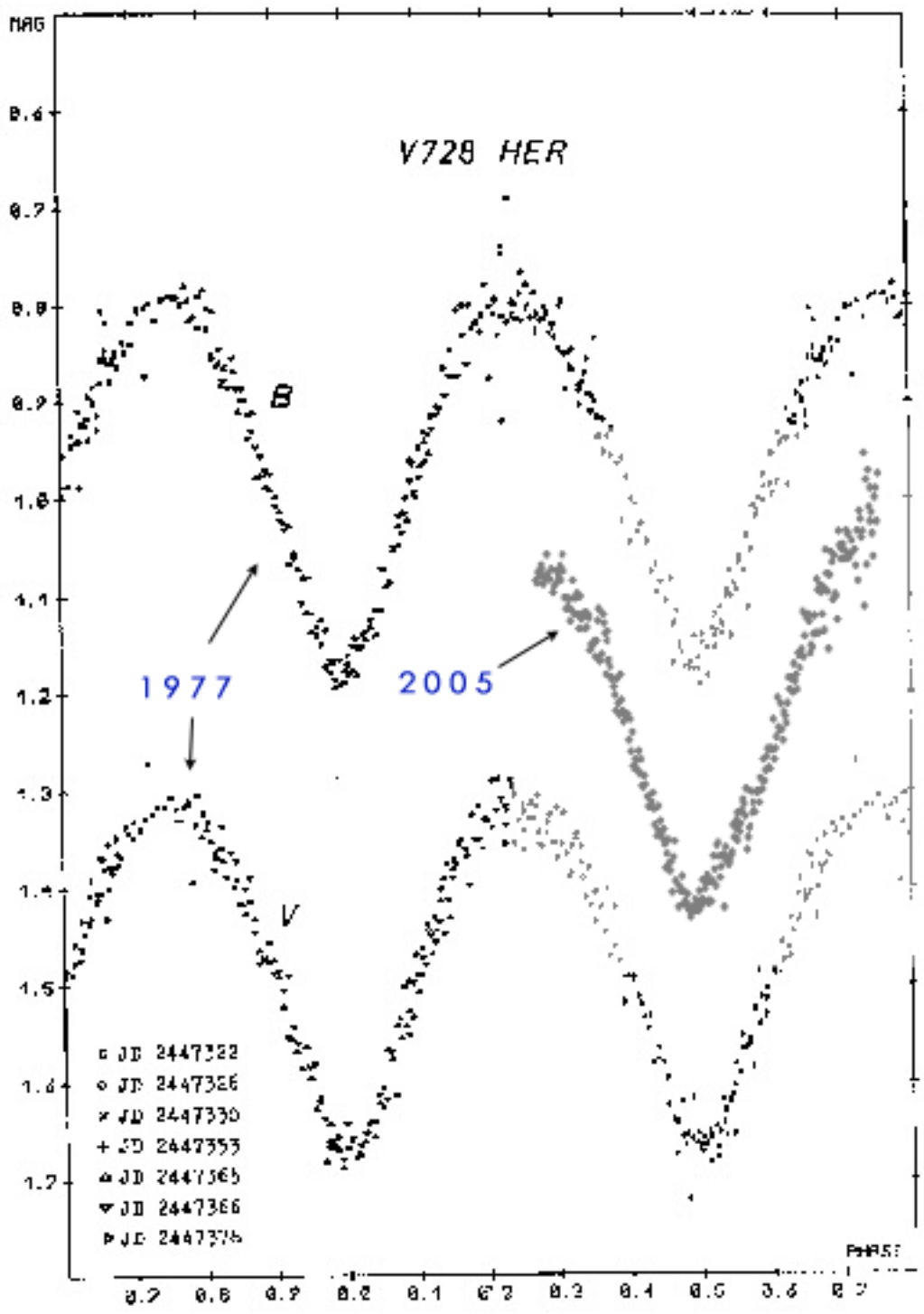
It is very probable, that the assymetry in light curve of V728 Her appears in last 17 years. Other multicolor CCD measurments and than calculated model should resolve this supposition.



Picture #1: *V 728 Her observation by Brat, ALTAN.Observatory. The photometric filter is R.*



Picture # 2: *The B and V phased light curve from year 1977 (IBVS 3234).*



Picture # 3: *Comparison of light curve obtained in 1977 and 2005. The asymmetry appears in past 28 years?*

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