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# LONG-TERM OPTICAL LIGHT VARIATIONS OF THE PECULIAR MASSIVE RUNAWAY STAR HD 108

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Name of the object:

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| $HD 108 = NSV 25 = SAO 10973 = BD + 62^{\circ}2363$   |                                |          |
|---|--------------------------------|----------|
| Equatorial coordinates:<br>$\mathbf{R.A.} = 00^{\mathrm{h}}06^{\mathrm{m}}03^{\mathrm{s}}3861$ $\mathbf{DEC.} = +63^{\circ}40'46''.763$ |                                | Equinox: |
| $\mathbf{R.A.} = 00^{\circ}06^{\circ}03.3861$   | $DEC = +63^{\circ}40'46''.763$ | 2000     |
| Observatory and telescope:  |                                |          |
| Crimean Laboratory, Sternberg Astronomical Institute, 60-cm Cassegrain telescope  |                                |          |
| Detector:   | photometer: one channel        |          |
| Filter(s):  | BVR                            |          |
| Date(s) of the observation(s): 1989.07/2006.08  |                                |          |
| Comparison star(s):   HD 134  |                                |          |
| Transformed to a standard system: No  |                                |          |
| Availability of the data:   |                                |          |
| upon request  |                                |          |

#### Remarks:

HD 108 is a well-known Ofp star which is placed in a list of runaway stars by Bekenstein & Bowers (1974) with a peculiar velocity  $V_p > 98$  km/s and the height above the Galactic plane z=80 pc (Cruz-Gonzalez et al., 1974; Stone, 1979). The star belongs to the association Cas OB5 (Humphreys, 1978). One of the interesting aspects of investigation of the star is its long-term optical variability which has been found by Barannikov (1999). According to the newest observation data the brightness of the star was constant from 1989 until 1994, then, it began to decline monotonically till now (Fig. 1). Total amplitude of brightness diminution reached  $\sim 0^{\rm m}06$ . Variations of colour indexes B-V and V-R were small (Fig. 2). This result confirms independent deductions about long-term variability of HD 108 in the optical domain (Nazé et al., 2004).

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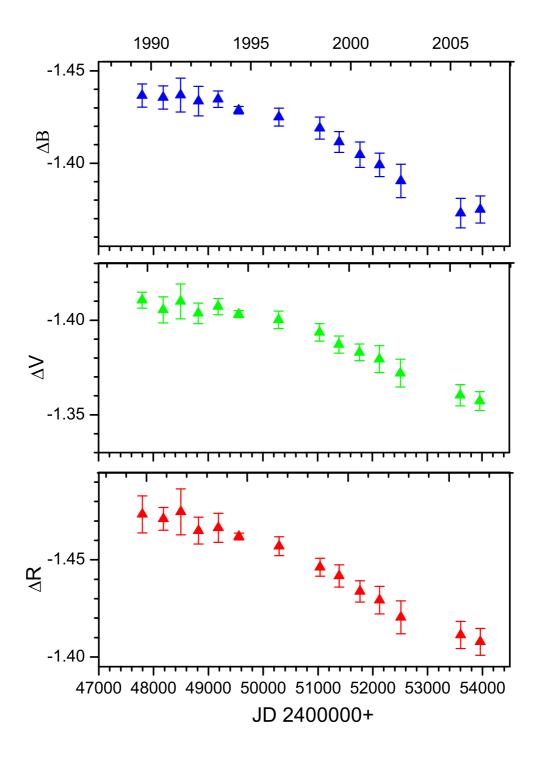


Figure 1. Long-term light curves of HD 108 in the B, V and R bands (yearly averages)

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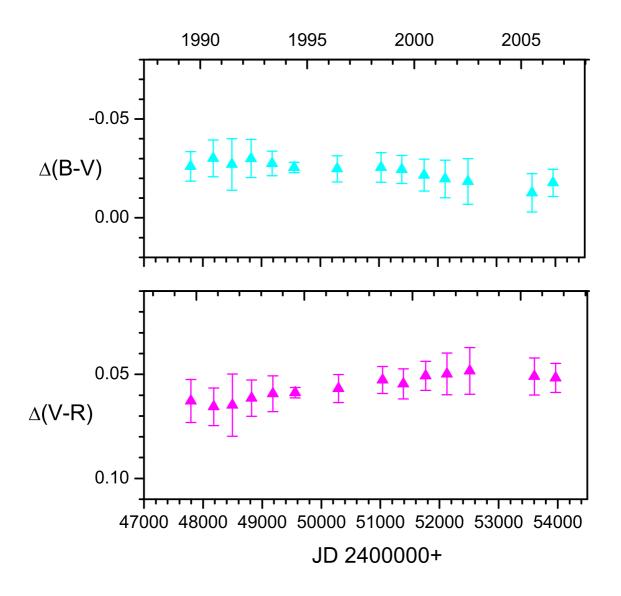


Figure 2. Long-term colour curves of HD 108 (yearly averages)

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#### Reference:

Barannikov, A.A., 1999, AstL, **25**, 169 Bekenstein, J.D., Bowers, R.L., 1974, ApJ, **190**, 653 Cruz-Gonzalez, C., Recillas-Cruz, E, Costero, R., et al., 1974, RevMexAA, **1**, 211 Humphreys, R.M., 1978, ApJSS, **38**, 309 Nazé, Y., Rauw, G., Vreux, J.-M., De Becker, M., 2004, A&A, **417**, 667 Stone, R.C., 1979, ApJ, **232**, 520