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V928 AND V929 OPHIUCHI

PASTUKHOVA, E. N.¹; SAMUS, N. N.^{1,2}

¹ Institute of Astronomy, Russian Academy of Sciences, 48, Pyatnitskaya Str., Moscow 119017, Russia,
e-mail: samus@sai.msu.ru

² Sternberg Astronomical Institute, 13, University Ave., Moscow 119992, Russia

| | |
|--|---|
| Name of the object: | |
| V928 Oph | |
| Equatorial coordinates: | Equinox: |
| R.A.= 18 ^h 40 ^m 28 ^s .93 DEC.= +12°04'01".4 | 2000 |
| Observatory and telescope: | |
| Crimean Laboratory of Sternberg Astronomical Institute, 40-cm astrograph | |
| Detector: | Photoplate |
| Filter(s): | None |
| Transformed to a standard system: | B_{pg} |
| Standard stars (field) used: | Calibrated using surrounding stars of the USNO A2.0 catalog |
| Date(s) of the observation(s): | |
| JD 2437023–2448414 | |
| Availability of the data: | |
| Upon request | |
| Type of variability: | RRAB |
| Remarks: | |
| <p>V928 Oph (S 4338) was discovered by Hoffmeister (1949) who attributed it to the long-period variable stars. His finding was later confirmed by Götz (Götz and Wenzel, 1956) who, on the base of about 150 photographic brightness estimates (JD 2425688–2434253), attributed it to Miras, with a period of 140^d and a photographic range from 13^m9 to fainter than 15^m5, and reported three times of maxima. The finding chart was published by Hoffmeister (1957), it permits a reliable identification with modern positional catalogs (Kinnunen and Skiff, 2000), and the corresponding star is by no means red. Decades ago (Richter, 1965) it was noticed that the star's colour was discrepant with its classification. Our new estimates show that the star is an RRAB variable varying between 14^m9 and 17^m0, with the light elements Max JD Hel = 2445961.289 + 0^d.497511 × E. The finding chart is shown in Fig. 1 (left panel), the light curve is presented in Fig. 2.</p> | |

| | |
|---|---|
| Name of the object: | |
| V929 Oph | |
| Equatorial coordinates: | Equinox: |
| R.A.= 18 ^h 40 ^m 56 ^s .37 DEC.= +08°17'50".7 | 2000 |
| Observatory and telescope: | |
| Crimean Laboratory of Sternberg Astronomical Institute, 40-cm astrograph | |
| Detector: | Photoplate |
| Filter(s): | None |
| Transformed to a standard system: | B_{pg} |
| Standard stars (field) used: | Calibrated using surrounding stars of the USNO A2.0 catalog |
| Date(s) of the observation(s): | |
| JD 2437023–2448414 | |
| Availability of the data: | |
| Upon request | |
| Type of variability: | LB |
| Remarks: | |
| <p>V929 Oph (S 4339) was discovered by Hoffmeister (1949). He could not determine a reliable variability type but suspected that the star was an eclipsing binary. Götz and Wenzel (1956) found the same type, with variations between photographic magnitudes 15.0 and 15.6, and determined the light elements; they considered the derived period value (2^d:3401) uncertain because of too few observations. Four times of minima were published. The finding chart was published by Hoffmeister (1957), it permits a reliable identification with modern positional catalogs (Kinnunen and Skiff, 2000). The star is red, it is associated with the IRAS Point Source Catalog object IRAS 18385+0814. Our first guess was that the two stars had been mixed up by their Sonneberg investigators. However, neither V928 Oph turned out to be eclipsing, nor V929 Oph is a Mira. Our study reveals apparently irregular variations of V929 Oph between 14^m.7 and 16^m.2. The finding chart is presented in Fig. 1 (right panel) and a fragment of the light curve is shown in Fig. 3. The reason for the wrong classification of both stars in Sonneberg publications remains unclear.</p> | |
| Acknowledgements: | |
| <p>The work of the GCVS team is supported, in part, by grants from the Russian Foundation for Basic Research (grant 02-02-16069), The Federal Scientific and Technological Program “Astronomy”, and the program of support for leading scientific schools of Russia (00-15-96627). The Digitized Sky Survey images are provided by the Hubble Space Telescope Science Institute under support from grant NAG W-2166 of the USA Government. Thanks are due to Dr. S.V. Antipin for his assistance during the preparation of the manuscript.</p> | |

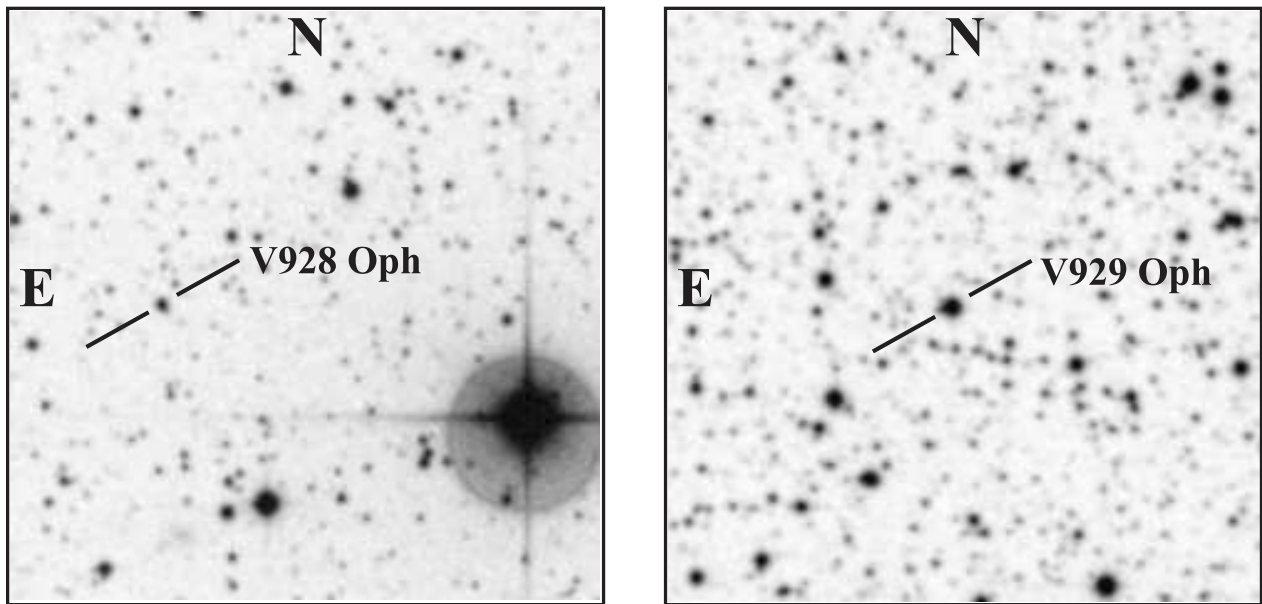


Figure 1. The finding charts for V928 Oph (left) and V929 Oph (right). Both charts show $4' \times 4'$ fields from the second Digitized Sky Survey, in blue light for V928 Oph and in red light for V929 Oph.

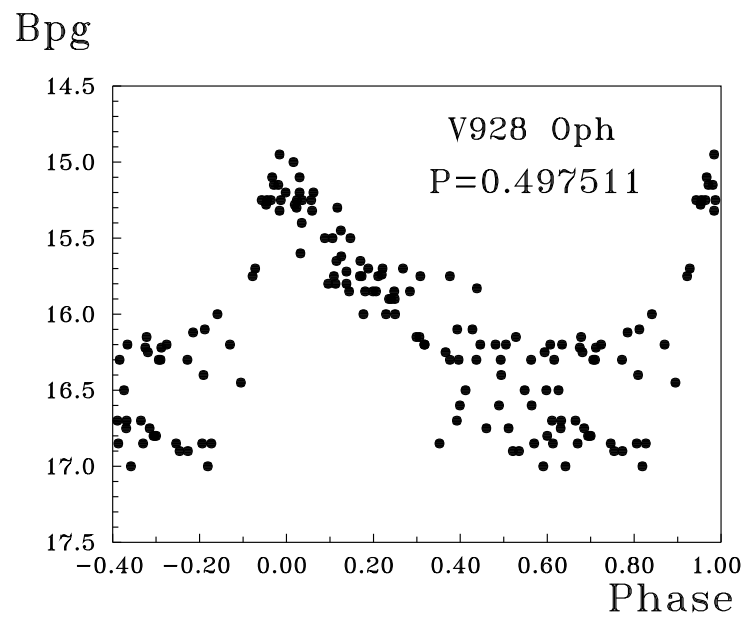


Figure 2. The light curve of V928 Oph, folded with the elements presented above.

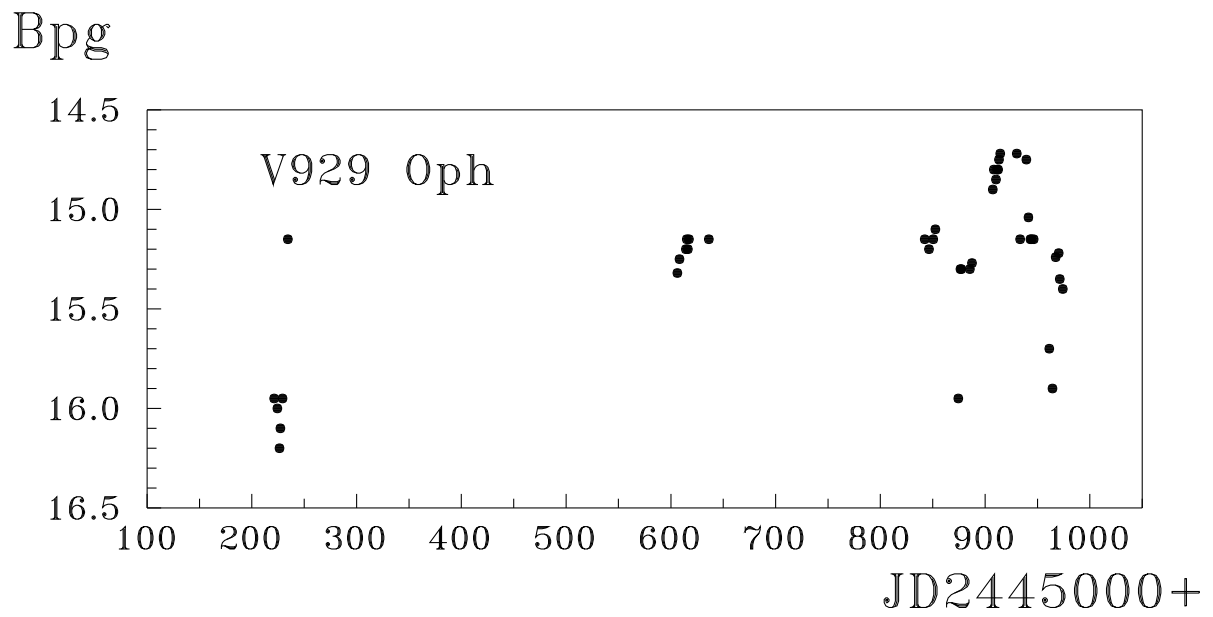


Figure 3. A fragment of the light curve of V929 Oph.

References:

- Götz, W., Wenzel, W., 1956, *Veröff. Sternw. Sonneberg*, **2**, 5
 Hoffmeister, C., 1949, *Ergänzungshefte Astron. Nachr.*, **12**, 1
 Hoffmeister, C., 1957, *Mitt. veränd. Sterne*, **Nr. 303**
 Kinnunen, T., Skiff, B.A., 2000, *IBVS*, No. 4905
 Richter, G., 1965, *Astronomische Abhandlungen. Professor Dr. Cuno Hoffmeister zum 70. Geburtstag gewidmet*, Leipzig: J.A. Barth, **S. 98**