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A NEW VARIABLE STAR IN THE VICINITY OF YY Her

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While monitoring the field of YY Her (cf. the observing campaign called up by Hric et al., 2001, and Sobotka & Hric, 2001, on behalf of the MEDUZA[†] group) we have noted that a very red star IRAS F18122+2053 ($V \approx 16.5$ mag, $V - R \approx 2.5$ mag, $R - I \approx 2.5$ mag) located at $\alpha = 18^{\text{h}}14^{\text{m}}23^{\text{s}}.15$, $\delta = +20^{\circ}54'28''.6$ (J2000) varies its brightness. The observations were carried out using the 0.4 m ($f = 1.75$ m) Newtonian telescope of Nicholas Copernicus Observatory and Planetarium in Brno and the 0.3 m ($f = 1.2$ m) Newtonian telescope of the Vyškov Observatory both equipped with SBIG ST-7 CCD camera and VR_CIC filters. Frames (typically two to six in each band per night) were processed using MUNIDOS 2.2 (Hroch, Novák and Král, 2001). Although the field stars were measured by Henden and Munari (2001), we did not attempt to put our measurements on the standard system due to the redness of the star. Instead, GSC 01579 00432 ($V = 12^{\text{m}}040$; Henden and Munari, 2001) was chosen as the comparison star for differential photometry. Its constancy was checked by using several field stars. The spectral response differences between observatories were removed by a zero-point shift. Weighted averages of CCD observations made on the same night with the same filter and at one observatory were made. Magnitude errors served as weights. The data are available through IBVS website as 5362-t1.txt.

In Figure 1 we present R and I differential light curves of IRAS F18122+2053. Data in V band confirm the variability, but are not plotted due to their low quality.

Averaged observations were submitted to a PDM period searching algorithm (Widjaja, 1996) resulting a period of 98 days. The colour of the star and the amplitude and period of the light variations indicate that, IRAS F18122+2053 is most probably a semiregular variable star.

[†]<http://www.meduza.info>

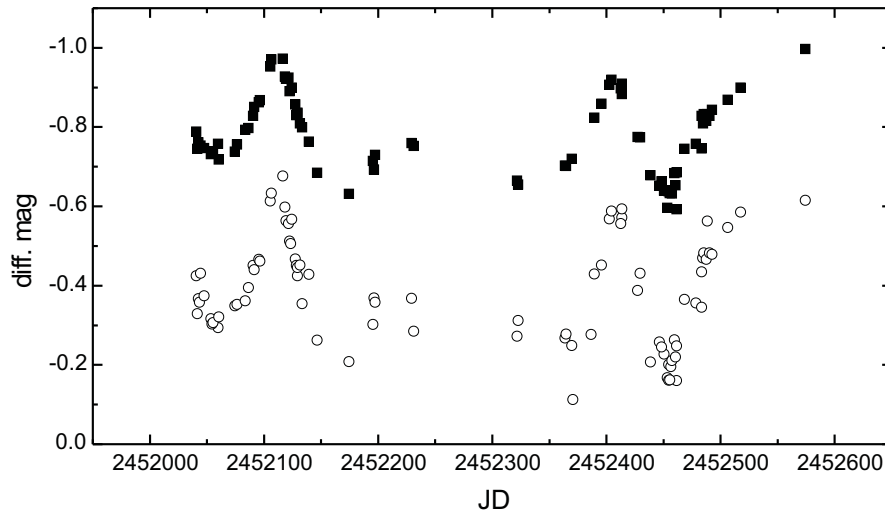


Figure 1. Light curves of IRAS F18122+2053. Open circles and filled squares are measurements in R and I filters, respectively. The datasets were shifted for plot clarity.

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This work has made use of the SIMBAD database, operated at CDS, Strasbourg, France. The NASA ADS Abstract Service was used to access data and references.

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