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V949 SAGITTARII IS NOT A NOVA BUT A RED VARIABLE

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This report describes the non-cataclysmic variability of V949 Sgr, nova in 1914.

In the course of variable star survey based on the MISAO Project observations, the variability of GSC 6870.1383 = USNO-A2.0 0600.36532866 = IRAS 18379-2812, R.A. = 18^h41^m03^s.101, Decl. = -28°09'35"61 (2000.0), 12.0 mag(*R*), 18.8 mag(*B*), was discovered from unfiltered CCD images taken by Kadota and named as MisV0508. It is within only 12 arcsec from the cataloged position of V949 Sgr, a nova in 1914.

In the course of observations of the field of V949 Sgr for recovery with the University of Iowa Robotic Telescope by Schmeer, this object was discovered as a 12 mag star and the slow variability was also confirmed.

Table 1: Photometry

JD	Mag	Observer	Instrument	Comparison Star Catalog
2448412	12.2	Kato	I-band CCD	USNO-A1.0 (Kato's <i>V</i> mag)
2451375.087	11.5	Kadota	Unfiltered CCD	USNO-A1.0 (Kato's <i>V</i> mag)
2451429.628	12.0	Schmeer	Unfiltered CCD	USNO-A2.0 (<i>R</i>)
2451444.943	13.3	Kadota	Unfiltered CCD	USNO-A1.0 (Kato's <i>V</i> mag)
2451453.607	12.4	Schmeer	Unfiltered CCD	USNO-A2.0 (<i>R</i>)
2451461.601	12.6	Schmeer	Unfiltered CCD	USNO-A2.0 (<i>R</i>)
2451477.622	13.0	Schmeer	Unfiltered CCD	USNO-A2.0 (<i>R</i>)
2451490.599	13.2	Schmeer	Unfiltered CCD	USNO-A2.0 (<i>R</i>)
2451501.571	13.3	Schmeer	Unfiltered CCD	USNO-A2.0 (<i>R</i>)

Table 1 shows our photometry. Although the magnitude system is different, it evidently shows the slow variability in 1999. It was also bright on the I-band CCD images taken on June 4, 1991 at Ouda Station, Kyoto University. These facts imply that the recent brightening is not an outburst of a recurrent nova, but a semiregular variability.

This object is relatively faint on Duerbeck's finding chart from a UK Schmidt blue-green plate (Duerbeck 1987), but bright on the DSS image at 2446934.278 (JD). The difference between R and B magnitude data in the USNO-A2.0 catalog, taken in 1980 August and 1976 May respectively, also implies that this object is very red or variable. Therefore, this object is probably a non-cataclysmic red variable star.

V949 Sgr is a nova discovered by Innes, Johannesburg Observatory, in 1914 (Duerbeck 1987). But it was only found on the three plates taken between July 16 and 25. No spectroscopic observations were obtained in order to confirm V949 Sgr as a nova. In addition, the peak photographic magnitude was 15.7 in 1914, which well coincides with our observations.

As a conclusion, our variable star and V949 Sgr are the same object, and V949 Sgr is not a nova, but a non-cataclysmic red variable, probably a Mira- or semiregular type.

References:

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<http://www.kusastro.kyoto-u.ac.jp/vsnet/Mail/vsnet-chat/msg00700.html>