

[IAUC] CBET 999: 20070713 : V919 SAGITTARI

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Electronic Telegram No. 999

Central Bureau for Astronomical Telegrams
INTERNATIONAL ASTRONOMICAL UNION

M.S. 18, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.
[IAUSUBS en CFA.HARVARD.EDU](mailto:IAUSUBS@CFA.HARVARD.EDU) or FAX 617-495-7231 (subscriptions)

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V919 SAGITTARI

U. Munari, A. Siviero, and H. Navasardyan, Istituto Nazionale di Astrofisica, Padova Astronomical Observatory; and F. Castellani, M. Bortolotti, P. Valisa, and V. Luppi, ANS ("Asiago Novae and Symbiotic stars") collaboration, report that the symbiotic star V919 Sgr is currently undergoing a strong outburst. Measured magnitudes: July 11.41 UT, B = 11.873, B-V = +0.681, V-R_c = +0.705, V-I_c = +1.621; July 12.40, B = 11.866, B-V = +0.677, V-R_c = +0.697, V-I_c = +1.611. The corresponding mean values during quiescence were B = 14.15, B-V = +1.22, V-I_c = +2.80. Therefore the star rose by 2.3 mag in the B band and became much bluer. Various low- and high-resolution, absolutely fluxed optical spectra of V919 Sgr have been obtained around July 12.9 with the 1.82-m telescope at Asiago and the 0.6-m telescope of the Schiapparelli Observatory in Varese. Compared with quiescence spectra, the He II 468.6-nm emission line has disappeared, and the intensity of [O III] 500.7-nm is reduced. The remaining lines in emission are the Balmer series and He I. The integrated flux of H_{alpha}, H_{beta}, and He I 587.6-nm emission lines are $1.6 \times 10^{(-11)}$, $2.0 \times 10^{(-12)}$, and $6.3 \times 10^{(-13)}$ erg cm⁽⁻²⁾ s⁽⁻¹⁾, respectively. The H_{alpha} emission line profile does not show a P-Cyg absorption component and it is characterized by a central reversal with a FWHM of 105 km/s, blueshifted by 95 km/s with respect to the peak of the emission component. The FWHM of the H_{alpha} emission component is 170 km/s. The TiO absorption bands of the M giant visible in the red part of the spectrum appear significantly weaker than in quiescence due to the veiling effect of the bright blue continuum originating from the outbursting white dwarf companion. Overall, the spectroscopic behavior is reminiscent of the one displayed by V919 Sgr in 1991, at the time its outburst then (cf. IAUC 5317; Ivison et al. 1993, A.Ap. 277, 510), when it attained a similar peak brightness and colors. The mean magnitudes and colors for quiescence are averaged from various sources, all of them strictly agreeing (see Munari and Jurdana-Sepic 2001, A.Ap. 370, 503), and Munari et al. have continued monitoring the object over the last couple of years. In 2006, V919 Sgr was still in quiescence; when monitoring was resumed in May 2007, the variable was already rising in brightness; on May 19, it was at B = 13.40 (thus already 0.75 mag brighter than typical quiescence). Since then, it has been increasing linearly to its current

brightness.

E. O. Waagen, American Association of Variable Star Observers (AAVSO), reports that M. Templeton, AAVSO, has investigated the ASAS-3 V-band data available for V919 Sgr, finding that between 2001 April and 2004 October 7, the star fluctuated between V about 13.1 and 12.4, gradually brightening, and was at $V = 12.74 \pm 0.03$ on 2004 Oct. 7.021 UT. No further ASAS-3 observations exist until 2006 Feb. 28.401, when the star was brighter at $V = 12.00 \pm 0.03$. ASAS-3 observations continued until 2006 June 8.229, when V919 Sgr was at $V = 11.86 \pm 0.04$. AAVSO visual magnitude estimates of V919 Sgr: 1991 Aug. 8.6, 11.0 (M. Koshiro, Suwa-shi, Nagano-ken, Japan); 1993 Sept. 11.85, 11.7 (A. Pereira, Linda-a-Velha, Portugal); 1997 Nov. 18.7, 13.2 (L. Monard, Tiegerpoort, South Africa); (Monard); 1998 Apr. 25.1, 13.0: (Monard); May 18.9, 13.3 (Monard); 31.9, 13.4 (Monard); June 19.9, 13.6 (Monard); 27.8, 13.5 (Monard); July 14.8, 13.6 (Monard); 19.8, 13.8 (Monard); 27.8, 13.8 (Monard); Sept. 19.8, 13.7 (Monard); Oct. 18.7, 13.6 (Monard); 1999 Mar. 1.1, 13.5 (Monard); 26.1, 13.4 (Monard); Apr. 13.0, 13.4 (Monard); 24.0, 13.6 (Monard); May 10.0, 13.5 (Monard); June 11.9, 13.4 (Monard); 22.9, 13.3 (Monard); July 3.8, 13.3 (Monard); 12.76, 13.2 (Monard); Aug. 14.7, 13.2 (Monard); 28.73, 13.2 (Monard); Oct. 6.7, 13.2 (Monard); 2000 Mar. 10.1, 12.9 (Monard); 31.1, 13.0 (Monard); Apr. 7.0, 13.0 (Monard); May 6.1, 13.0 (Monard); 25.9, 13.2 (Monard); June 5.98, 13.1 (Monard); July 5.82, 13.1 (Monard); 20.79, 13.2 (Monard); Aug. 25.74, 13.4 (Monard); Sept. 17.73, 13.5 (Monard); 27.72, 13.4 (Monard); Oct. 29.72, 13.6 (Monard); 2001 Mar. 2.08, 13.4 (Monard); Apr. 3.04, 13.2 (Monard); 23.02, 13.2 (Monard); May 18.87, 13.3 (Monard); July 13.82, 13.5 (Monard); 26.74, 13.4 (Monard); Aug. 20.74, 13.5 (Monard); Oct. 7.73, 13.6 (Monard); 2002 June 11.715, [13.0 (A. Jones, Nelson, New Zealand); 2006 July 22.442, 12.1 (Jones). V919 Sgr was not seen by Monard during 1996 July 10.8-1997 July 6.8, with limiting visual magnitudes then ranging from 12.1 to 12.6. S. O'Connor (Sandys/Somerset, Bermuda) reported $V = 13.59$ using a CCD camera on 2005 July 4.271.

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(CBET 999)

Daniel W. E. Green

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