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A new outburst of the symbiotic star V919 Sgr, again 15 yrs past the previous one

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on **25 Jul 2022; 15:44 UT** Credential Certification: U. Munari (ulisse.munari@oapd.inaf.it)

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V919 Sgr is a bright symbiotic star, of the burning type, which is largely ignored by observers. Its first known outburst in 1991-92 was described by Ivison et al. (1993, A&A 277, 510), with a second one in 2007 reported by Munari et al. (2007, CBET 999). V919 Sgr is currently again in outburst, as also noted by B. Monard in vsnet-alert N. 26878. The three recorded outburst are separated by similar ~15 yrs intervals.

We have been intensively observing V919 Sgr for the past 17 years with various ANS Collaboration telescopes (primarely ID 0300, 0600, 0601, 0606, and 0703). Maximum brightness during the 2007 event was attained on Aug 13.860 at B=11.211, V=10.689, B-V=0.522, V-R=0.556, and V-I=1.308. The following 15 years have been characterized by a continued decline with superimposed several rebrightenings, with the faintest level attained on 2020 Aug 10.003 at B=14.455, V=13.260, B-V=1.173, V-R=1.365, and V-I=2.958. Since then V919 Sgr has been rising again in brightness, initially with superimposed some up-and-downs, and then steadly during 2022. Our latest measurements provide:

UT	В	V	B-V	V-R	V-I
2022 Jul 06.999	11.440	10.797	0.630	0.630	1.488
2022 Jul 24.883	11.280	10.696	0.584	0.524	1.312

still on the rise, but approaching the values observed at the peak of the 2007 event.

Low resolution spectra of V919 Sgr have been obtained around 2022 Jul 24.9 UT with the Stroncone 50cm (3865-7660 Ang, 2.8 Ang/pix) and the Asiago 1.22m telescopes (3300-7880 Ang, 2.3 Ang/pix). They are best described as a smooth blue continuum (particularly around the Balmer discontinuity) overwhelming the absorption spectrum of the M giant, with TiO bands becoming noticeable only longword of 5800 Ang, in agreement with the marked blueing of photometric colors. The emission line spectrum is now composed by solely the Balmer lower terms (alpha, beta, and just a hint of gamma), and a very weak FeII multiplet 42, with all other lines gone. In particular, HeII, HeI, [OIII] and higher Balmer lines, which are rather conspicuous at lower system brightness, disappeared completely, in a perfect textbook example of a "cool"-type outburst (as opposed to the "hot"-type which is

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characterized by an increase of the ionization degree and the overall intensity of emission lines). The conditions are slightly cooler than for the 2007 event, when spectra at maximum brightness still showed some weak signature of [OIII] and HeI 5876, and apparently closer to those of 1991-92.

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