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MAXI J1807+132 is fading in both X-rays and optical wavelengths

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MAXI J1807+132 is fading in both X-rays and optical wavelengths

ATel #10224; *M. Armas Padilla (IAC-Tenerife), R. Wijnands, N. Degenaar (U. of Amsterdam), T. Munoz-Darias, F. Jimenez-Ibarra, D. Mata Sanchez, J. Casares (IAC-Tenerife), P. A. Charles (Southampton)*
 on 29 Mar 2017; 13:46 UT
 Credential Certification: [Rudy Wijnands \(radwijnands@gmail.com\)](mailto:radwijnands@gmail.com)

Subjects: Optical, Ultra-Violet, X-ray, Request for Observations, Black Hole, Neutron Star, Transient

Referred to by ATel #: [10245](#)

We have analyzed a new Swift observation (performed on 06:44UT on March 29, 2017) of the recently discovered X-ray transient MAXI J1807+132 [ATEL #[10208](#), #[10215](#), #[10216](#), #[10217](#), #[10221](#), #[10222](#), #[10223](#)].

The average spectrum obtained during this observation has been fitted with a power-law model affected by absorption. The hydrogen column has been fixed to the value of $N_H \sim 2.3 \times 10^{21} \text{ cm}^{-2}$ obtained during the analysis of the previous Swift-XRT observation [ATel #[10216](#)]. The photon index is 2.5 ± 0.2 and the resulting absorbed (unabsorbed) 0.3-10 keV flux is $(9.2 \pm 0.1) \times 10^{-12}$ ($(1.9 \pm 0.1) \times 10^{-11}$) $\text{ergs cm}^{-2} \text{ s}^{-1}$.

This represent a $\sim 75\%$ drop in X-ray flux (0.3 - 10 keV) with respect to the previous Swift-XRT observation (2 days ago; ATel #[10216](#)). Similarly, the UVOT data show also a flux drop (the below magnitudes are given in the AB system):

March 27	March 29
$v > 17.56$	$v > 18.02$
$b = 18.1 \pm 0.3$	$b = 18.6 \pm 0.2$
$u = 18.43 \pm 0.19$	$u = 18.76 \pm 0.16$
$uvw1 = 18.56 \pm 0.13$	$uvw1 = 19.10 \pm 0.13$
$uvm2 = 18.72 \pm 0.13$	$uvm2 = 19.61 \pm 0.14$
$uvw2 = 18.75 \pm 0.09$	$uvw2 = 19.59 \pm 0.11$

The above results suggest that the source may be decaying to quiescence after a very short outburst. If confirmed this behavior is reminiscent of the X-ray transient MAXI J1957+032 (Mata

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Sanchez et al. 2017, arXiv:1701.03381) and that of the accreting millisecond X-ray pulsar NGC 6440 X-2 (Altamirano et al. 2010, ApJ, 712, L58; Heinke et al. 2010, ApJ, 714, 894). Both those sources have shown recurrent, very short (~week long) outbursts. However, we urge more X-ray observations of MAXI J1807+132 to investigate the further evolution of the outburst of this source.

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