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Swift follow-up of ASSASN-18fs

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Swift follow-up of ASSASN-18fs

ATel #11469; *A. S. Parikh (U. of Amsterdam), R. Wijnands (U. of Amsterdam)*

on 23 Mar 2018; 11:51 UT

Credential Certification: *Aastha Parikh (A.S.Parikh@uva.nl)*

Related

11469	Swift follow-up of ASSASN-18fs
11452	Spectroscopic classification of ASASSN-18fs as a CV
11442	ASAS-SN Discovery of a Possible Galactic Nova ASASSN-18fs

Subjects: Optical, Ultra-Violet, X-ray, Cataclysmic Variable, Transient

The ongoing All Sky Automated Survey for SuperNovae (ASAS-SN) reported discovery of a new transient ASSASN-18fs on 2018 March 19. It was detected at ~ 13.2 mag in the V band (ATel #11442). The source was not detected at $V > 17.6$ mag on 2018 March 17. ASAS-SN has monitored this part of the sky since February 2016 and no previous activity from this source has been detected. ASSASN-18fs was classified as dwarf nova outburst using follow-up spectroscopic observations (ATel #11452).

We report on the follow-up Swift observations of the source carried out on 2018 March 22, < 3 days after the source was discovered. All six UV and optical filters on board the Swift/UVOT were used and the source was observed for ~ 720 s (in total, across all six filters). The source is clearly detected in all the filters. The magnitudes in the Swift/UVOT AB photometric system from the various filters, along with the 1-sigma errors, are shown below. The source has dropped by ~ 1 mag in the V band since its reported detection ~ 3 days ago.

Filter	Mag
V	14.15 +/- 0.04
B	13.96 +/- 0.03
U	13.88 +/- 0.03
W1	13.92 +/- 0.03
M2	14.07 +/- 0.03
W2	13.86 +/- 0.03

We also examined the Swift/XRT data and found that the source was barely detected at ~ 0.01 c/s. The spectrum extracted from this data had only ~ 10 counts and was not very constraining. Fitting it with an absorbed power-law model (with the N_{H} fixed at $\sim 1.8 \times 10^{21}$ /cm²; determined by the N_{H} along the line of sight to the source) resulted in a power-law index of ~ 2 . The unabsorbed (0.5 - 10 keV) flux was 1.2×10^{-12} erg/cm²/s.

The optical/UV broadband spectral shape as well as the very low X-ray count rate supports the dwarf nova nature of the source.

We thank the Swift PI Brad Cenko and the Swift team for the rapid execution of this ToO observation.

ATel #11442 Stanek et al. 2018

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