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Recently, on 30 July 2019, Russell et al., (2019) reported an optical brightening of the transiently accreting millisecond X-ray pulsar SAX J1808.4-3658 but with, at that point, no associated X-ray brightening. This optical brightening was thought to be indicative of an imminent outburst.

Since then the source has continued to be monitored using ground-based observatories in the optical and using the Swift in the X-rays. New observations examined by Goodwin at al., (2019) show that the source has very recently further brightened in the i' band (between 4 and 6 August 2019) and in the X-rays on 6 August 2019, suggesting the onset of the anticipated new accretion outburst.

We have examined the recent observations of SAX J1808.4-3658 carried out by the UVOT on board Swift to determine if the source also showed a brightening in the UV emission. We used the Level 2 data products and determined the source brightness using the uvotsource tool. A circular source region, centred on the source position, having a radius 6 arcsec was used. A circular background region having a radius of 6 arcsec was placed on a source free location on the CCD. We found that the X-ray and optical brightening was accompanied by a UV brightening. This rise can be conclusively seen in the UVW2 band: 20.1 mag on 6 August (upper limit <20.9 mag on 3 August, with similar upper limits during the earlier observations) and marginally in the UVW1 band: 20.3 mag on 5 August (upper limit <20.4 mag on 1 August and during the earlier

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observations). This UV brightening supports the notion that the source may be exhibiting renewed outburst activity, its first since 2015.

We have two additional Swift UVOT observations approved (before the source is Moon constrained on 13 August) to further track the rise of the current outburst in all three UV bands per observation. We thank the Swift PI Brad Cenko and his designate B. Sbarufatti for approving these observations.

Russell et al., (2019) ATel #12964
Goodwin at al., (2019) ATel #12993

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