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Title:	Swift monitoring of a Very Faint X-ray Transient Swift J1357.2-0933 during its 2019 outburst
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Abstract:	This thesis aims to study the 2019 outburst of Swift J1357.2-0933. This was the third outburst detected from a confirmed black hole source, belonging to a class of Very faint X-ray transients. We have proposed, obtained and used the data of this source from the NASA's Swift observatory for our work. These proposed Swift observations were part of the multi-wavelength campaign (Simultaneous Multiwavelength Astronomy Research in Transients NETwork; SmartNet) of this source. We have analyzed the data obtained with X-ray telescope (XRT) and Ultra-Violet/Optical Telescope (UVOT) aboard Swift, with the aim to compare its emission properties with that observed during its previous outbursts in 2011 and 2017. Our Swift-XRT results showed that 2019 outburst of Swift J1357.2-0933 lasted for about 83 days and during which the maximum X-ray luminosity observed was about $1.62 \times 10^{33} \text{ erg s}^{-1}$. This value of X-ray luminosity indicated that it might be the faintest of two previous outbursts seen in this source or maybe we have missed out the peak of the 2019 outburst. The results obtained after performing X-ray spectroscopy indicated the presence of significant softening during this outburst. We also observed a correlation between X-ray and optical/UV emission. This trend was quite similar to that observed during its previous outbursts. In future, we wish to investigate this source further in X-rays using data from NICER observatory.
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