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Title:	X-ray observations of 1ES 1959+650 in its high-activity state in 2016–2017 with AstroSat and Swift.
Authors:	Singh, Kulinder Pal (/jspui/browse?type=author&value=Singh%2C+Kulinder+Pal)
Keywords:	AstroSat Swift
Issue Date:	2021
Publisher:	IOP Publishing
Citation:	Astrophysical Journal, 918(2).
Abstract:	We present a comprehensive multifrequency study of the high-frequency-peaked BL Lac object 1ES 1959+650 using data from various facilities during the period 2016–2017, including X-ray data from AstroSat and Swift during the historically high X-ray flux state of the source observed until 2021 February. The unprecedented quality of X-ray data from high-cadence monitoring with AstroSat during 2016–2017 enables us to establish a detailed description of X-ray flares in 1ES 1959+650. The synchrotron peak shifts significantly between different flux states, in a manner consistent with a geometric (changing Doppler factor) interpretation. A time-dependent leptonic diffusive shock acceleration and radiation transfer model is used to reproduce the spectral energy distributions and X-ray light curves, to provide insight into the particle acceleration during the major activity periods observed in 2016 and 2017. The extensive data of Swift-XRT from 2015 December to 2021 February (exp. = 411.3 ks) reveals a positive correlation between flux and peak position.
Description:	Only IISER Mohali authors are available in the record.
URI:	<a href="https://doi.org/10.3847/1538-4357/ac01d1">https://doi.org/10.3847/1538-4357/ac01d1</a> ( <a href="https://doi.org/10.3847/1538-4357/ac01d1">https://doi.org/10.3847/1538-4357/ac01d1</a> ) <a href="http://hdl.handle.net/123456789/5214">http://hdl.handle.net/123456789/5214</a> ( <a href="http://hdl.handle.net/123456789/5214">http://hdl.handle.net/123456789/5214</a> )
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