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Title:	Multi-wavelength analysis of the NGC 3227 group using AstrSat-UVIT
Authors:	<a href="#">Singh, Jivjot</a>
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Abstract:	Star-Forming Galaxies, SFGs are astrophysical systems wherein the gas is transformed into stars through gravitational collapse and fusion reactions. The High-Energy photons that leave the newly formed stars are absorbed by gas and dust, producing strong UV emission lines. I present my analysis in this thesis where using the data from AstroSat, I investigate the properties of one such SFG, namely NGC 3227 in the multi-wavelength regime. The motivation behind this work is to study Star Formation regions facilitated by the Ultra- Violet Imaging Telescope (UVIT). Firstly, I have derived the full-field magnitude distributions and correlations, Point Spread Function (PSF) fitting and color-color plots by matching UVIT-FUV sources in the F148W filter with Galex-NUV and SDSS-Optical sources to build a complete catalogue. Secondly, I have combined data from UVIT-FUV with Galex-NUV, SDSS-Optical, WISE and IRAC to model the Spectral Energy Distribution (SED) of NGC 3227 from UV to IR and extensively studied the Star Formation Rates (SFR) in the knots structure of NGC 3227 in UVIT's F148W filter.
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