



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)

/ Publications of IISER Mohali (/jspui/handle/123456789/4)

/ Research Articles (/jspui/handle/123456789/9)


Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/4971>

Title:	Deepest far ultraviolet view of a central field in the Coma cluster by AstroSat UVIT
Authors:	Mahajan, Smriti (/jspui/browse?type=author&value=Mahajan%2C+Smriti) Singh, Kulinder Pal (/jspui/browse?type=author&value=Singh%2C+Kulinder+Pal) Pradeep, Kala G. (/jspui/browse?type=author&value=Pradeep%2C+Kala+G.)
Keywords:	ultraviolet field in the Coma
Issue Date:	2022
Publisher:	Cambridge University Press
Citation:	Publications of the Astronomical Society of Australia, 39(1), e048.
Abstract:	We present analysis of the far ultraviolet (FUV) emission of sources in the central region of the Coma cluster ($z=0.023$) using the data taken by the UVIT aboard the multi-wavelength satellite mission AstroSat. We find a good correlation between the UVIT FUV flux and the fluxes in both wavebands of the Galex mission, for the common sources. We detect stars and galaxies, amongst which the brightest ($r \leq 17$ mag) galaxies in the field of view are mostly members of the Coma cluster. We also detect three quasars ($z=0.38, 0.51, 2.31$), one of which is likely the farthest object observed by the UVIT so far. In almost all the optical and UV colour-colour and colour-magnitude planes explored in this work, the Coma galaxies, other galaxies and bright stars could be separately identified, but the fainter stars and quasars often coincide with the faint galaxies. We have also investigated galaxies with unusual FUV morphology which are likely to be galaxies experiencing ram-pressure stripping in the cluster. Amongst others, two confirmed cluster members which were not investigated in the literature earlier, have been found to show unusual FUV emission. All the distorted sources are likely to have fallen into the cluster recently, and hence have not virialised yet. A subset of our data have optical spectroscopic information available from the archives. For these sources ($\sim 10\%$ of the sample), we find that 17 galaxies identify as star-forming, 18 as composite and 13 as host galaxies for active galactic nuclei, respectively on the emission-line diagnostic diagram.
Description:	Only IISER Mohali authors are available in the record.
URI:	https://doi.org/10.1017/pasa.2022.45 (https://doi.org/10.1017/pasa.2022.45) http://hdl.handle.net/123456789/4971 (http://hdl.handle.net/123456789/4971)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.docx (/jspui/bitstream/123456789/4971/1/Need%20to%20add%20pdf.docx)		9.74 kB	Microsoft Word XML	View/Open (/jspui/bitstream/123456789/4971/1/Need%20to%20add%20pdf.docx)

Show full item record (</jspui/handle/123456789/4971?mode=full>)

 (</jspui/handle/123456789/4971/statistics>)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.