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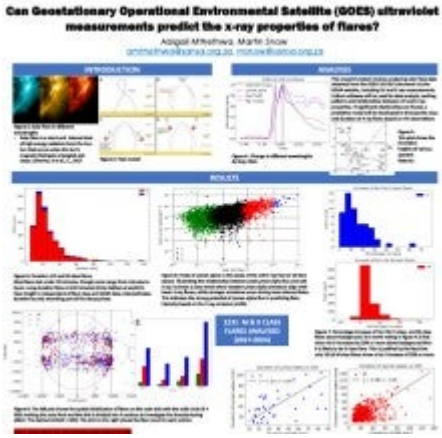
Solar flares are powerful phenomena with significant implications for space weather. Understanding their characteristics and predicting their behaviour is crucial for mitigating potential risks and ensuring the safety of space-based operations. This research project aims to investigate whether ultraviolet (UV) measurements obtained from the Geostationary Operational Environmental Satellite (GOES) can be used to predict the X-ray properties of solar flares. By analysing high-cadence UV solar spectral irradiance data from the GOES Extreme Ultraviolet and X-ray Sensors (EXIS) instrument, the study seeks to establish a reliable relationship between UV observations and X-ray flare behaviour. The ultimate goal is to develop a model that enables real-time prediction and interpretation of solar flares, empowering space weather forecasters to make accurate forecasts and take necessary precautions.



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