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Web based HXMT data analysis platform

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The HXMT satellite is China's first space astronomy satellite. It is a space-based X-ray telescope capable of broadband and large-field X-ray sky surveys, as well as the study of high-energy celestial objects such as black holes and neutron stars, focusing on short-term temporal variations and broadband energy spectra. It also serves as a highly sensitive all-sky monitor for gamma-ray bursts. The HXMT User Data Analysis Software (HXMTDAS) is primarily designed to analyze pointed observational data from the HXMT satellite, including on-axis and off-axis observations, to produce energy spectra, light curves, and energy response files.

This report presents an interactive data analysis platform based on web technology and HXMTDAS. Using containers, virtualisation technology and JupyterLab, this platform allows users to perform interactive data analysis via a web browser. The platform is out-of-the-box and operating system independent, eliminating the need for complex software installations and environment configuration steps. It is particularly user-friendly and can be used for educational purposes or for training new users.

Significance

References

Experiment context, if any

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Session Classification: Poster session with coffee break

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