A Microservice-Based Portal for X-ray Transient and Variable Sources

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ABSTRACT

Modern soft X-ray observatories can yield unique insights into time domain astrophysics, and a huge amount of information is stored - and largely unexploited - in data archives. Like a treasure-hunt, the EXTraS project is harvesting the hitherto unexplored temporal domain information buried in the serendipitous data collected by the European Photon Imaging Camera (EPIC) instrument onboard the ESA XMM-Newton, in 16 years of observations. Part of this analysis is performed through a dedicated science gateway, the EXTraS portal, whose initial release is the subject of this paper. In particular the focus is on its light software architecture, based on the use of microservices, providing a better resilience and more decoupled development lifecycle with respect to the approaches followed by the most used science gateway toolkits.

FULL PAPER

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