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Workflow interoperability for telescope operations and time domain astronomy

Content

I will present our work on improving interoperability of scientific workflows, supporting operations of astronomical data centers, started with INTEGRAL observatory ground segment activities, and extended to several other missions. We are adapting traditional data analysis processes into cloud-native environment and incorporating RDF Knowledge Graphs to annotate, publish, and discover data and live workflows. The Knowledge Graphs also consume diverse human-written and automated publications and drive automated data and workflow transformation and composition for the needs of time domain astronomy and telescope operations. Our platform implements end-to-end (publication-experiment-publication) scientific process, while maintaining semantically rich data knowledge-driven data model, facilitating data and workflow interoperability in linked data paradigm. Our development is fully open source, available for deployment on premises or in public cloud by any interested party.

Preferred talk time

no preference at this time

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Track Classification: Applications; Data Model; Grid and Web Services; Registry; Semantics; Knowledge Discovery in Databases; Operations; Time Domain

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