

Advanced archival data analysis tools

Wednesday 19 June 2019 11:55 (15 minutes)

As we are approaching the era of big data in astronomy, tools to address the challenges of database cross-correlation and automated advanced image product generation are needed. Here we present two such tools - KAFE and TOAST. KAFE, the Key-analysis Automated FITS-images Explorer, is a web-based FITS image post-processing analysis interface designed to be applicable in the radio to sub-mm wavelength domain. KAFE was developed to complement selected FITS files with metadata based on a uniform image analysis approach as well as to provide advanced image analysis diagnostics in a fully automated way. The Telescope Observational Astronomical Sample Tool (TOAST) is a data visualisation platform whose purpose is the taxonomy of multi-wavelength telescope archive contents alongside with the exploration of the physical parameter space probed by existing observations through catalogue cross-matching. TOAST addresses both galactic and extragalactic databases and can be used twofold: astronomical archive/database content visualisation as well as user-specific data sample generation.

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Session Classification: Session 4b: After Science: Interoperability - Chair: R. Smareglia