

CASDA DAL Implementations

CSIRO Information Management & Technology

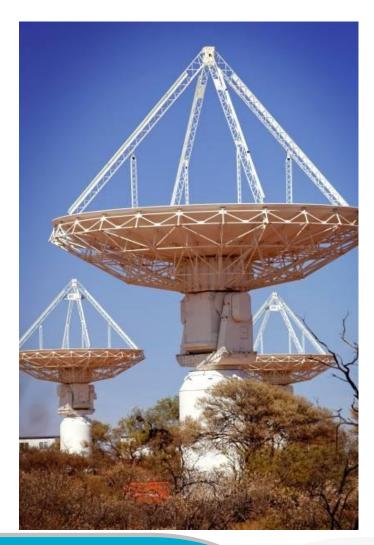
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Australian SKA Pathfinder (ASKAP)



- 36×12 m dishes
- Max baseline = 6 km
- Phased array feeds 188 elements
- 30 deg² FOV
- 700 1800 MHz
- 300 MHz Bandwidth
- 16,384 channels
- Early science commenced





ASKAP Data Products

- Calibrated visibility data files (CASA)
- Image cubes (FITS)
- Single plane images (FITS)
- Moment Maps (FITS)
- Spectra (FITS)
- Catalogues (VOTable)
- Daily Volume: 16TB, ~60,000 files
- Annual Volume: 5 PB



Releases

- V1.3 June 2016
 - Cutout web interface
 - VO compliance improvements
 - SODA validator
- V1.4 October 2016
 - Add spectra, moment maps,
- V1.5 December 2016
 - Predefined spectra support including SSAP discovery
- v1.6 March 2016
 - Generated spectra support plus SSAP retrieval,
 - Upload of arbitrary images and spectra derived data products



SSAP Support

- Based on our SIA2 implementation
 - Database view to implement spectral DM
 - Class for each parameter
- No Datalink
- Included DALI endpoints
- Should SSA be updated to refer to DALI, SimpleDALRegExt?
- Client: Splat-VO



SODA – Spectra Generation

- Added support for generating spectra
- Process:
 - 1. Sub-cube cutout
 - 2. Flattens that into a 1D spectrum
- Montage for subcube
- Python script for flattening into a spectrum
- Uses an internal id to switch from subcube to spectrum action - no local SODA triple yet



Another Deployment





Future

- MOCs for surveys
- More use of HiPS
- TAP upload support
- Examples endpoints
- Time series e.g. Pulsars, FRBs



Summary

- Open Source
 - https://github.com/csiro-rds/casda data access
- Operational and being expanded



Thank you

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