Focus Session Summary

Mark Allen

CoSADIE Project

Science Priority Areas

Multi-dimensional Data

Radio astronomy, Integral Field Spectroscopy, high energy, polarization, simulation, data mining datasets + ...

Time Domain Astronomy

Time Series, light curves, transient event reports, +...

- Need to ensure that these are accessible and useable within the VO

Focus Sessions

- To engage projects and surveys that produce and use multi-d and time domain data
- Invited presentations / Panel Discussions
  - Multi-dimensional Data - Tues morning
  - Time Domain Astronomy - Weds morning
- Part of IVOA process - requirements, use cases, feedback from implementation. Follow-up technical WG sessions.

Goals

- Summarize data being produced now ✓
- Identify the metadata needed to discover, access, analyse these data ✓
- Status of VO standards in these areas ✓
- Identify implementation hurdles ✓
- Identify desirable features in standards, services, tools ✓

Slides to be linked on the schedule page

Tuesday May 14 2013				
5	09:00–09:10	gHS	Focus session on multi-dimensional data - Introduction	Mark Allen (Session Chair)
	09:10–09:30	gHS	CyberSKA	Russ Taylor
	09:30–09:50	gHS	ALMA, JVLA, VLBA	Brian Glendenning
	09:50–10:10	gHS	CALIFA	Mariya Lyubenova
	10:10–10:30	gHS	MUSE	Thomas Martinsson
Wednesday May 15 2013				
9	09:00–09:10	gHS	Focus session on time domain astronomy - Introduction	Enrique Solano (Session Chair)
	09:10–09:30	gHS	CoRoT, Kepler time series	Jonas Debosscher
	09:30–09:50	gHS	Designs and Requirements for Time Domain Data in LSST	Mario Juric (LSST)
	09:50–10:10	gHS	ASKAP/VAST	Paul Hancock
	10:10–10:30	gHS	LOFAR Transients	John Swinbank
	10:30–11:00	***Break***		

Diverse perspectives from projects

- VO protocols obvious for new instruments
- VO never made a priority ... effort on VO would be waste
- VO alongside dedicated web access
- VO not in thinking when designing project
- Important for managers that it is cheap
- Access to data using formats, protocols, and conventions widely adopted by user community

VO already in use/plans

- ALMA - using OpenCADC TAP, voview, will use SAMP, ObsCore, SIAPv2
- CyberSKA - VO access option via CADC
- CALIFA - data access via TAP and SSA
- MUSE - VO publishing via AstroWise
- ASKAP - all data through VO protocols
- CoRoT - avail from SVO, Kepler - avail from MAST
- LOFAR - VOEvent broker

- Identify the metadata needed to discover, access, analyse these data

Radio - commonly 4-6D RA, Dec, freq/vel, pol, (time)

Event lists: Time stamp, (x,y) -> (ra,dec), energy (freq, wave)

IFU - 3D: ra, dec, wave

Polarization + auxillary data/models

IFU footprints - fibre size/pos/filling

PSF

Calibration, quality flags

Time

period

Data count statistics

ephemeris - position

spectral type, classification

+ ...

- Identify implementation hurdles
  - description/access to cubes
  - query by time parameters
  - expense

} in progress

- mismatch of expectations/approach
  - implementation of ‘standards’ cf. ‘libraries’
  - "*Rough consensus and running code*"
  - Java and Python...
  - Importance of ...

- Two reference implementations!

- Identify desirable features in standards, services, tools
  - Visualizer for large cubes (remote viz.)
  - Analysis apps for time series
  - python (-wrapped) implementations of TAP, ADQL, VOTable, SIAP

Format of Sessions

- Presentations / Panel
- Effort to address VO aspects, and frankness in presentations much appreciated!
- Panel discussions lively
  - *Should we include specific discussion Qs?*
  - *Was the balance of presentations/panel OK?*