State of the IVOA

Christophe Arviset
Chair of the IVOA Executive Committee

IVOA Interop Meeting Opening Session
Sydney, Australia 30/06/2015

Great to have IVOA interop in Australia !

Great to have **I**VOA interop in Australia !

Brian Schmidt

Nobel Laureate

Inspiring talk at
ADASS !

Standards Matter!

- Astronomy has done better than most at keeping to standards.

- This allows everyone to write software to the standard - It worked for the web, its worked for Astronomy

- But we need to be vigilant! WCS systems as an example…

Brian Schmidt, Nobel Laureate
Big Data and Big Astronomy
ADASS 2015, Sydney

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Astronomy is a Leader

- Astronomy (along with High Energy Physics) - thanks to this community - has done a better job integrating data and making it accessible across the our discipline than any other community

- FITS - ADS - VO data formats

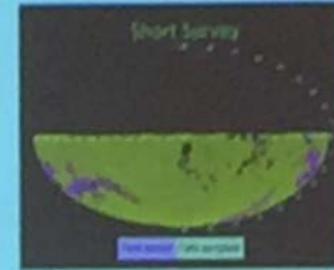- Others learn and follow - and this leadership helps keep Astronomy relevant

Brian Schmidt, Nobel Laureate
Big Data and Big Astronomy
ADASS 2015, Sydney

SkyMapper Database

- SDSS-depth 5-year survey 20,000 sq deg
- Volume
  - 300,000 images
  - 5 Giga-rows of measurements × 100 features
  - Tables with images, measurements, distilled objects

- Query functions & IVOA standards
  - ADQL catalogue query — Table Access Protocol TAP
  - Cone search — Cone search
  - Image cutouts — Simple Image Access Protocol SIAP

- Service discoverable in TopCat
- Web access wrapped around backend functions

All Sky VO, Australia
ADASS 2015, Sydney

Great to have **I**VOA interop in Australia ! Engage national VO project
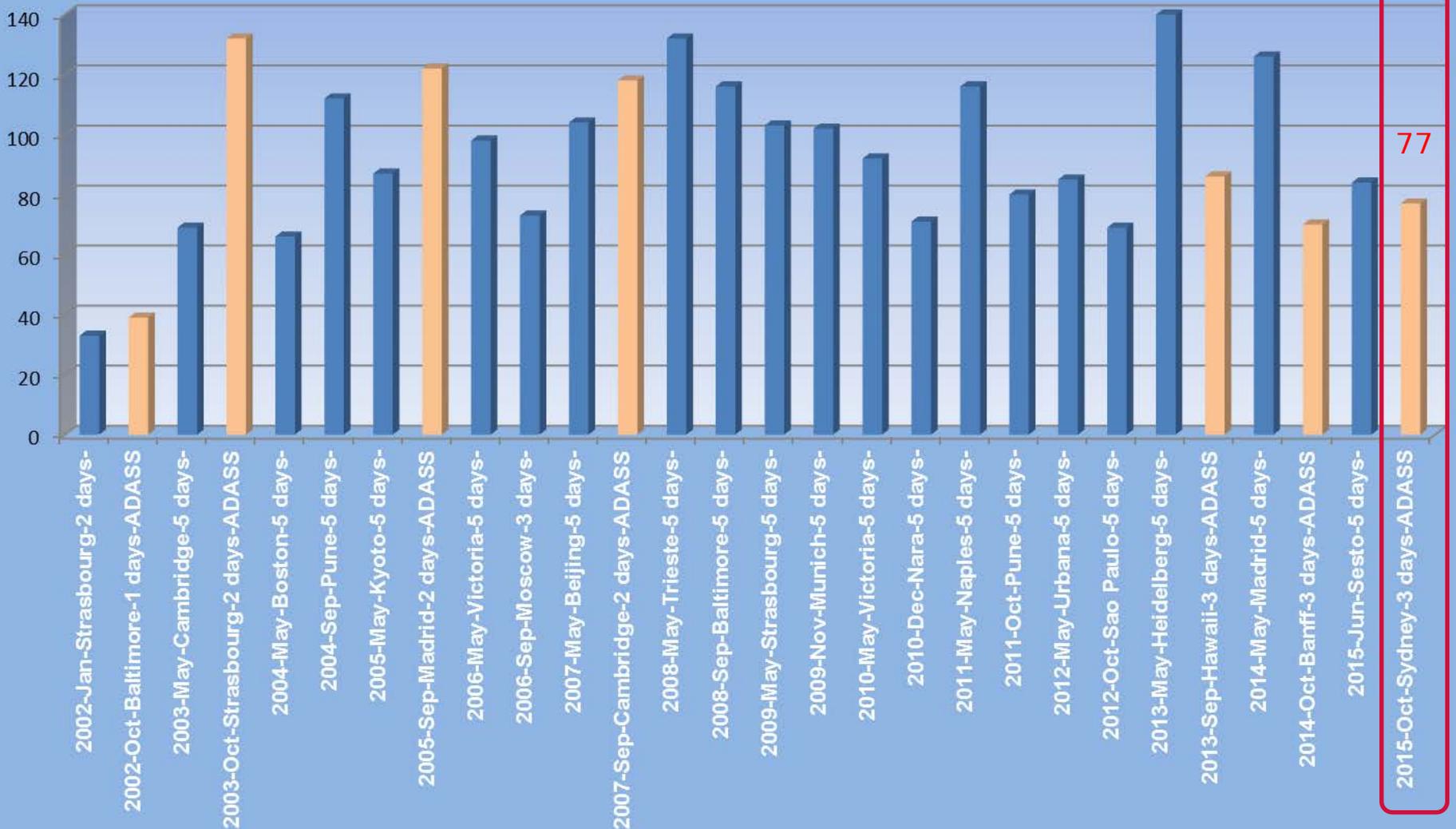

Name	Institution
Dr. Amr Hassan	Swinburne University of Technology
Dr. Jessica Chapman	CSIRO Astronomy and Space Science
Mr. James Dempsey	CSIRO
Mr. Andreas Wicenec	ICRAR
Dr. Yeshe Fenner	Astronomy Australia Ltd
Dr. Slava Kitaeff	Pawsey Supercomputing Centre
Dr. Simon O'Toole	Australian Astronomical Observatory
Dr. Katrina Sealey	Australian Astronomical Observatory
Dr. Duncan Galloway	Monash University
Dr. Andy Green	Australian Astronomical Observatory
Ms. Lloyd Harischandra	Australian Astronomical Observatory
Mr. Kehe Wang	Space Weather Services, Bureau of Meteorology, Australia
Dr. Matthew Whiting	CSIRO

Participants per Interop

Number of Participants per IVOA Interoperability Meeting

IVOA standards

1. As responses to science cases, some standards really needs to become Recommendations
   a. SIA 2.0
   b. SpectrumDM 2.0
   c. Reference implementations ? Service Validators ?

2. Open Discussion about IVOA Standards Process
   a. Need to be faster and more agile
   b. Need to produce validated and implementable Standards

The VO: A Powerful Tool for Global Astronomy - 1

1. ADASS 2015 Talk
   a. Co-authored by many data centres and projects
   b. Bring a realistic view of the VO and IVOA today

2. IVOA successes
   a. International collaboration, VO applications, interoperable data collections, re-use by other communities
   b. VO built-in data archive infrastructure

3. IVOA Problem Areas
   a. Unrealistic initial expectations, wrong perception
   b. VO standards seen as complex, long time to elaborate, difficult to implement

VO is a data management interoperability infrastructure

rather than an astronomy killer "application"

The VO: A Powerful Tool for Global Astronomy - 2

1. Engagement of big projects
2. Facilitate and improve VO take-up by Data Centres

Need to make big projects and data centres "participants" not "customers"

1. How to show the VO is in use ? Which success metrics ?
2. VO Services Operations, reliability of the VO ecosystem

Is the VO success to be invisible ?

The main goal of the VO is:

- to make access to and use of data easier

- to facilitate science and to enable new science

Next Interops

1. Agreement at Exec to keep ADASS and (northern) Fall Interop paired
   a. Preferably Interop _after_ ADASS so many discussions can take place prior to the interop

2. Northern Spring 2016 – Cape Town, South Africa
   a. May 08 -13 2016

3. Northern Fall 2016 - Trieste, Italy (after ADASS)
   a. Oct 21-23 2016

4. Still TBC
   a. Northern Spring 2017 – China
   b. Northern Fall 2017 - Chile

ADASS XXVI
TRIESTE • ITALY
16-20 OCTOBER 2016

WWW.ADASS2016.INAF.IT

Let's now go with it !

1. Thanks to Kylie, Andreas for organizing this interop !

2. Thanks to Pat and Matthew for putting the programme together

3. Looking forward for a fruitful and constructive week ...

Program for October 2015 Interop in Sydney, Australia

Preliminary program as of 2015-10-25:

Session	Time	Room	Session	Notes
Thursday Oct 29 2014				
	16:30-18:00	Ballroom at Rydges (after ADASS)	IVOA Exec Meeting	Exec + WG/IG Chairs/Vice-chairs
Friday Oct 30 2015				
1	09:00–09:15	Seminar Room	Welcome and Logistics	Andreas Wicenec
	09:15–09:35	Seminar Room	State of the IVOA	Christophe Arviset
	09:35-09:45	Seminar Room	State of the TCG	Patrick Dowler (for Matthew Graham)
	09:45–10:15	Seminar Room	Charge to Working Groups	WG/IG Chairs
	10:15-10:30	Seminar Room	Science Priorities	Mark Allen
	10:30–11:00	*Break*		
2	11:00–12:30	Seminar Room	Apps 1	
		Board Room	DAL 1	
	12:30–14:00	*Lunch*		
3	14:00–15:30	Seminar Room	Focus: Standards and Processes	
	15:30 –16:00	*Break*		
4	16:00–17:30	Seminar Room	Ops 1	
		Board Room	DM 1	
Saturday Oct 31 2015				
5	09:00–9:30	Seminar Room	Plenary: AusVO	Andreas Wicenec
	09:30-10:30	Seminar Room	DCP	DOIs - Overview
	10:30–11:00	*Break*		
6	11:00–12:30	Seminar Room	DM 2	
		Board Room	Registry	
	12:30–14:00	*Lunch*		
7	14:00–15:30	Seminar Room	GWS 1	
		Board Room	DAL 2	
	15:30 –16:00	*Break*		
8	16:00–17:30	Seminar Room	Apps 2	
		Board Room	GWS 2	