WP4 – DADI Data Access, Discovery and Interoperability

Françoise Genova et l'équipe WP4

ASTERICS

- Astronomy ESFRI Research Infrastructure Cluster
- Horizon2020 project Call September 2014 – Topic : Implementation of cross-cutting solutions for clusters of ESFRI research infrastructures
- Focus: ESFRIs - SKA, CTA, KM3Net, close links with

  E-ELT, plus EGO (new messengers)
- 22 partners, 15 M€, including 4.5 M€ for WP4, 4 years, began 1 May 2015, coordinated by ASTRON (M. Garrett)
- Major collaboration Astronomy-Astrophysics/Astroparticle physics
- Multi-wavelength/multi-messenger
- https://www.asterics2020.eu/home

WP4 high level objectives

Make the ESFRI and pathfinder project data available for discovery and usage by the whole astronomical community, interoperable in a homogeneous international framework, and accessible with a set of common tools.

European VO teams AND ESFRI/pathfinder teams are involved in *ALL* activities.

Fully aligned with the IVOA work and current priorities

- DADI (WP4) - Francoise Genova (CNRS-OAS):

4.5 M€

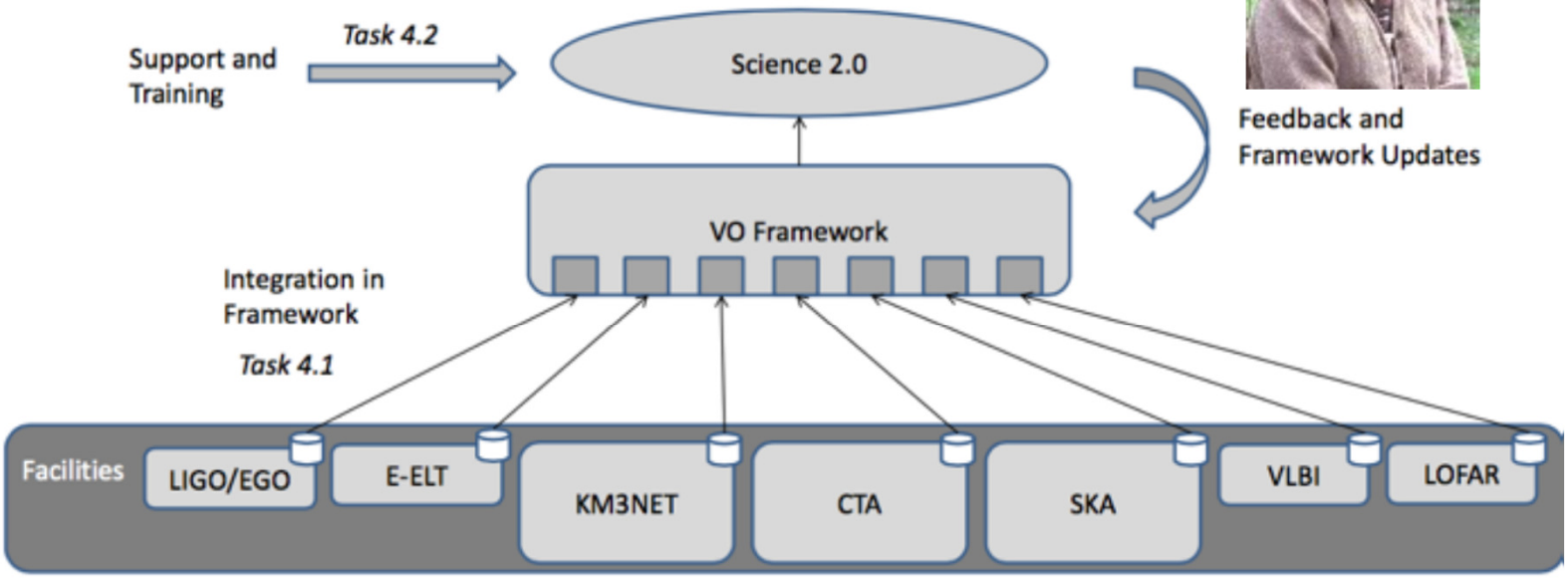
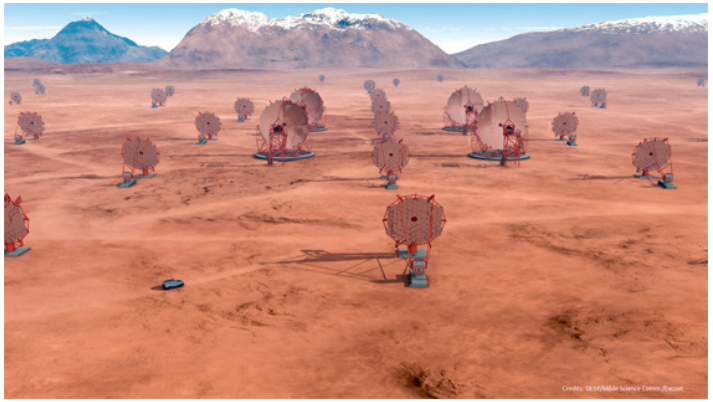
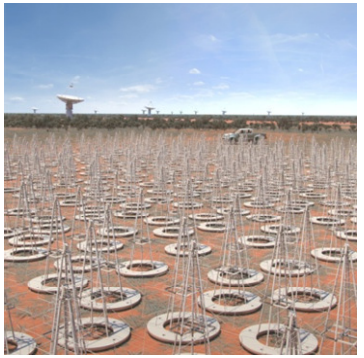


Figure 6: The ESFRI projects integrated in the VO Framework offers users uniform access.

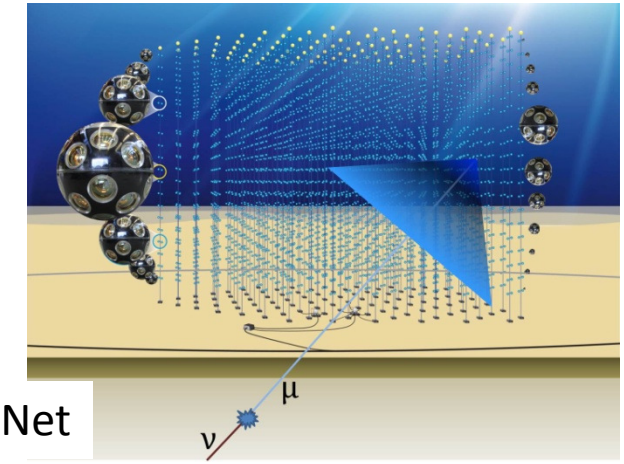
Who is involved



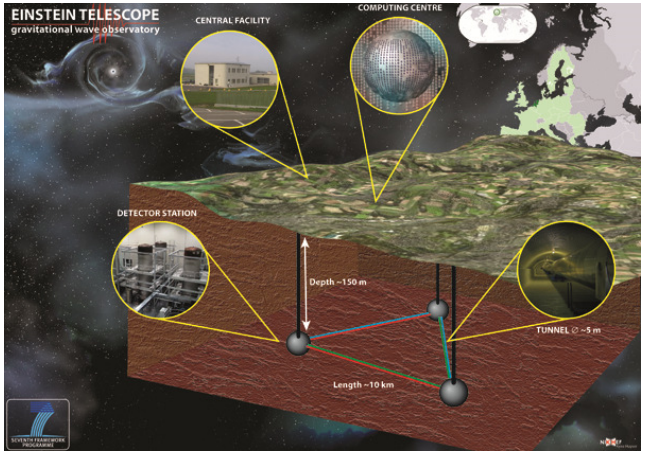
CTA



SKA



KM3Net



Who's involved

- Euro-VO partners, i.e. VO initiatives from France (CNRS/OAS- CDS+UNISTRA), Germany (UHEI), Italy (INAF), Spain (INTA),UK (UEDIN)
- Representatives of ESFRI and pathfinders
  - CTA (CNRS/LUTH + OBSPAR)
  - EGO/VIRGO and ET (CNRS/APC)
  - KM3Net (CNRS/CPPM)
  - SKA (ASTRON)
- ESO is associated to the project
- ESA (ESAC) is working in close collaboration with Euro-VO

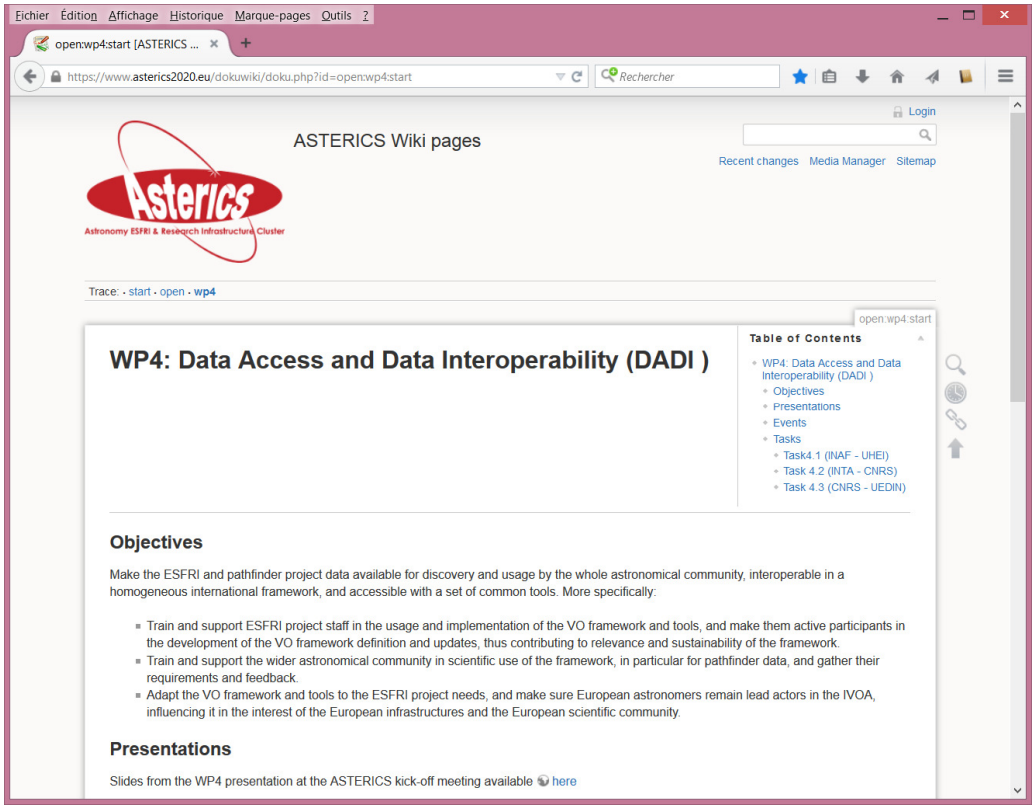
Targets

Three Tasks in support to three complementary targets

- Task 4.1: Support to astronomy ESFRI facilities, their pathfinders and other infrastructures of pan-European interest for implementation of their data in the VO framework (INAF/UHEI)
- Task 4.2: Support to the astronomical community (CNRS-CDS/INTA)
- Task 4.3: Updates of the VO framework from feedback and requirements (CNRS-CDS/UEDIN)

DADI Web site

https://www.asterics2020.eu/dokuwiki/doku.php?id=open:wp4:start



Activities during the period

- DADI is structured around the organisation of Workshops (Deliverables) and participation in external events (IVOA meetings, which are Milestones, plus ADASS, RDA)
- Intense activity during the first 9 months
  - to create DADI community
  - to introduce newcomers to the VO
  - to share information on the partners' expertise, activities and needs
  - to begin to identify topics of common interest and collaboration paths
  - to perform technological work on the initial priorities, in particular multi-dimensional data (IVOA standards) – defining standards and agreeing on them takes time!

Deliverables

- One deliverable/task during the period
- Deliverables are Workshops, the « text deliverable» is provided several weeks afterwards

#	Title	Lead partner	Due date	Actual date and location
D4.1	First DADI Technology Forum	CNRS/CDS (Task 4.3)	September 2015	Held 17-18 Sept. Strasbourg Del. 3 Nov.
D4.2	FIRST ASTERICS European School	INTA (Task 4.2)	November 2015	Held 15-17 Dec. Madrid Del. being finalized
D4.3	First ESFRI Forum & Training Event	INAF (Task 4.1)	November 2015	Held 3-4 Dec. Trieste Del. Being finalized

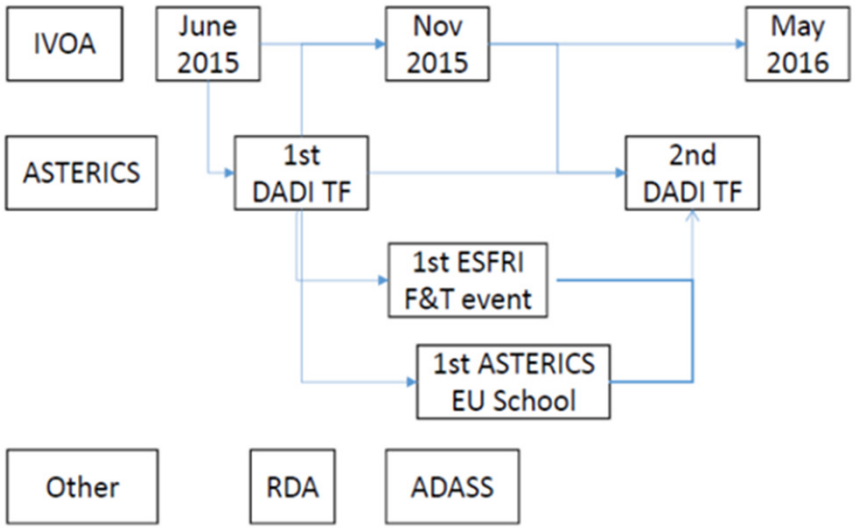
Milestones and other relevant meetings

- The IVOA Interoperability meetings are milestones

M2	IVOA Sesto (Italy)	14-19 June 2015
M5	IVOA Sydney (Australia)	30 October-1 November 2015

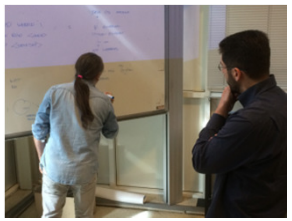
- Other relevant meetings
  - ADASS XXVth Meeting, Sydney, 25-29 November 2015
  - RDA Sixth Plenary, Paris (France), 23-25 October 2015

DADI events in a nutshell



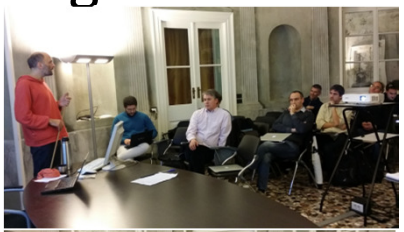
D4.1 First Technology Forum

- 17-18 September 2015, Strasbourg
- 34 participants (except KM3Net-VLVvT), including ESO and ESA
- DADI kick-off
  - Information about ASTERICS and DADI
  - Presentation of the VO Framework by the IVOA Chair (C. Arviset, ESA)
  - Presentation of partners' expertise and on-going work
  - « Hack-a-thon » i.e. discussions by small groups on topics identified on the spot
- Outcomes
  - List of topics of interest for the ESFRI Forum D4.3
  - Preparation of Sydney IVOA meeting
  - Status of multi-D standards
  - HiPS strategy



D4.3 First ESFRI Forum & Training Event

- 3-4 December 2015, Trieste
- 25 participants, all DADI partners and ESO
- Centered on the ESFRI and pathfinder requirements
- Organised around the topics identified during the Tech Forum
  - Multi-dimensional data access
  - Time domain data access (<> WP5)
  - VO registry of resources
  - Authentication & Autorisation (<>WP3)
- VO standards and tools already in use
- Discussion on specific support activities initiated with the ESFRIs and pathfinders



D4.2 First DADI School

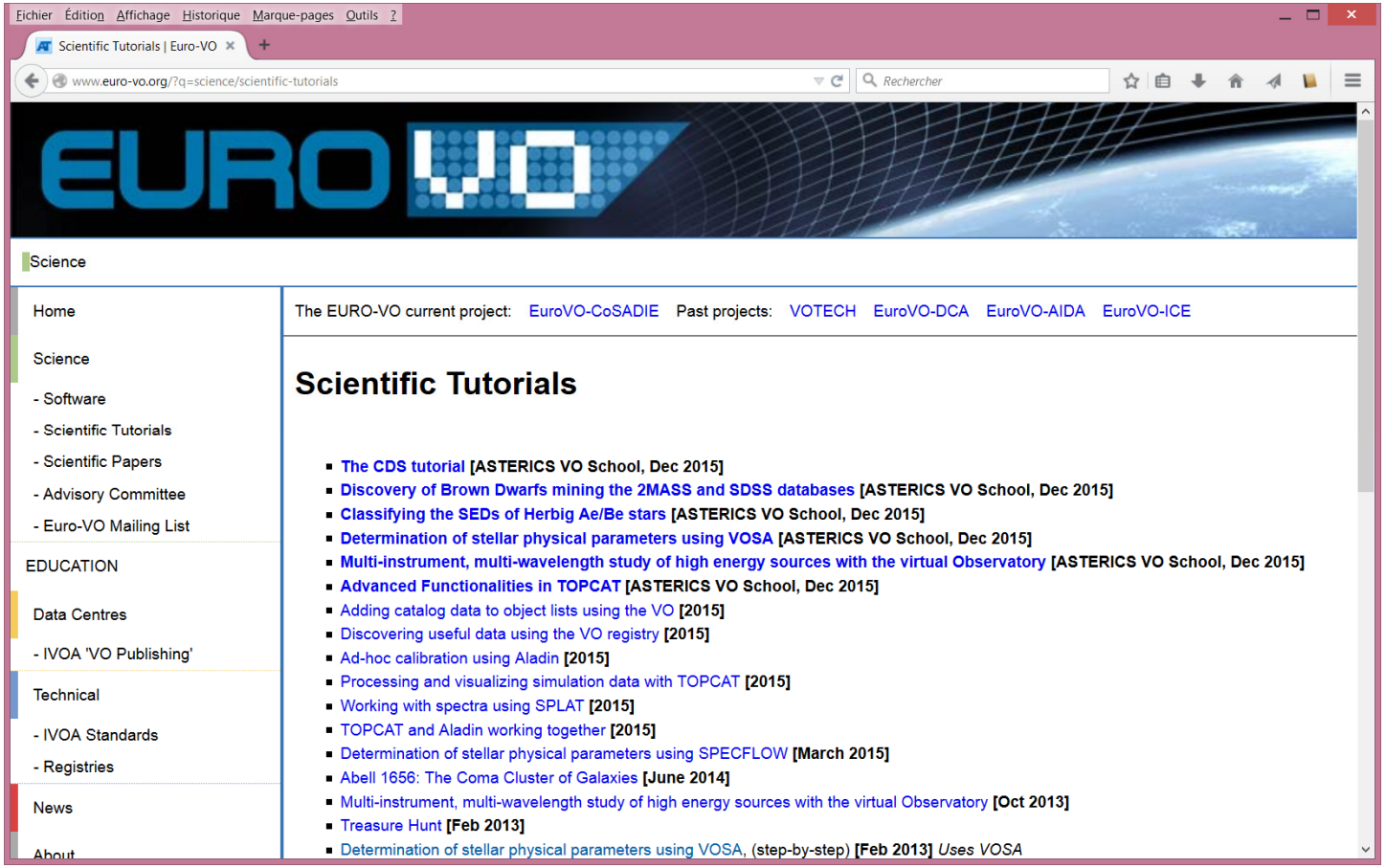
- 15-17 December 2015, Madrid
- 43 participants from France, Germany, Italy, Spain, UK, and from Belgium, Greece, Lithuania, Poland, Portugal and Slovakia, also CTA, LOFAR, ESO
- 11 tutors
- Learn enough about the VO to be able to use it in one's own research
  - Short presentation of the IVOA and ASTERICS
  - "Hands-on" tutorials & "Treasure Hunt"
  - Participants' own projects
  - Presentation of some of the projects and feedback session

- Significant preparatory work
  - Update of the tutorials
  - Discussion with the participants about their scientific interests

- Follow-up
  - Two seminars in Athens in 2016
  - The participants will be polled each year to follow the School impact and monitor their usage of the VO

Tutorials

http://www.euro-vo.org/?q=science/scientific-tutorials



D4.4 Second Technology Forum

- 7-8 mars 2016, Edimbourg
- 26 participants
- Technical discussions

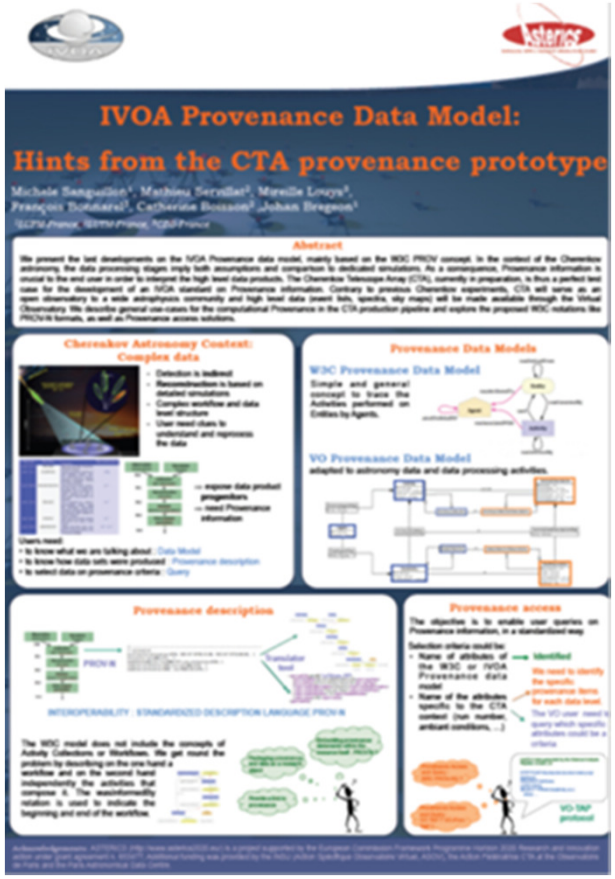
  - Talks & 'open' Hack-a-Thon breakout sessions on different subjects, including several discussed in this AOV meeting
  - https://www.asterics2020.eu/dokuwiki/doku.php?id=open:wp4:wp4techforum2 being completed

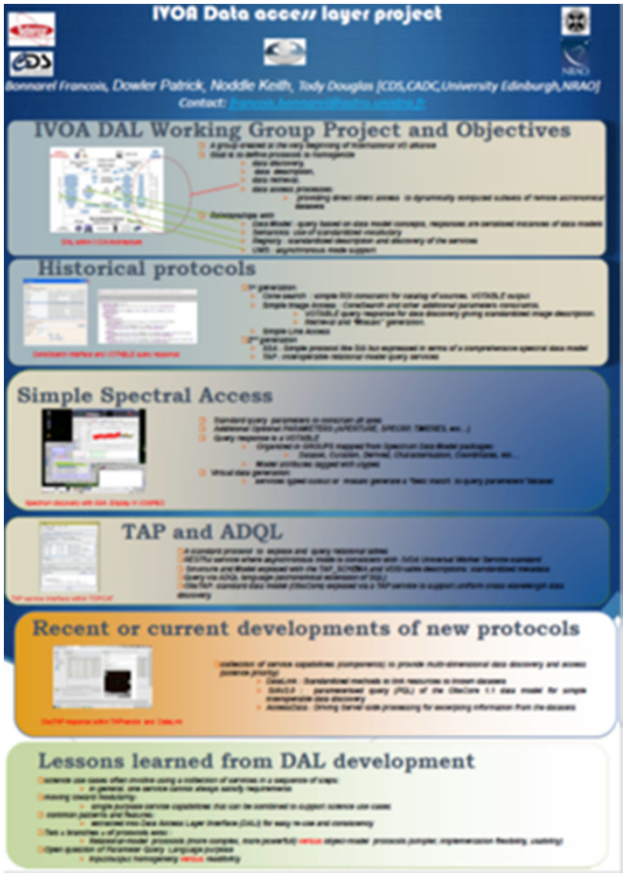
IVOA

- DADI technological activities (Task 4.3) are performed in the IVOA context
- Sesto (June): presentation of DADI and work on multi-d standards
- Sydney (October)
  - Many meeting highlights relevant to DADI
  - Well prepared by the Tech Forum
  - Significant impact of participants linked to DADI
    - At least one chair or co-chair of all the Groups present at the meeting except one
    - Significant participation in the Groups

ADASS XXVth

- The place to be to discuss with large projects about their data
- ASTERICS talk (F. Pasian)
- IVOA talk (C. Arviset)
- VO ubiquitous in the talks and posters, very positively mentioned in B. Schmidt keynote address
- Two ASTERICS posters


IVOA Provenance Data Model:
Hints from the CTA provenance prototype
Abstract
Cherenkov Astronomy Context: Complex data
Provenance Data Models
W3C Provenance Data Model
VO Provenance Data Model
Provenance description
Provenance access


IVOA Data access layer project
IVOA DAL Working Group Project and Objectives
Historical protocols
Simple Spectral Access
TAP and ADQL
Recent or current developments of new protocols
Lessons learned from DAL development

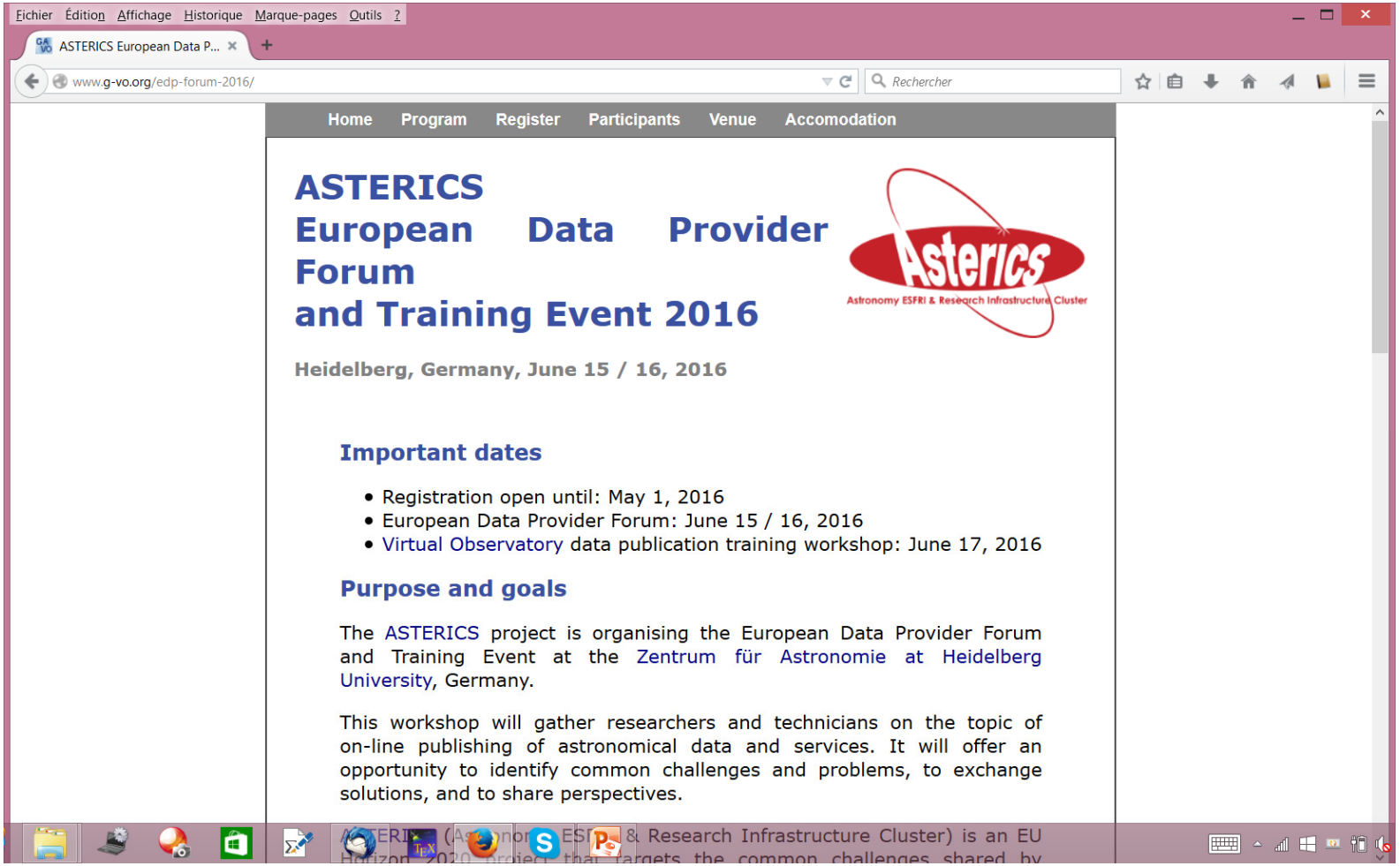
Among the other activities

- Technical work on Provenance (VO/CTA)
- Collaboration between CDS and EGO on Aladin customization
- ANTARES data in GAVO
- Autorisation&Authentication
- Collaboration with EUDAT (i.e. with the « generic » data infrastructure)

Next steps

- Discussion on specific support actions with the ESFRIs
- Cape Town IVOA meeting (May 2016)
  - Focus sessions on large projects, organised by M. Allen
  - VO standards and tools including multi-D and time domain
- European Data Provider Forum & Training Event, Heidelberg, 15-16 + 17 Juin 2016
- Second School, Strasbourg, November 2016 (TBC)

http://www.g-vo.org/edp-forum-2016/



ASTERICS et l'ASOV

- Point sur les activités aux réunions plénières
- Support à des participations aux réunions IVOA et à certaines réunions techniques
- Formation des chercheurs
  - Les tutoriels peuvent être réutilisés
  - Participation à des formations locales ou nationales
  - Nouveaux sujets de tutoriels bienvenus (cf 'high Energy', produit en collaboration avec PCHE)
- Le Data Provider Forum & Training Event devrait être un évènement intéressant (cf la réunion CoSADIE en 2013)