ASTERICS WP4 – DADI Data Access, Discovery and Interoperability

Françoise Genova and the WP4 team

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.

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, the contact can involve people from other labs
  - 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
- EST is participating in the activities

WP4 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)

WP4 Activities

- DADI is structured around the organisation of Workshops (Deliverables) and participation in external events (IVOA meetings, which are Milestones, plus ADASS, RDA)
- Repository of products (Deliverable)
- Specific meetings are organised when useful

Workshops to date

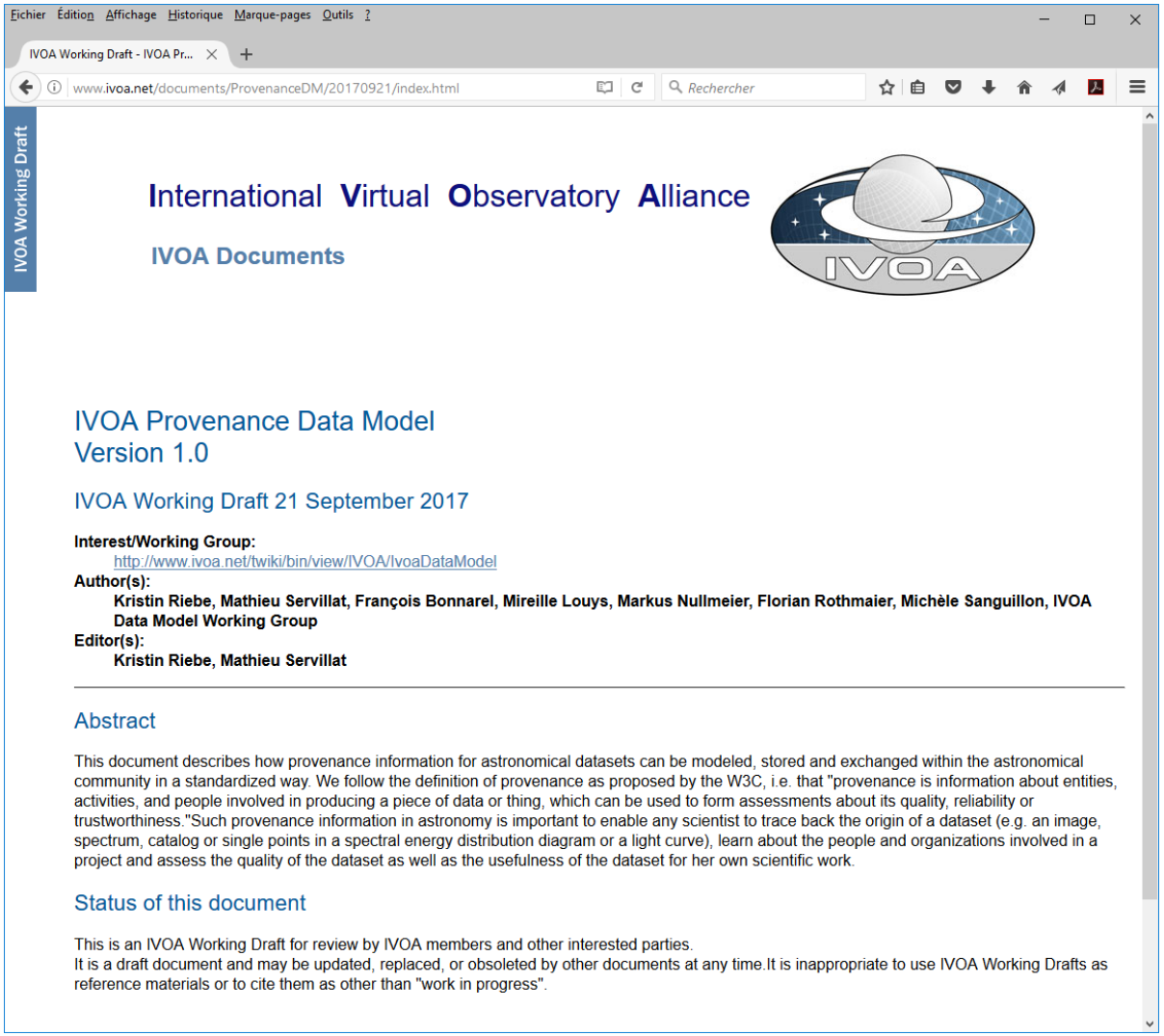
- Towards data providers
  - Two ESFRI Forum & Training Events (Trieste, Dec. 2015 & 2017)
  - Two European Data Providers Forum & Training Event (Heidelberg, June 2016 & this event)
- Towards the science community
  - One school/year for early career & ESFRI staff (Madrid, Dec. 2015 & Nov 2017, Strasbourg, Nov. 2016 & 20-22 Nov 2018)
- Technology Forums
  - Four to date (Strasbourg, Sept. 2015 & March 2017; Edinburgh, March 2016 & April 2018)
  - One to come (Strasbourg, March 2019)

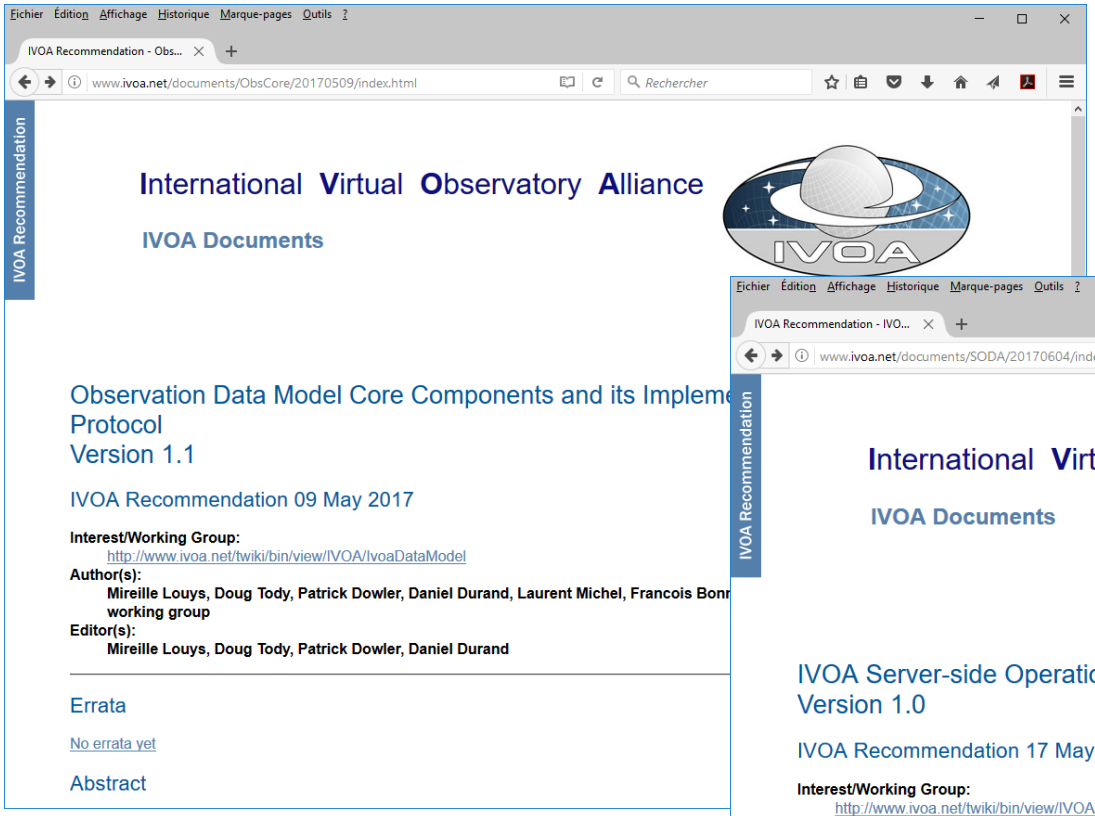
Specific events

- Provenance meetings
  - 5 Provenance Days (co-organised with VO France)
  - 2 other meetings
- Time domain
  - DADI/CLEOPATRA (Strasbourg, March 2017), GAPS (Padova, June 2017), Time Series (Dec. 2017)
- A&A (Meudon, organised by CTA, Dec 2015)
- Gravitational waves (Strasbourg, June 2016)
- LOFAR/VO (Strasbourg, Nov. 2016)

IVOA

- DADI technological activities (Task 4.3) are performed in the IVOA context
- Significant participation in all the IVOA meetings and WGs/Igs, including leadership of groups and on standards
- CTA actively participating in the Provenance Data Model definition – *adopted by CTA*
- Significant progress in DADI/IVOA priorities
  - Multi-dimensional data
    - « Standard caravan » completed in May 2017
    - Implementation and feedback
  - Strong focus on Time Domain
    - Started again in IVOA thanks to DADI momentum
    - Intense activity in DADI & IVOA


Fichier Édition Affichage Historique Marque-pages Outils ?
IVOA Working Draft - IVOA Pr...
www.ivoa.net/documents/ProvenanceDM/20170921/index.html
Rechercher
IVOA Working Draft
International Virtual Observatory Alliance
IVOA Documents
IVOA
IVOA Provenance Data Model
Version 1.0
IVOA Working Draft 21 September 2017
Interest/Working Group:
http://www.ivoa.net/twiki/bin/view/IVOA/IvoaDataModel
Author(s):
Kristin Riebe, Mathieu Servillat, François Bonnarel, Mireille Louys, Markus Nullmeier, Florian Rothmaier, Michèle Sanguillon, IVOA Data Model Working Group
Editor(s):
Kristin Riebe, Mathieu Servillat
Abstract
This document describes how provenance information for astronomical datasets can be modeled, stored and exchanged within the astronomical community in a standardized way. We follow the definition of provenance as proposed by the W3C, i.e. that "provenance is information about entities, activities, and people involved in producing a piece of data or thing, which can be used to form assessments about its quality, reliability or trustworthiness."Such provenance information in astronomy is important to enable any scientist to trace back the origin of a dataset (e.g. an image, spectrum, catalog or single points in a spectral energy distribution diagram or a light curve), learn about the people and organizations involved in a project and assess the quality of the dataset as well as the usefulness of the dataset for her own scientific work.
Status of this document
This is an IVOA Working Draft for review by IVOA members and other interested parties.
It is a draft document and may be updated, replaced, or obsoleted by other documents at any time.It is inappropriate to use IVOA Working Drafts as reference materials or to cite them as other than "work in progress".


IVOA Recommendation - Obs...
www.ivoa.net/documents/ObsCore/20170509/index.html
IVOA Recommendation
International Virtual Observatory Alliance
IVOA Documents
Observation Data Model Core Components and its Implem
Protocol
Version 1.1
IVOA Recommendation 09 May 2017
Interest/Working Group:
http://www.ivoa.net/twiki/bin/view/IVOA/IvoaDataModel
Author(s):
Mireille Louys, Doug Tody, Patrick Dowler, Daniel Durand, Laurent Michel, Francois Bonn
working group
Editor(s):
Mireille Louys, Doug Tody, Patrick Dowler, Daniel Durand
Errata
No errata yet
Abstract


IVOA Recommendation - IVO...
www.ivoa.net/documents/SODA/20170604/index.html
IVOA Recommendation
International Virtual Observatory Alliance
IVOA Documents
IVOA Server-side Operations for Data Access
Version 1.0
IVOA Recommendation 17 May 2017
Interest/Working Group:
http://www.ivoa.net/twiki/bin/view/IVOA/IvoaDAL
Author(s):
François Bonnarel, Markus Demleitner, Patrick Dowler, Douglas Tody, James Dempsey
Editor(s):
François Bonnarel, Patrick Dowler
Errata
No errata yet
Abstract
This document describes the Server-side Operations for Data Access (SODA) web service capability. SODA is a low-level data access capability or
server side data processing that can act upon the data files, performing various kinds of operations: filtering/subsection, transformations, pixel

ADASS

- Many invited/contributed talks and posters from DADI staff
- Also CLEOPATRA
- Lots of reference to the VO in general in the ADASS meetings

THE RESEARCH DATA ALLIANCE

www.rd-alliance.org

building the social and technical bridges that enable open sharing of data

23 FLAGSHIP OUTPUTS

of which 4 ICT Technical Specifications

75 ADOPTION CASES

across multiple disciplines, organisations & countries

93 GROUPS WORKING ON GLOBAL DATA INTEROPERABILITY CHALLENGES

of which 32 WORKING GROUPS & 61 INTEREST GROUPS

7,017 INDIVIDUAL MEMBERS FROM 137 COUNTRIES

67% Academia & Research
15% Public Administration
11% Enterprise & Industry

43 ORGANISATIONAL MEMBERS & 8 AFFILIATE MEMBERS

RDA
RESEARCH DATA ALLIANCE

Vision

Researchers and innovators openly share data across technologies, disciplines, and countries to address the grand challenges of society.

Mission

RDA builds the **social and technical bridges** that **enable open sharing** of data.

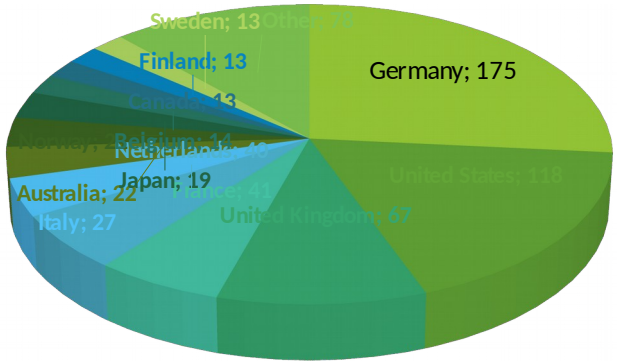
RDA

- No astronomy Group in RDA
  - Interoperability discussion in IVOA
  - An overarching Disciplinary Collaboration Frameworks IG co-chaired by D. Schade (CADC)
- Active participation in different Groups and adoption of recommendations
  - CM Zwölf's talk
  - Certification of Data Repositories – Core Trust Seal

83 Breakout meetings

- 19 Working Groups
- 37 Interest Groups
- 12 Joint Working & Interest Groups
- 15 Birds of a Feather
- 4 Final Recommendations presented
- 3 New Recommendations
- Collaboration projects with AGU and ISO on adoption and impact metrics

74 posters applications



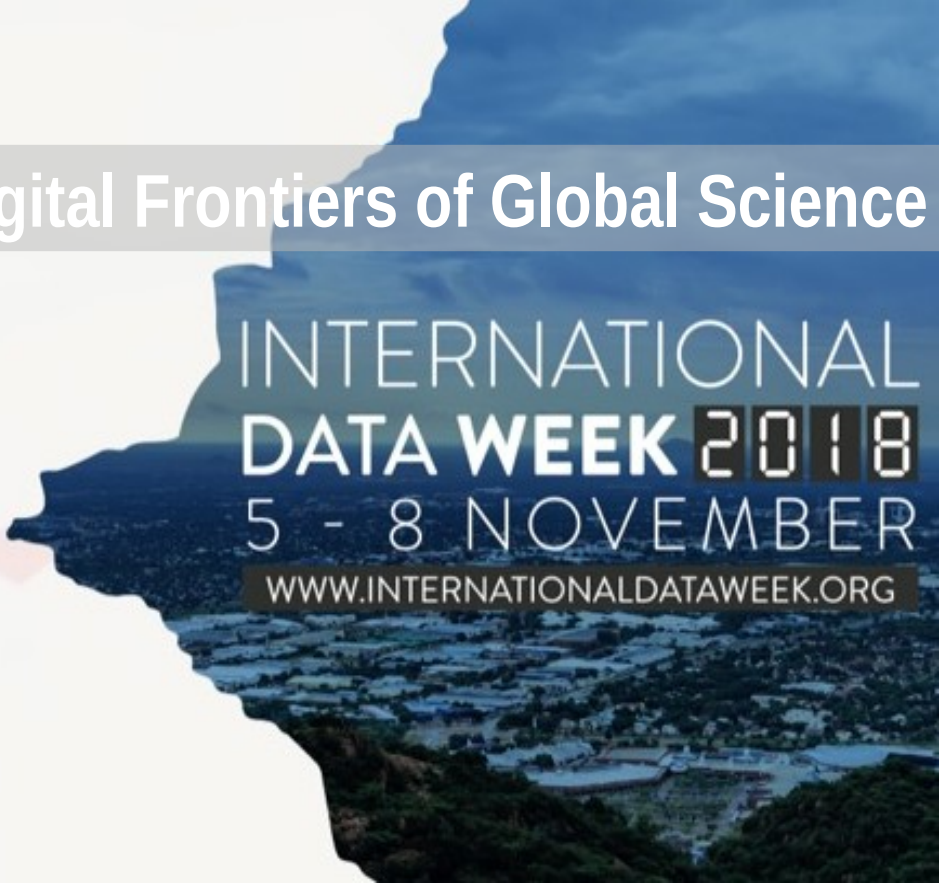
661 participants from 41 countries

https://rd-alliance.org/plenaries/rda-eleventh-plenary-meeting-berlin-germany

International Data Week 2018

will be held on 5-8 November 2018 in Gaborone, Botswana.

Digital Frontiers of Global Science



Hosted by the Botswana Open Science and Open Data Forum, IDW 2018 will bring together data scientists, researchers, industry leaders, entrepreneurs, policymakers and data stewards from all disciplines and geographies across the globe.

Co-organized by the **ICSU World Data System** (WDS), the **ICSU Committee on Data for Science and Technology** (CODATA) and the **Research Data Alliance** (RDA), IDW 2018 combines the 12th RDA Plenary Meeting, the bi-annual meeting of the research data community, and SciDataCon 2018, the scientific conference addressing the frontiers of data in research.

Organisers

To find out more visit:
https://www.rd-alliance.org/plenaries/rda-twelfth-plenary-meeting-part-international-data-week-2018-gaborone-botswana

RDA's 13th Plenary Meeting
Philadelphia, Pennsylvania
2- 4 April 2019

https://rd-alliance.org/plenaries/rda-thirteenth-plenary-meeting-philadelphia-us

RDA in a Nutshell

WWW.RD-ALLIANCE.ORG/
@RESDATALL

RDA Global

Email - enquiries@rd-alliance.org
Web - www.rd-alliance.org
Twitter - @resdatall
LinkedIn - www.linkedin.com/in/ResearchDataAlliance
Slideshare - http://www.slideshare.net/ResearchDataAlliance

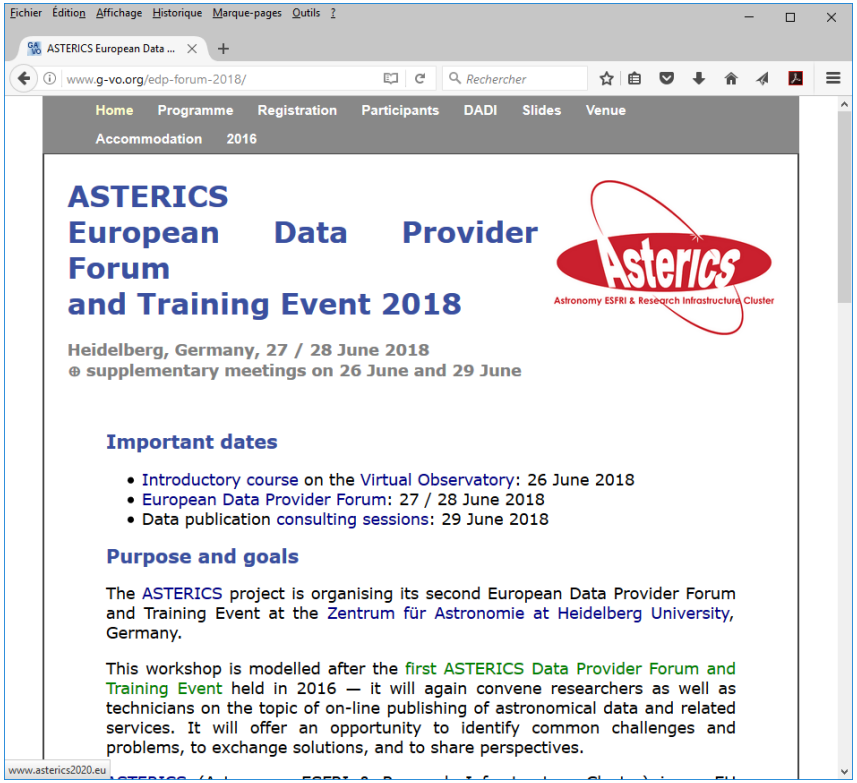
RDA Europe

Email - info@europe.rd-alliance.org
Twitter - @RDA_Europe
National nodes in 9 countries

RDA US

Twitter - @RDA_US

This meeting (D4.13)



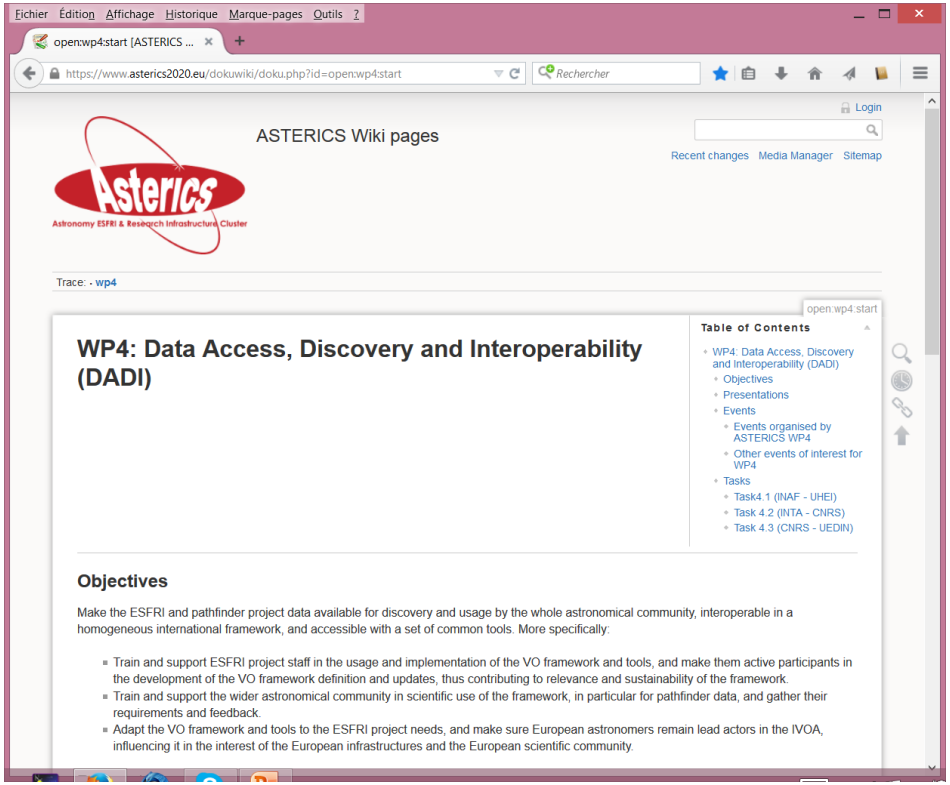
- Open to European data providers beyond the project partners
- Newcomer session: yesterday (feedback from the first F&T Event)
- Forum: Share methods and lessons learnt, identify needs
- Training on Friday

DADI web site

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

The site contains information about the Work Package activities and a link to all the meeting sites, which include all the slides and additional information

try ASTERICS wiki page WP4 DADI



Repository of products

« Products » produced by DADI or essential for VO implementation

- Tutorials from Schools
- VO Tools
- VO Standards
- Tools in support to data publishing in the VO
- Other results
- Talks presented by European participants in IVOA meetings

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