



EURO-VO Facility Centre Status

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



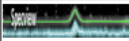


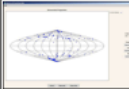



Recent Activities

- Web pages
- On-line scientific workflows
- Research Initiative
- Conferences, Workshops & Schools
- Euro-VO News in the EAS newsletter

<http://www.euro-vo.org>

List of available software

	Tool/Description	Version	Download/Launch
DATA DISCOVERY			
	Aladin: An interactive software sky atlas allowing the user to visualize digitized images of any part of the sky, to superimpose entries from astronomical catalogs	V5 (February 2008)	Standalone version
	Workbench: A desktop application for working with the Virtual Observatory. It can explore data resources, query remote catalogs, and construct workflows to automate tasks.	2007.1.1	Download Page
	Datascopes: A Web Service for discovering and exploring data in the Virtual Observatory from archives and data centres around the world.	V2.1 (March 2007)	Web Service
SPECTRAL ANALYSIS			
	VOSpec: A multiwavelength spectra analysis tool, with access to both Spectral services (SSAP) and Theoretical Spectral services (TSAP).	V3.0	Launch java applet
	SPLAT: A spectra analysis tool.	Version: 3.8-5	Download Page
	Specview: 1-D spectral visualization and analysis	2.14.1	Download Page or Run Applet
	Euro3D: Analyse datasets in Euro3D FITS format.		Launch Java Webstart or Java applet
DATA VISUALISATION AND DATA HANDLING			
	Topcat: An interactive graphical viewer and editor for tabular data. It understands a number of different astronomically important formats (including FITS and VOTable) and more formats can be added.	3.2 (January 2008)	Download Page
	VOPlot: A tool to visualise astronomical data.	1.4.1 Beta	Download Page
	VisIVO: A visualisation and analysis software for astrophysical data. VisIVO can handle both observational and theoretical data.	1.3 alpha	Download Page
SED BUILDING AND FITTING			

List of available software Scientific Workflows

<http://www.euro-vo.org>

Introduction

This workflow deals with 3C295, a powerful lobe-dominated radio-galaxy embedded in the X-ray emission of a galaxy cluster. It shows you how to:

- Generate (and display) a photometric Spectral Energy Distribution (SED)
- Study the multi-wavelength (radio, optical, X-ray) emission from the lobes and the cluster
- Identify red objects in the field
- Study the properties of individual galaxies in the cluster

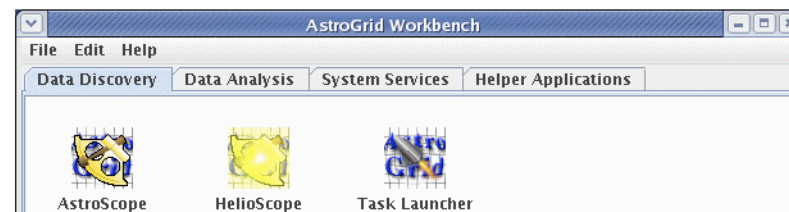
At the end of the workflow a red (*i.e.* elliptical) galaxy is identified, in agreement with expectations that ellipticals reside at the center of massive cluster.

The science case is based on the [VOTECH Science Framework Document](#). The reader is referred to this document for more details on the underlying scientific drivers.

In order to effectively follow this workflow, some knowledge of basic functionalities of VO tools such as [Aladin](#), [topcat](#), and [VOSpec](#) may be helpful. Please, refer to the [EURO-VO recipes user manual](#) for more information.

Set-up

1. launch [AstroScope](#) from the [AstroGrid Workbench](#)





<http://www.euro-vo.org>

List of available software
Scientific Workflows
List of scientific papers

[SDSSJ124155.33+114003.7 -- a Missing Link Between Compact Elliptical and Ultracompact Dwarf Galaxies](#)

Chilingarian I.V. & Mamon G.A., 2008
Monthly Notices of the Royal Astronomical Society, in press; arXiv:0712.2724[astro-ph]

[Albus 1: A Very Bright White Dwarf Candidate](#)

Caballero J.A., Solano E., 2007
Astrophysical Journal, v.665, p.L151

[Using VO tools to investigate distant radio starbursts hosting obscured AGN in the HDF\(N\) region](#)

Richards A.M.S., Muxlow T.W.B., Beswick, R., et al., 2007
Astronomy & Astrophysics, v.472, p.805

[Flare productivity of newly-emerged paired and isolated solar active regions](#)

Dalla S., Fletcher L., Walton N.A., 2007
Astronomy & Astrophysics, v.468, p.1103

[eSDO algorithms, data centre and visualization tools](#)

Auden E., Toutain T., Zharkov S., 2007
Astronomische Nachrichten, v.328, Issue 3, p.356

[The DRaGONS Survey: A Search for High-Redshift Radio Galaxies and Heavily Obscured Active Galactic Nuclei](#)

Schmidt S., Connolly A., Hopkins A., 2006
Astrophysical Journal, v.649, p.63

[Cluster Merger Variance and the Luminosity Gap Statistic](#)

Milosavljevic M., Miller C.J., Furlanetto S.R., Cooray A., 2006
Astrophysical Journal, v.637, L9

[High-Energy Astrophysics and the Virtual Observatory](#)



List of available software
Scientific Workflows
List of scientific papers
Events Calendar

<http://www.euro-vo.org>

IVOA Interoperability Meeting

Location: Trieste, Italy– *Date:* May 19-23, 2008– *Host:* Palazzo dei Congressi della Stazione Marittima

Euro-VO DCA workshop: Theory in the Virtual Observatory

Location: Garching, Germany– *Date:* April 7-9, 2008– *Host:* MPE

Euro-VO DCA workshop: GRID and the Virtual Observatory

Location: Garching, Germany– *Date:* April 9-11, 2008– *Host:* MPE

EURO-VO Science Advisory Committee meeting

Location: Cambridge, UK– *Date:* March 11-12, 2008– *Host:* IoA

Virtual Observatory Info-Workshop

Location: Sofia, Bulgaria– *Date:* January 24-25, 2008– *Host:* The Bulgarian Academy of Sciences and The Institute of Astronomy

Astronomy with Virtual Observatories

Location: Pune, India– *Date:* October 15-19, 2007– *Host:* The Inter-University Centre for Astronomy and Astrophysics

IVOA Interoperability Meeting

Location: Cambridge, UK– *Date:* September 27-28, 2007– *Host:* IoA

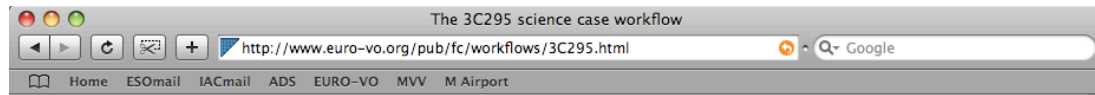
ADASS XVII

Location: London, UK– *Date:* September 23-26, 2007 – *Host:* Kensington Town Hall

JENAM 2007

EURO-VO SAC Meeting, March 11-12 2008

<http://www.euro-vo.org/pub/fc/workflows/3C295.html>



Introduction

This workflow deals with 3C295, a powerful lobe-dominated radio-galaxy embedded in the X-ray cluster. The workflow shows how to:

- Generate (and display) a photometric Spectral Energy Distribution (SED)
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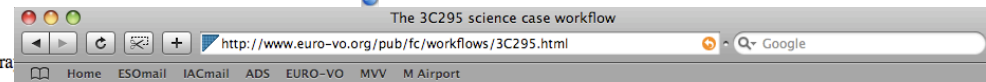
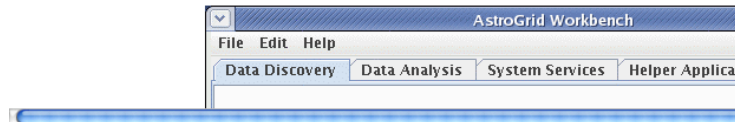
At the end of the workflow a red (*i.e.* elliptical) galaxy is identified, in agreement with expectation for a massive cluster.

The science case is based on the [VOTECH Science Framework Document](#). The reader is referred to the underlying scientific drivers.

In order to effectively follow this workflow, some knowledge of basic functionalities of VO tools will be helpful. Please, refer to the [EURO-VO recipes user manual](#) for more information.

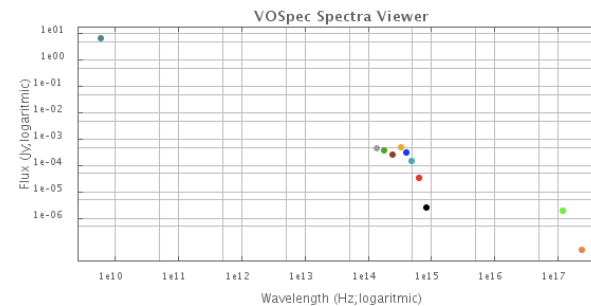
Set-up

1. launch [AstroScope](#) from the [AstroGrid Workbench](#)



SED display

1. The photometric SED can be displayed in [VOSpec](#) by reading each of the files produced in the previous step. Before the photometric point is actually displayed, a panel asks for the column where the X- and Y-axis are defined, and their units.

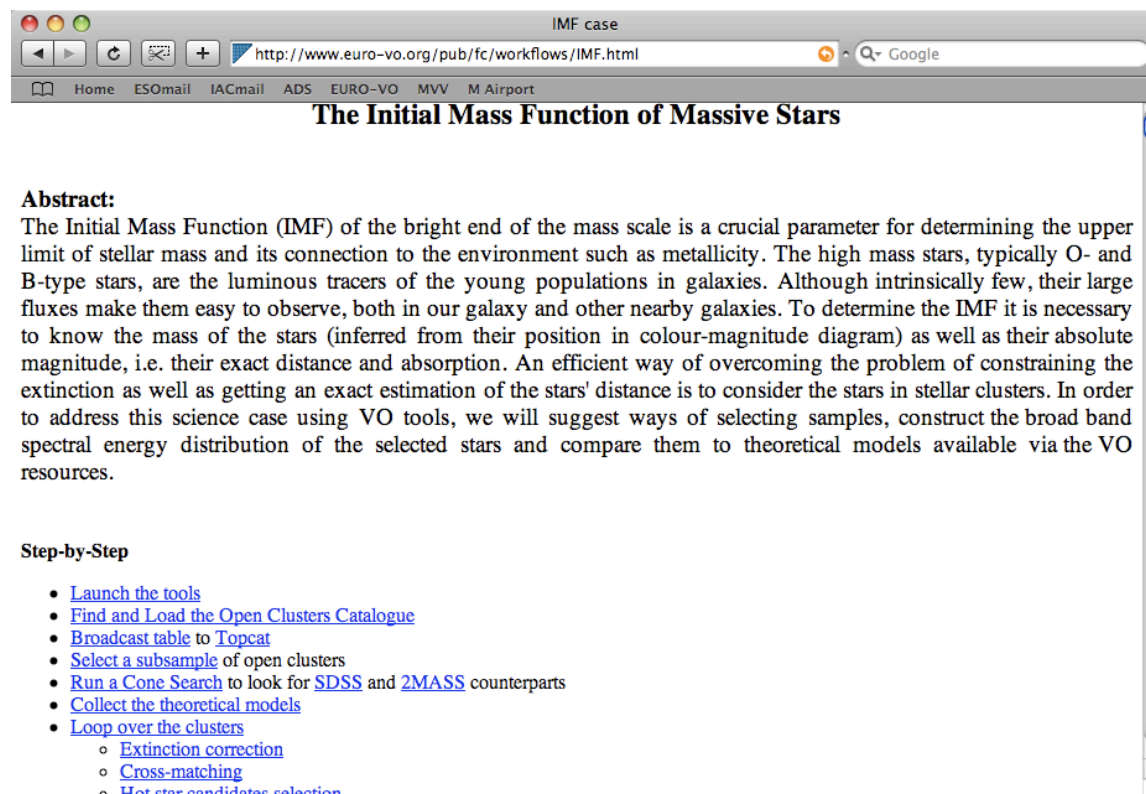


3C295 photometric SED displayed by [VOSpec](#).

Images display

1. launch [Aladin](#) [automatically [PLASTICized](#)]
2. launch the [MERLINImager](#) from the [AstroGrid Workbench Task Launcher](#)

<http://www.euro-vo.org/pub/fc/workflows/IMF.html>

A screenshot of a web browser window displaying the "IMF case" page. The browser's address bar shows the URL "http://www.euro-vo.org/pub/fc/workflows/IMF.html". The page title is "The Initial Mass Function of Massive Stars". The content includes an abstract and a step-by-step list of tasks.

IMF case

Home ESOmail IACmail ADS EURO-VO MVV M Airport

The Initial Mass Function of Massive Stars

Abstract:

The Initial Mass Function (IMF) of the bright end of the mass scale is a crucial parameter for determining the upper limit of stellar mass and its connection to the environment such as metallicity. The high mass stars, typically O- and B-type stars, are the luminous tracers of the young populations in galaxies. Although intrinsically few, their large fluxes make them easy to observe, both in our galaxy and other nearby galaxies. To determine the IMF it is necessary to know the mass of the stars (inferred from their position in colour-magnitude diagram) as well as their absolute magnitude, i.e. their exact distance and absorption. An efficient way of overcoming the problem of constraining the extinction as well as getting an exact estimation of the stars' distance is to consider the stars in stellar clusters. In order to address this science case using VO tools, we will suggest ways of selecting samples, construct the broad band spectral energy distribution of the selected stars and compare them to theoretical models available via the VO resources.

Step-by-Step

- [Launch the tools](#)
- [Find and Load the Open Clusters Catalogue](#)
- [Broadcast table to Topcat](#)
- [Select a subsample](#) of open clusters
- [Run a Cone Search](#) to look for [SDSS](#) and [2MASS](#) counterparts
- [Collect the theoretical models](#)
- [Loop over the clusters](#)
 - [Extinction correction](#)
 - [Cross-matching](#)
 - [Hot star candidates selection](#)



Participation in Conferences, Workshops and Schools (in the last 8 months)

- Virtual Observatory Info **Workshop**, Sofia, Bulgaria [Jan 08]
 - ▶ VO Science (PP)
 - ▶ Overview of VO Tools (EH)
- **Summer School** on Virtual Observatories, Moletai Observatory, Lithuania [Oct 07]
 - ▶ X-ray to Optical Correlation of Galaxy Clusters in 2XMM/SDSS DR5 (EH)
 - ▶ IMF of Massive Stars (EH)
 - ▶ VirGO - the new ESO Archive Browser (EH)
 - ▶ Building VO-based Research Projects (EH)
- Astronomy with Virtual Observatories, **Workshop**, Pune, India [Oct 07]
 - ▶ VO Overview (PP)
 - ▶ Overview of VO Tools (EH)
 - ▶ Science with the VO (PP)
 - ▶ VO Spectroscopy: VOSpec, SPLAT (MG)
 - ▶ Science Case: IMF of Massive Stars (EH)
 - ▶ Science case study: 3C 295 (MG)
- **JENAM** 2007, EAS S8, Science with Virtual Observatories, Yerevan, Armenia [Aug 07]
 - ▶ Science with the Virtual Observatory (PP)
 - ▶ Astronomical spectroscopy and VO: a new golden era? (MG)
 - ▶ The IMF of Massive Stars (EH)



EAS Newsletter

(see <http://esavo.esac.esa.int/EuroVOWorkshopJune2007>.)



EURO-VO NEWS

The European Virtual Observatory (EURO-VO) Project aims at deploying an operational Virtual Observatory (VO) in Europe. It promotes new science by providing easy access, retrieval, and analysis of data from archives world-wide.



The new EURO-VO web pages (<http://www.euro-vo.org>) contain information about the structure of the project, provide access to available VO tools and manuals, as well as news and announcements. A way of staying tuned to the latest news with a minimum number of mouse clicks is the newly established

way the VO will address the needs of modern spectroscopy. The presentations given during the workshop are available via the workshop's web pages (<http://esavo.esac.esa.int/SpectroscopyAndVOWorkshopMarch2007/program.html>).

In the framework of the Joint European and National Astronomy Meeting (JENAM) 2007, a dedicated symposium will take place (EAS Symposium 8, «Science with the Virtual Observatory»). It will discuss the achievements in the area and plan further developments and future projects. For more details see the JENAM 2007 web pages (<http://www.aras.am/JENAM-2007>).

Evanthia Hatziminaoglou
on behalf of the EURO-VO Facility Centre

EURO-VO NEWS

The European Virtual Observatory (EURO-VO), in its continuous effort to provide easy and seamless access to data from archives world-wide, services and analysis tools has engaged in a series of activities, among which the support of selected projects making use of VO tools as well as the organization of, or participation to, various VO workshops.



A call for proposals announced earlier this year to carry out projects using VO tools attracted nine European teams, who proposed a variety of science projects that could benefit from the VO technology. After examination of the science cases, technical requirements and feasibility of the projects within the available time (projected by the end of 2007), the EURO-VO Science Advisory Committee, with input from EURO-VO partners, selected three projects whose topics cover both galactic and extragalactic astronomy, that are currently being offered scientific and technical support.

The EURO-VO workshop "Publishing data in the VO" was held on 25-29 June 2007 at ESAC, Villafranca, with more than 70 participants from major European data centers

tronomy with Virtual Observatories", participation of EURO-VO scientists, r in Pune, India. For more details see [net.in/~voiwork/](http://www.euro-vo.org/net.in/~voiwork/)

proposal "Astronomical Infrastructure for A)" submitted to the first Framework Infrastructure call INFRA-2007-1.2.1 "Repositories" has been selected for 1€ level. The projected starting date is at least until 2010. AIDA aims at data collection of European astronomy, access mechanisms with evolving e-technologies, and the science extracted from these

web pages (<http://www.euro-vo.org/pub/>) updated with links to tools, services, news and announcements are also circulated via the list that already has more than 400 subscribers. To join, go to http://help.euro-vo.org/ex.php?_m=news&_a=view and type your name in the "Subscribe" field.

Evanthia Hatziminaoglou
on behalf of the EURO-VO Facility Centre

EURO-VO SAC Meeting, March 11-12 2008