

European Virtual Observatory

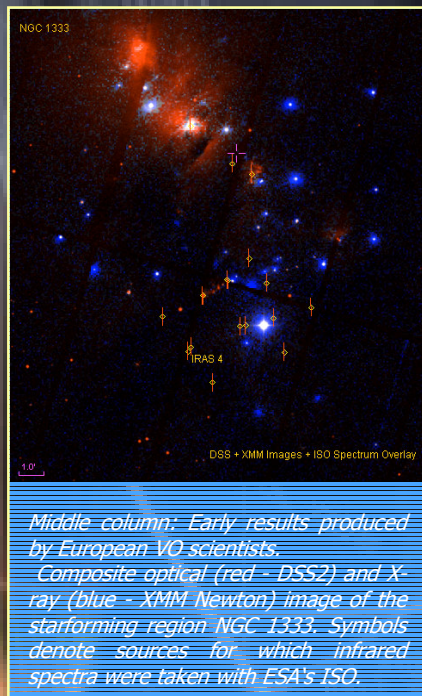


The European Virtual Observatory (EURO-VO) project is an integrated and coordinated program of work designed to provide the European astronomical community with the data access, research tools and systems, research support, data interoperability standards, data-flow practices and data centre coordination, necessary to enable the exploration of the digital, multi-wavelength universe resident in European and international astronomical and astrophysical data archives.

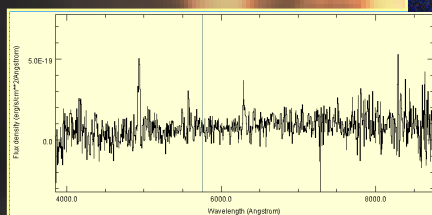
Starting in 2005 the EURO-VO program seeks to support and deploy Virtual Observatory (VO) capabilities to data centres and observatories across the entire electromagnetic spectrum. It will therefore be closely coupled with the two other major integrating and networking activities for astronomy in FP6: OPTICON and RADIONET. EURO-VO will act as a natural hub for coordination and integration of the new, GRID-enabled, VO research infrastructure that will be essential to the success of future large European community programs in astronomy (e.g. ALMA, OWL, SKA and Planck).

Objectives

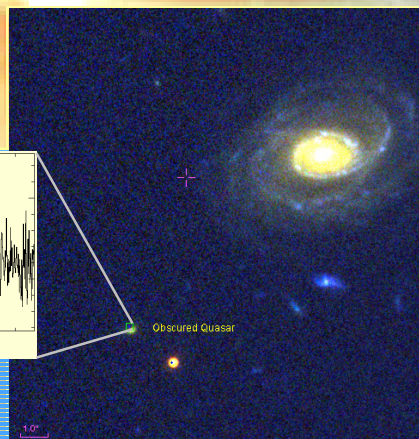
- Technology take-up and full VO compliant data and resource provision by astronomical data centres in Europe
- Support to the scientific community to utilize the new VO infrastructure through dissemination, project support, tool prototyping and VO facility-wide resources and services
- Further development and refinement of VO technologies to meet new scientific challenges.



Middle column: Early results produced by European VO scientists. Composite optical (red - DSS2) and X-ray (blue - XMM Newton) image of the star-forming region NGC 1333. Symbols denote sources for which infrared spectra were taken with ESA's ISO.



An obscured quasar imaged by Hubble Space Telescope ACS and identified through an ESO/FORS2 spectrum.



EURO-VO Structure

Data Centre Alliance (DCA)

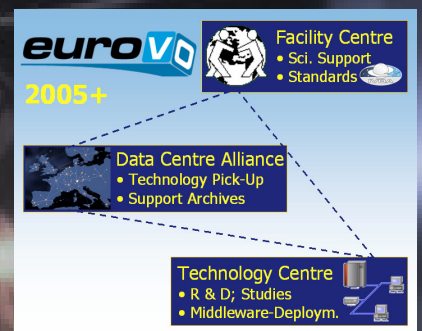
A collaborative and operational network of European data centres who, by the uptake of new VO technologies and standards, will publish data, metadata and services to the EURO-VO and who will provide a research infrastructure through the adoption and application of GRID-enabled processing and storage facilities.

Facility Centre (VofC)

An organization that provides the EURO-VO with a centralized registry for resources, standards and certification mechanisms as well as community support for VO technology take-up, VO dissemination and scientific program support using VO technologies and resources.

Technology Centre (VOTC)

A distributed organization that coordinates a set of research and development projects on the advancement of VO technology, systems and tools in response to scientific and community program needs.



Participation

EURO-VO is open to all European astronomical data centres. A recent successful FP6 bid for supplementary EC funding led by Prof. Lawrence is a joint proposal by the Universities of Edinburgh, Cambridge and Leicester representing the UK Astrogrid Consortium, the European Southern Observatory, the Centre National de la Recherche Scientifique representing French VO and the Istituto Nazionale di Astrofisica in Italy.

www.euro-vo.org



EURO-VO is based on the research, development experience and prototypes produced in the FP5 RTD project entitled Astrophysical Virtual Observatory (AVO) [HPRI-CT-2001-50] and the science case experience of the Enhancing Access to Large Facilities initiative ASTROVIRTEL [HPRI-CT-1999-00081].