

## SCIENCE PRODUCTS FROM LARGE PROGRAMMES TO BE AVAILABLE FROM THE ESO ARCHIVE

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**E**SO IS COMMITTED to producing and maintaining a data stream from the VLT Observatory that forms a data heritage for international astronomy. This goal is being realised by an end-to-end operational approach that maintains data integrity, produces appropriate metadata, maintains and executes calibration plans and produces quality controlled data products. ESO has also designed and produced advanced data products from surveys that are available from the ESO/ST-ECF Science Archive Facility (SAF) and which feed archival science programs and future applications for VLT time. ESO also wishes to ensure that the full scientific potential of the VLT is realised by granting large amounts of telescope resources to large programmes chosen on scientific merit by the Observing Programme Committee (OPC). To ensure that the scientific products from these programmes also form an effective part of the VLT data heritage and the emerging international virtual observatory, ESO is defining requirements and procedures for large programmes that will ensure their scientific output can be published through the SAF. This goal is directly supported by the recommendations of the recent ESO workshop on Large Programmes and Surveys, endorsed by the Scientific Technical Committee (STC) at its April 2004 meeting.

### WHAT DOES THIS MEAN?

Starting with Period 75 results, PIs of Observing Programme Committee-approved large programmes will be required to return the data products (processed images and spectra, catalogues) to the ESO archive at the time of the publication of their scientific results in a refereed publication. This

requirement will be made clear in the call for observing proposals for Period 75 in the large programmes section. Each approved programme will have to agree on the content of their data product delivery with ESO before the start of the programme.

### SOME DETAILS

- The various files representing the processed products shall be delivered in FITS format for images and in VOTable or FITS format for tables (e.g., spectra or catalogues). FITS to VOTable conversion software will become available from ESO and other VO partners in the coming months, once a spectral data model has been agreed upon.
- Each new data delivery (or reduced data package) shall be accompanied by:
  - A package description page in HTML format, such that it can be immediately made available on the ESO archive web site;
  - An accompanying table containing one row per file and a short description of each file;
  - An accompanying table containing, for each product file, a list of the original raw files that have been used in the fabrication of the product. In this way, future users of the product will be able to go from the products to its constituent raw files and conversely from the raw files to the products.
- Each data delivery will be considered as one single "Data Package" by default. A delivery can consist of several distinct packages if it makes sense. The package(s) will be made available to the community through the ESO archive web. See for example the way the "High-z QSO spec-

troscopy" program is made available: [http://archive.eso.org/wdb/wdb/eso/packages/query?pkg\\_id=175](http://archive.eso.org/wdb/wdb/eso/packages/query?pkg_id=175). Also note the pointer to the package description within the page as well as the possibility to access each file individually.

- ESO will manage the incorporation of the science data products in the most effective form for publication and utilization within the VO.
- Principal Investigators of large programmes currently on-going (e.g., P73 or before) are strongly encouraged to consider delivering their products under the proposed scheme for early publication in the archive.

### EVERYBODY WINS

The above implementation conditions may seem constraining and adding overhead to the production of the science results. However, the benefits of this initiative are large for both the future users of the archive or the VO and for the large programme teams. The former will have a large pool of high quality data to compare, cross-correlate and analyse whereas the PI of the large programme, whose products have been used in new work, will have a chance to dramatically increase his/her paper's citation rate as each product will be tagged with the ESO programme ID and hence with the PI name. Moreover, the "bibcode" of the accompanying publication will also be attached to the description of all products. Statistics of data download rates will also be made available to the large programme PIs on request. Finally, we would like to recommend to PIs of currently on-going large programmes to consider returning their data to the archive already now.

## VISIT EIROFORUM AT ESOF 2004

**T**he EuroScience Open Forum (ESOF2004) is the first pan-European interdisciplinary scientific conference, modelled on the well-known and highly successful meetings in the US by the American Association for the Advancement of Science (AAAS). ESOF2004 will be held at the Stockholm City Conference Centre in Stockholm, Sweden, this summer, between 25–28 August. It is intended to continue with ESOF meetings on a biannual basis in the future.

Its objective is to bring scientists from all fields, and people interested in science and technology, from all over Europe to a single meeting. The participants will be scientists, science policy makers, administrators and representatives from media as well as the science based industries. Some 2–3 000 participants are expected to take part in the conference.

The programme includes 270 speakers from 33 countries and more than 80 scientific workshops, symposia, plenary lectures and debates. The conference also includes public outreach activities in Stockholm. Another activity, known as the ESOF2004 Career Programme, is organised by the Marie Curie Fellowship Association

and Naturejobs, the career resource of the journal, with the aim of furthering the career development of young researchers.

EIROforum and its member organisations will contribute to the programme by organising a special scientific session under the title 'European Research at the Cutting Edge' providing an overview of some of the most exciting recent research results obtained at our facilities. Furthermore, a public outreach event involves video-conferences between several of our research organisations, including CERN in Geneva and the Paranal Observatory in Chile, and the central venue in Stockholm. Finally, EIROforum will have a 70 sq.m. information stand with a number of activities during the conference.

ESOF2004 is an initiative by Euroscience, but has received strong support by the European Commission, the European Science Foundation, Nature, The Swedish Research Council, DFG, the Stifterverband für die deutsche Wissenschaft, The Bank of Sweden Tercentenary Foundation, the Robert Bosch Stiftung, etc.

For more information, including registration, please see [www.esof2004.org](http://www.esof2004.org)

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