

## 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)

CLAUS MADSEN (ESO)

**NOVA-ESO-MPIA workshop on**

# VLTI/MIDI

## Data reduction, Analysis and Science

Leiden Observatory/Lorentz Centre, The Netherlands  
October 11–15, 2004

The VLT-interferometer Mid-Infrared Instrument (MIDI) is unique in its kind and the only interferometric instrument available through an open call for proposals. The objective of the workshop is to provide the knowledge and tools to astronomers to:

1. Identify where MIDI can lead to new insights in astronomy
2. How to reduce MIDI data
3. How to interpret MIDI data

The program has sessions on:

- A: Basics of optical interferometry
- B: The VLTI/MIDI instrument
- C: Science with MIDI
- D: MIDI data reduction and analysis tools, and ESO observing preparation tools
- E: Teams will be formed and be working on MIDI data of Active Galactic Nuclei, Evolved stars, Young stars, Hot stars

The format of the workshop will be lectures combined with teamwork. Teams will reduce and analyze MIDI data during the workshop.

**SOC members:** Walter Jaffe, Andreas Quirrenbach, Eric Bakker (contact person), Christoph Leinert, Uwe Graser, Francesco Paresce. Full details and registration information can be found at: [http://www.strw.leidenuniv.nl/~nevec/workshop\\_2004](http://www.strw.leidenuniv.nl/~nevec/workshop_2004) or by email: [bakker@strw.leidenuniv.nl](mailto:bakker@strw.leidenuniv.nl)

**Date for interest to participate:** 1 September 2004 (required)

**Date for registration:** 15 September 2004

International Astronomical Observatories in Chile (IAOC) Workshop in 2004

# THE COOL UNIVERSE: OBSERVING COSMIC DAWN

Universidad Tecnica Federico Santa Maria (UTFSM), Valparaiso, Chile  
2004, October 4–8

**Sponsors:** ESO, NOAO, LCO, Gemini, NRAO, NAOJ

**Host:** UTFSM

**Rationale:** With the official start of the ALMA construction phase, it is of utmost importance to usher in the astrophysical topics which will be the prime scientific drivers for this outstanding facility. This is why we have chosen to organize the 2004 IAOC workshop on the subject of the cool universe and in particular, the contribution ALMA will make towards our understanding of the formation of astronomical objects at scales that range from protoplanetary systems to galaxies. Chile, the home of ALMA and the location of several existing submm, mm and cm telescopes (ASTE, APEX, CBI...), is a place that is particularly appropriate for hosting such a workshop.

The workshop will consist of a series of tutorial and reviews, each followed by oral contributions, to discuss physical processes in cool material and the astronomical objects in which they take place.

**Topics covered (tutorial and reviews):**

- Observing procedures and derivation of physical quantities in the submm/mm window
- The cosmic microwave background (CMB): theory and observation
- Galaxy formation up to enlightenment: theory and predictions
- Emission processes on the ISM (includes maser)
- Molecular clouds and fragmentation: modeling and observations
- Star formation, stellar evolution, astrochemistry: models and observations
- The ISM properties across redshifts (includes absorbers)
- Fragmentation within protoplanetary discs: models and predictions
- Observational facilities on the Atacama Plateau
- Concluding remarks and Prospective

**Scientific Organizing Committee:** Danielle Alloin (Chair), Claire Chandler, Edith Falgarone, Guido Garay, Santiago Garcia-Burillo, Ryohei Kawabe, Anthony Readhead, Luis Felipe Rodriguez, Peter Shaver

**Local Organizing Committee:** Danielle Alloin, Eduardo Hardy, Kotaro Kohno, Cedric Ledoux, Chris Lidman, Lars Nyman, Bernadette Rodgers, Miguel Roth, Malcolm Smith, Massimo Tarenghi

**Dead-line for pre-registration: July 15, 2004**

Full details, list of invited reviewers and registration information can be retrieved from <http://www.sc.eso.org/santiago/science/cooluniv> and by email at [cooluniv@eso.org](mailto:cooluniv@eso.org)

Applications are invited for the position of a

## SENIOR ASTRONOMER DIRECTOR OF THE LA SILLA/PARANAL OBSERVATORIES

Career Path: VII

**Assignment:** The Director responsible for both Observatories will lead a multi-disciplinary team and act as a link between the User Community, the Director General and the Observatories. She/he will in particular be responsible for:

- the continuation, creation and implementation of scientific and technical policies for the operation of the Observatories in accordance with overall ESO policy
- the management of the Observatories and their staff members through the definition and implementation of goals and objectives
- the Observatories budget
- the representation of both observatories in the science community, public and public relations (e.g. media support, exhibitions, presentations etc.) in close interaction with the Public Relation Officers in Garching and Santiago.

The Director of the Observatories reports directly to the Director General and as a member of the ESO Management contributes directly to the development of the overall policy, strategic planning and maintains professional contacts at highest level outside the Organisation. The Staff of the Observatories presently consist of about 70 International and 150 Local Staff Members who work in groups or teams.

As a Senior Astronomer the Director of the Observatories is a member of the ESO Science Faculty and is expected and encouraged to actively conduct astronomical research. She/he should foster the participation and integration of the scientists of the Observatories in the ESO Faculty and in the Office for Science in Santiago.

**Qualification and Experience:** Basic requirements for the position include a PhD in astronomy, astrophysics or physics or related fields, substantial and long or equivalent experience in management and leadership preferably gained within multinational scientific organisations. A proven record in astronomical systems such as instruments, large optical telescopes or systems of equivalent complexity as well as an outstanding record of astronomical research and international scientific collaborations are required. Initiative, ability to judge, to decide and to work with people of different nationalities as well as excellent communication skills are essential. The position requires a very good knowledge of English and a working knowledge of Spanish or willingness to learn it.

**Duty stations:** La Silla, Paranal and Santiago, with regular duty travels to Munich to ESO's Headquarter.

**Starting date:** 1 April 2005

**Remuneration and Contract:** We offer an attractive remuneration package including a competitive salary (tax free), comprehensive pension scheme and medical, educational and other social benefits as well as financial help in relocating your family. The initial contract is for a period of three years with the possibility of a fixed-term extension or permanence. Serious consideration will be given to outstanding candidates willing to be seconded to ESO on extended leaves from their home institutions. The title or the grade may be subject to change according to qualification and the number of years of experience.

**Applications:** If you are interested in working in a stimulating international research environment and in areas of frontline science and technology, please send us your CV (in English) **by 15 August 2004**.

All applications should include the names of four individuals willing to give professional references.

For further information, please contact Mr. Roland Block, Head of Personnel Department, Tel +49 89 320 06 589, e-mail: rblock@eso.org. You are also strongly encouraged to consult the ESO Home Page (<http://www.eso.org/>)

## PERSONNEL MOVEMENTS

### International Staff

(1 April 2004 - 31 May 2004)

#### ARRIVALS

##### EUROPE

AHMADIA, Aron (US)	Student
BERTA, Stefano (IT)	Student
GRILLO, Claudio (IT)	Student
IRWIN, Jimmy (US)	Associate
LOPS, Roberto (IT)	Associate
LUCUIX, Christian (FR)	Electronics Engineer
MARTINEZ, Pascal (FR)	Associate
MIRALLES, Joan-Marc (AD)	Associate
PUGLIESE, Giovanna (IT)	Associate
QUIROS-PACHECO, Fernando (MX)	Student
REUNANEN, Juha Pekka (FI)	Associate
SPECK, Hartmut (DE)	Associate
TOZZI, Paolo (IT)	Associate

UTTENTHALE, Stefan (AT) Student

#### CHILE

ANDRETTA, Vincenzo (IT)	Associate
BECKER, Karl (DE)	Associate
DELVA, Pacome (FR)	Student
GIUFFRIDA, Giuliano (IT)	Student
HAUBOIS, Xavier (FR)	Student
HUNTER, Ian (GB)	Student
MILLOT, Nadia (FR)	Student
NOTERDAEME, Pasquier (BE)	Student
RAGAINI, Silvia (IT)	Student
RAHOUI, Farid (FR)	Student
REVERET, Vincent (FR)	Fellow

#### DEPARTURES

EUROPE	
BAARS, Jacob (NL)	Associate

# ESO FELLOWSHIP PROGRAMME 2004/2005

The European Southern Observatory awards several postdoctoral fellowships to provide young scientists opportunities and facilities to enhance their research programmes. Its goal is to bring them into close contact with the instruments, activities, and people at one of the world's foremost observatories. For more information about ESO's astronomical research activities please consult <http://www.eso.org/science/>.

Fellows have ample opportunities for scientific collaborations: a list of the ESO staff and fellows, and their research interest can be found at <http://www.eso.org/science/sci-pers.html> and <http://www.sc.eso.org/santiago/science/person.html>. The ESO Headquarters in Munich, Germany host the *Space Telescope European Coordinating Facility* and are situated in the immediate neighbourhood of the Max-Planck-Institutes for Astrophysics and for Extraterrestrial Physics and are only a few kilometers away from the Observatory of the Ludwig-Maximilian University. In Chile, fellows have the opportunity to collaborate with the rapidly expanding Chilean astronomical community in a growing partnership between ESO and the host country's academic community.

In Garching, fellows spend beside their personal research up to 25% of their time on support or development activities of their choice in the area of e.g. instrumentation, user support, archive, VLT, ALMA, public relations or science operations at the Paranal Observatory. Fellowships in Garching start with an initial contract of one year followed by a two-year extension.

In Chile, the fellowships are granted for one year initially with an extension of three additional years. During the first three years, the fellows are assigned to either the Paranal or La Silla operations groups. Together with the astronomer in charge, they contribute to the operations at a level of 80 nights per year up on the mountain and 35 days per year at the Santiago Office. During the fourth year there is no functional work and several options are provided. The fellow may be hosted by a Chilean institution and will thus be eligible to apply for Chilean observing time on all telescopes in Chile. The other options are to spend the fourth year either at ESO's Astronomy Center in Santiago, Chile, or the ESO Headquarters in Garching, or any institute of astronomy/astrophysics in an ESO member state.

We offer an attractive remuneration package including a competitive salary (tax-free), comprehensive social benefits, and provide financial support in relocating families. Furthermore, an expatriation allowance as well as some other allowances may be added. The Outline of the Terms of Service for Fellows provides some more details on employment conditions/benefits.

Candidates will be notified of the results of the selection process in December 2004/January 2005. Fellowships begin between April and October of the year in which they are awarded. Selected fellows can join ESO only after having completed their doctorate.

The closing date for applications is **October 15, 2004**.

Please apply by:

- filling the form available at <http://www.eso.org/gen-fac/adm/pers/forms/fellow04-form.pdf> attaching to your application: a Curriculum Vitae including a publication list (the latter split into refereed and non-refereed articles, please) an outline of your current and past research, as well as of your research plans if you came to ESO (max. 2 pages) a brief outline of your technical/observational experience (max. 1 page)
- arranging for three letters of reference from persons familiar with your scientific work to be sent to ESO before the application deadline.

All documents should be typed and in English. The application material has to be addressed to:

European Southern Observatory  
Fellowship Programme  
Karl-Schwarzschild-Str. 2  
85748 Garching bei Muenchen  
Germany  
[vacancy@eso.org](mailto:vacancy@eso.org)

**Contact persons:** Nathalie Kastelyn, Tel. +49 89 320 06-217, Fax +49 89 320 06-497, e-mail: [nkastely@eso.org](mailto:nkastely@eso.org) for applications for Chile  
Katjuscha Haase, Tel. +49 89 320 06-219, Fax +49 89 320 06-497, e-mail: [khaase@eso.org](mailto:khaase@eso.org) for applications for Garching

All material must reach ESO by the deadline (**October 15**); the same applies to recommendation letters which should be sent directly by the reference person; applications arriving after the deadline or incomplete applications will not be considered!

BASTIAN, Nathan (US)	Students
BAUME, Gustavo (AR)	Associate
COURVOISIER, Thierry J.-L.(CH)	Associate
DI FOLCO, Emmanuel (FR)	Students
EGEDAL, Carsten (DK)	Engineer
EGHOLM, Mathias (DK)	Students
EHMKE, Veronika (DE)	Students
ELMHAMD, Abouazza (MA)	Associate
GARCIA, Perez Ana (ES)	Students
GREVE, Albert (NL)	Associate
HAU, George (GB)	Fellow
IRWIN, Jimmy (US)	Associate
KURZ, Richard (US)	European Project Manager
LEDO, Hugo (PT)	Students
LE POOLE, Rudolf Samuel (NL)	Associate
METZ, Manuel (DE)	Students
RAINER, Norbert (DE)	Associate
SNEL, Ralph (NL)	Associate
TOZZI, Paolo (IT)	Associate

## CHILE

ANDRETTA, Vincenzo (IT)	Associate
FIOKTISTOVA, Irina (RU)	Student
GIUFFRIDA, Giuliano (IT)	Student
GRILLO, Claudio (IT)	Student
JOHNSON, Rachel (GB)	Operation Staff Astronomer
RAFFI, Hernan (IT)	Student
SCATARZI, Alberto (IT)	Associate

## Local Staff

(1 April 2004 – 31 May 2004)

### ARRIVALS

JIRON, Paulina	Executive Bilingual Secretary
PEÑA, Eduardo	Software Engineer
ZAGAL, Juan	Software Engineer

### DEPARTURES

PEREZ, Juan Pablo	Electronics Engineer
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