

Release of Scientific Data from VLTI Commissioning

Technical commissioning activities of the VLTI with the VINCI test camera and the 40-cm diameter siderostats with 16 m baseline and the ANTU and MELIPAL 8-m telescopes with 103 m baseline have been ongoing since first fringes on March 17, 2001 with the siderostats and on October 30, 2001 with the 8-m. A number of astronomical targets from various object classes have been observed in these two modes.

The observations were made to assess the compliance of the instruments with the technical specifications as well as to characterise performance of the

facility in its first phase of development. In addition to these more technical tasks, a number of observations are certainly also useful for scientific purposes.

In order to fully involve the ESO community in analysing and understanding the data and its scientific and technical implications, ESO has decided to make these data available to this community through the archive.

The data were obtained in the period between March 17, 2001 and December 5, 2001 and have been deemed by the commissioning team and the VLTI Project Scientist to be of sufficient qual-

ity to warrant scientific work. The data are available directly on the ESO web (http://www.eso.org/projects/vlti/instru/vinci/vinci_data_sets.html).

Access to these data is restricted to astronomers in the ESO member countries. ESO welcomes community feedback on any aspect of the reduction, analysis and interpretation of these data. Please contact the VLTI project scientist (fparesce@eso.org), the VLTI group head (aglindem@eso.org) or the head of the Commissioning team (mschoell@eso.org) with your comments and for further information on this release. *F. PARESCE*

VLT Science Verification Policy and Procedures

Replicated from ESO web pages

1. Science Verification Observations

After the conclusion of Commissioning of a new VLT instrument, and prior to the start of regular operations, a series of **Science Verification (SV)** observations with such an instrument are conducted. SV observations may also be conducted in the case of a major instrument upgrade.

The equivalent of at least 11 VLT UT nights should be dedicated to SV observations.

SV Observations are conducted during the *dry runs* preceding the instrument regular operations. At the end of the scheduled dry runs, the VLT Programme Scientist submits to the Director General a report on the status of completion of the planned SV observations. If the corresponding set of data is judged insufficient to reach the goals of SV, the Director General may decide that further SV observations be executed during the first scheduled regular runs in Service Mode.

All SV Observations are conducted in Service Mode, but one or two members of the SV Team may be present at Paranal Observatory for a prompt reduction of the data, and the selection of the observations to be executed.

2. Goals of Science Verification

The goals of SV are manifold, and include:

- offering to ESO users first science-grade data from a new instrument
- demonstrating the scientific potential of the VLT+instrument
- fostering an early scientific return from the VLT+instrument
- experimenting any pipeline and reduction tools that may be available at the time of SV
- providing feedback to Operation (Paranal and Garching), Instrument Division, and Data Flow System, as appropriate
- the involvement of scientists from the ESO community in the prompt scientific exploitation of the data.

3. Science Verification Programmes and Data Policy

The SV Plan of an instrument is developed by a dedicated SV Team.

The PI(s) of the instrument subject to SV and the Instrument Science Team are involved in the definition of the SV plan.

The SV Programme is presented to the ESO Faculty for discussion.

The SV Programme is finally submitted by the VLT Programme Scientist to the Director General for approval.

SV observations of targets already included in GTO or approved GO programmes with the same instrument could be executed only with the agreement of the PI.

Raw and calibration SV data passing quality control are made immediately

public via the ESO archive, following the "Data Access Policy for ESO Data".

The SV Team will make efforts to release reduced SV data within two months from the conclusion of SV observations.

4. Selection Criteria for SV Programmes

SV Programmes are selected according to the following criteria: They should

- have outstanding scientific interest
- push the VLT+Instrument close to their limit
- address a scientific issue widely studied within the ESO Community
- result in a sufficiently complete dataset for its prompt exploitation to be scientifically rewarding
- use the core modes of the instrument
- help PIs and Co-Is of approved GO and GTO programmes to get promptly acquainted with the data from the instrument
- exploit complementarity with other public datasets (e.g. HDF-S/CDF-S/EIS, etc.), if appropriate.

5. The SV Team

5.1 Composition of the SV Team

A dedicated SV Team is assembled for each of the various SV phases, including Garching and Chile staff and fellows (typically up to 8–10 people).

In the selection of the SV Team mem-

bers the VLT Programme Scientist will follow the following criteria:

- Strong scientific interest for the specific capabilities of the instrument
- Technical experience with the type of data being produced by the instrument
- Wide coverage of the main scientific areas that the instrument is designed to satisfy

To all activities of the SV Team will also be invited to participate:

- The Instrument PI and Co-PI, or one person designated by each of them
- The ESO Instrument Scientist
- The ESO and Consortium Instrument Pipeline experts

4.2 Duties of the SV Team

The duties of the SV Team include:

- Development and pre-selection of the SV projects
- Preparation of the OBs, and their delivery to Paranal Observatory prior to the instrument dry runs
- Maintenance of SV WEB pages, describing the SV plan well in advance of the SV Observations, and including informative lists of SV data as they become public
- Real time assessment of the SV data at Paranal Observatory (maximum 2 SV Team members)
- Reduction of the SV data
- Delivery through the SV WEB and the ESO Archive of the raw, calibration, and calibrated data
- On users request provide information on the data
- The SV Team can have access to the Commissioning data prior to SV observations.

5. Scientific Exploitation of the SV Data

The scientific exploitation of the SV data can start as soon as the data are publicly released.

The formation of groups and teams for the scientific exploitation of SV data is left to the initiative of the individuals.

SV Team members are encouraged to promptly use the data and to stimulate the participation of scientists from the community.

Authors are kindly asked to send to ESO (Office of the VLT Programme Scientist) at submission time copy of any paper that may result from the use of SV data, along with a concise technical report on the use of the data, pipeline, etc.

News from Santiago

The spectacular fringes obtained at VLTI, as well as the intensive ALMA preparatory work in Chile, have suddenly brought the “world of interferometry” to full attention of the astronomical community in Chile.

Astronomers not yet familiar with this type of observational technique have started to realise the originality, the strength and the astrophysical potential of aperture synthesis observations, both at radio and at optical/IR wavelengths.

On the side of the pioneers who have been developing the techniques of interferometry for almost 30 years now, it is time to advertise widely their tools and enrol young researchers in this fascinating adventure. On the side of the astronomical community at large, the fantastic improvement in spatial resolution brought by interferometry is very attractive and opens new avenues for solving astrophysical problems.

Therefore, the demand has been growing in Chile for some basic and

practical information about interferometry: the principles, the instrumental solutions to be adopted according to the wavelength domain, and also the effective achievements of today’s interferometric instruments.

The idea of organising an “Interferometry Week” at ESO/Santiago was born almost two years ago and became a reality on 2002 January 14–16. After the traditional welcome (D. Alloin) and introductory remarks (M. Tarenghi), we could attend very well prepared and enlightening lectures on the basics of aperture synthesis (P. Lena), on interferometry in the radio domain and soon with ALMA (S. Guilloteau), on the science performed with millimetre interferometers (A. Dutrey), on optical/IR interferometry (A. Glindemann), on phase closure (M. Wittkowski), on the VLTI and its instrumentation (M. Schoeller) and, finally, on the science we can dream of with optical/IR interferometers (A. Richichi).

A large audience attended the tutorial, including a noticeable group of students from ESO/Chile, PUC and Universidad de Chile. At the request of the attendees, and thanks to the generous attention of the speakers, all presentations have been made available on a webpage and can be retrieved from: <http://www.sc.eso.org/santiago/science/interf2002.html>

Once more, we thank the lecturers and the attendees for a very interesting scientific meeting which, for some of us, has opened the door to new horizons in astronomical data and results. Many thanks also to the administration staff and to the team of the Office for Science in Santiago, in particular A. Lagarini, who have contributed in the organisation and the success of this “Interferometry Week”.

We hope that this first contact with interferometry (for some of the attendees) will be the start of exciting work and beautiful discoveries. *D. ALLOIN*

ESO Studentship Programme

The European Southern Observatory research student programme aims at providing the opportunities and the facilities to enhance the post-graduate programmes of ESO member-state universities by bringing young scientists 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 see the ESO Science Activities webpage at URL <http://www.eso.org/science/index.html>.

Students in the programme work on an advanced research degree under the formal tutelage of their home university and department, but come to either Garching or Vitacura-Santiago for a stay of up to two years to conduct part of their studies under the supervision of an ESO staff astronomer. Candidates and their national supervisors should agree on a research project together with the potential ESO local supervisor. This research programme should be described in the application and the name of the ESO local supervisor should also be mentioned. It is highly recommended that the applicants start their Ph.D. studies at their home institute before continuing their Ph.D work and developing observational expertise at ESO.

The ESO studentship programme comprises about 14 positions, so that each year a total of up to 7 new studentships are available either at the ESO Headquarters in Garching or in Chile at the Vitacura Quarters. These positions are open to students enrolled in a Ph.D programme in the ESO member states and exceptionally at a university outside the ESO member states.

The closing date for applications is June 15, 2002.

Please apply by using the ESO Studentship application form available on-line at URL <http://www.eso.org/gen-fac/adm/pers/vacant/studentship2002.html>.

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