78th Meeting of the
ESO Observing Programmes Committee
hold in Garching from 29 May – 2 June, 2006

A. OPC meeting - Part 1 (29 May, 2006)
B. Panel Sessions (30/31 May, 2006)
C. OPC meeting - Part 2 (1/2 June, 2006)

The meeting took place with the following participants:

Chairperson: Dr. Lutz Wisotzki (Germany)

Members:
Dr. Xavier Barcons (Spain)
Dr. Eric F. Bell (Germany)
Dr. Simon Morris (United Kingdom)
Dr. Hans de Ruiter (Italy)
Dr. Sven De Rijcke (Belgium)
Dr. Martin Groenewegen (Belgium)
Dr. Jari Kotilainen (Finland)
Dr. Tom Richtler (Chile)
Dr. Rafael Rebolo Lopez (Spain)
Dr. Andre Moitinho (Portugal)
Dr. Daniel Rouan (France)
Dr. Michiel Hogerheijde (The Netherlands)
Dr. Hermann Boehnhardt (Germany)
Dr. Maria Teresa Ruiz (Chile)
Dr. Monica Tosi (Italy)

On behalf of ESO:
Dr. Catherine Cesarsky
Dr. Gautier Mathys
Dr. Bruno Leibundgut
Dr. Marco Lombardi
Dr. Olivier Hainaut

Secretariat: Elisabeth Hoppe
A. OPC meeting – Part 1

The new OPC chairman, Dr. Lutz Wisotzki, opened the 78th OPC meeting. All participants to the meeting introduced themselves in a tour-de-table.

1. Introduction by the Director General

The Director General welcomed all participants to the meeting and emphasized the importance of the OPC in its role to evaluate and rank the proposals in order to ensure the best possible use of the ESO telescopes. She was pleased to see that the standing practice of reviewing the OPC procedures every period to continuously optimize the evaluation process has proved to be a very successful approach so far. Finally she introduced Dr. Gautier Mathys as new Head of the Visiting Astronomers Department.

Some recent news of relevance concerned:

APEX
APEX is a collaboration between Max Planck Institut für Radioastronomie (MPIfR) at 50%, Onsala Space Observatory (OSO) at 23%, and the European Southern Observatory (ESO) at 27%. First observations with APEX-2a and the PI instrument FLASH resulting from a Delta Call in P77 had been very successful with a high publication rate in A&A. Unfortunately the Bolometer Array LABOCA is suffering from some further delays, which might require another Delta Call in the near future.

Dr. Bell commented that in P77 the Delta Call for FLASH had not been published widely enough and recommended a wider distribution list for such extraordinary calls. Dr. Leibundgut replied that upon official request by the UC, ESO will introduce an electronic newsletter to keep the community informed about current activities of interest at ESO. These communications will include announcements of Calls for Proposals, announcements for special observing opportunities such as Delta Calls or surveys, announcements of opportunities for instrumentation or software development, and other information of interest to the community. The newsletter will appear roughly every two to three months or whenever important news becomes available. It will not replace the regular ESO publications such as The Messenger or Press Releases.
Surveys
At the 62nd meeting held on April 6-7, 2006 the STC suggested in its recommendation on survey that the OPC could award up to 15% of the available ESO time to PI-led surveys and that this fraction should be considered in scientific competition with the public surveys, with any unallocated time returned to the public surveys. In accordance with this recommendation as a way of relieving pressure on the VST, negotiations with the Max Planck Gesellschaft were initiated for the extension of the loan of the 2.2m telescope until March 31, 2009, in order to possibly accommodate VST GTO time.

2./3. Adoption of the Agenda and Approval of the Draft Minutes of the 77th Meeting

The agenda of the 78th OPC meeting was adopted with the modification to include a summary by Dr. Leibundgut on the GRB meeting for P77 held on March 7, 2006.

The minutes of the 77th OPC meeting were approved without any changes.

4. Dates of the next meeting

The next OPC meeting is scheduled in the week of November 20 to 24, 2006.

5. Reports on on-going Large Programmes

After a thorough discussion of the progress reports on the 13 ongoing Large Programmes, the OPC approved all of them for continuation or conclusion.

6. Presentation of finished Large Programmes

Upon invitation by ESO, presentations on the following two finished Large Programmes were held:

171.D-0237: "The FLAMES survey of massive stars in the Magellanic clouds".
PI: S. J. Smartt (presentation given by Dr. Smartt.)

171.B-0588 “Dwarf galaxies: remnants of galaxy formation and corner stones for understanding galaxy evolution” PI: E. Tolstoy (presentation given by the Co-I, Dr. Irwin.)
The OPC was very impressed by the presented results and the high impact and visibility in their field. Nevertheless it was felt that some more emphasis could have been put on the conclusions drawn from the results and therefore wondered whether the time interval between the end of the project and the final presentation should be extended.

Considering the large number of ongoing LPs which are expected to finish, the OPC doubted that in the future it will be possible to accommodate this agenda item the frame of the OPC meeting.

The OPC was very enthusiastic about Dr. Leibundgut’s suggestion to hold on a more regular basis Large Programme workshops as the one of 2003, which was very successful.

7. Overview of P78 Large Programmes and Targets of Opportunity

Large Programmes

For P78 20 Large Programmes (LPs) were submitted with a rather even distribution among the scientific categories (7 to Panel A, 5 to Panel B, 5 to Panel C and 3 to Panel D).

Due to the large number of new OPC members the chairman summarized the procedures to be adopted for the discussion and ranking of LPs, first in the Panel and then by the joint OPC. He emphasized that in case the Panels recommended a LP to be converted to “normal” it should be graded as such (normal) on the sub panel level.

Some members of the OPC found it not very appropriate to discuss the “virtual” Large Programmes for Visitor Instruments together with the “regular” Large Programmes for a given period. Dr. Leibundgut replied that the adopted procedure is that these “virtual” Large Programmes should be scientifically judged by the OPC. If highly ranked, then ESO will/can start negotiations with the consortia which will result in the final LP submission.

In view of the fact that some normal programmes are very large and do recur over several periods Dr. Bell raised the question as to whether a conversion from “Normal” to “Large” option should be considered.

Dr. Wisotzki replied that this is not feasible within the present system and that in any case programmes of this kind should be judged period by period.

In general the OPC felt that some revised guidelines regarding the evaluation process of LPs and a more detailed overview on future LP commitments would be beneficial.
ToOs

Dr. Ruiz gave an overview of the ToOs that were top ranked according to the assigned pre-grades, indicating the requested targets and triggers.

Dr. Leibundgut reported on the meeting of GRB ToO PIS for P77 which took place in Garching on 7 March, 2006 with 7 PIs. At this meeting the two big ToO teams gave presentations of the scientific highlights achieved and agreed to coordinate their projects. Furthermore it was agreed that RRM projects would have no proprietary period and would not be allocated per month but on a “first come first serve” basis. The data would be made public to all successful GRB PIs while follow ups of RRMs projects would be treated as regular ToOs.

Dr. Leibundgut further sketched out a few outstanding ToOs events in 2005. Some borderline cases between Supernova and GRB events proved the need for clearer definitions and procedures in order to alleviate the burden of the responsibility regarding the implementation of the observations and data distribution which presently is on the side of the Observatory directorate.
Panel Sessions

1. Welcome and Information to Panel Members

Dr. Wisotzki welcomed all participants and in particular the new Panel members and gave a summary of the agenda of the week and of the aspects to be considered regarding the evaluation of Normal Programmes, Large Programmes and ToOs.

Dr. Mathys took the occasions to introduce the members of the Visiting Astronomers Department.

Some aspects raised by the participants regarding the feasibility assessment by the observatory, the final OPC comments, the rules for carry-over of SM programmes and the standing procedures for Visitor Instruments were discussed.

2. Report by Dr. Mathys

Dr. Mathys gave an overview on the number of submitted proposals, their distribution over the observing sites, the pressure on the individual telescopes, and the time distribution in P78 (ANNEX 1).

3. Report on Instruments

Dr. Hainaut presented the La Silla Paranal status report including developments and news for P78 (ANNEX 2).

Review of Applications by the Panels

The Panels reviewed the applications for P78 on May 30 and 31. After the Panel meetings the OPC documents with the Panel recommendations were issued for the final discussion on June 1 and 2, 2006.

Joint sub panel discussions on LPs, ToOs and Normal Programmes were scheduled in order to sort out possible duplications and to co-ordinate the ranking.
C. OPC meeting – Part 2

1. Reports from the Panels

This agenda item was found to be redundant since it appears also on the following day, when Panel chairs will report on the scientific highlights.

2. Ranking of Large and ToO Programmes

a) Large Programmes

The Panel chairs gave a detailed summary of the joint discussions of the Large Programmes submitted in their category indicating which proposals had been recommended by their Panel. After a thorough discussion and a concluding vote, the OPC recommended 4 Large Programmes for implementation in P78. In addition 2 “virtual” Large Programmes for a visitor instrument were accepted.

The OPC recommended that in the future the joint Panels should decide on the conversion of from “LP” to “Normal”. The OPC should still vote on this decision but would normally follow the recommendation of the Panels.

b) ToOs

For P78 25 Targets of Opportunity were submitted of which 12 for GRBs mostly from the two big consortia, 7 for SNs and 6 for other topics. The chairs of Panel D had prepared a suggestion for implementation based on a rank list of the proposals indicating the approximate commitments as concerns the numbers of targets and triggers. Dr. Wisotzki thanked the Panel chairs for this valuable input and the OPC agreed to go along these suggestions.

Dr. Ruiz remarked that in order to facilitate the preparatory work of the D Panel chairs it would be good to have clearer procedures and to receive more input from the other panels with ToOs. In addition, as a follow-up information for the next OPC meeting a list of ToOs which have actually triggered and how often would be very helpful. The OPC chairman concluded that for the next meeting a joint ToO discussion of all concerned Panel chairs should be foreseen on Thursday morning.
3. **Scientific Highlights (reports from the Panels)**

The Panel chairs gave a summary of the scientific highlights in their panels. They were pleased to see a very broad range of topics and several excellent Programmes for the VLTI and for APEX. Given the fact that APEX is still quite new the Panel chairs considered it helpful for the evaluation process if the science cases in the presented proposals were a bit more extensive and explanatory.

4. **Report on Public Surveys**

(Dr. Madga Arnaboldi)

Dr. Arnaboldi, the ESO survey team leader gave a comprehensive overview of the ESO Public Surveys project, the policies to be applied, responsibilities, tools, recommended VST Public Surveys, including the timeline until the submission for P79 (ANNEX 3).

The Director General stressed the strong support expressed by the STC as part of the recommendation from its 62nd meeting for increase of the fraction of time allocated to Public Surveys in the early stages of operation of the VST and VISTA with a view to maximizing the scientific impact of these surveys.

5. **OPC Procedures for future periods**

**Large Programmes**

- All Large Programmes should be graded in formal joint Panel sessions using the Panel tool. (Guidelines for an overall LP procedure will be written by the OPC chairman.)
- In case of conversion from LP to NP, a description of the way in which this conversion could be achieved should be given in the proposal form (e.g., in box 9, or as part of the science justification). This new feature should be announced in the Call for Proposals.
- Large Programmes that were not recommended by the Panels should not be re-discussed on the OPC level unless the OPC wants to “rescue” them.
ToOs

- ToOs should be pre-discussed in joint sessions with all concerned Panel chairs.
- The proposal form should provide an additional page/entry for specification of the number of triggers per source and description of the triggering strategy.

Information/documents provided by VISAS

- Scheduling information should be presented so that the OPC can get a complete overview of the highly-ranked proposals that could not be allocated time.
- Execution statistics on previously approved ToOs should be provided.

Suggestions (“to dos”) for the future

- The scientific OPC sub-categories should be reviewed to minimize overlaps and ambiguities between panels.
- The procedures for “visitor instruments” (especially the submission of “virtual” proposals for pre-approval of the instrument) should be reviewed.
- In Box 10 of the proposal form the possibility to replace the current “Report on the use of ESO facilities during the last 2 years” by e.g., a report covering a longer period of time, but limited to science related to that of the proposal, should be evaluated.
- New guidelines for the OPC comments should be implemented.

Electra

- Electra should be updated to allow for a direct upload of comments to the WOT form.

6. Conclusions by the Director General

The Director General was pleased to see that the first OPC meeting according the new rules and procedures and with 3 Panels in categories C and D was a success. She thanked all participants for their work.

7. Other business

none
A N N E X 1
# Total number of proposals received in P78

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<th>C</th>
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* Including 25 ToO proposals (20 in Panel D)
Proposal submission history
Users submit late... too late?

- Between 0:00 and 12:00 noon on March 31:
  - ESO email system failure
  - ESO ISP blackout
  - Web receiver server problem

We have been able to rescue all submissions with an attempt before March 31, 12:00 that we know of.
Pressure
Paranal, La Silla & Chajnantor

![Graph showing data for Paranal, La Silla, APEX, Paranal_LaSilla, and LaSilla_APEX over the period 1963 to 1978.](image)
Scientific areas P78

Number of proposals

Requested time
P78 time distribution

Available to OPC78

Non-Science Time
Calibration time
LP commitments
Carry over
GTO + SV/SDT
DDT (5%)

Total: 1314 nights + APEX
Your mission today

Really good!

Resource limit

Cut-off

3.0

Really bad!

All proposals with grade < 3.0 will be used in the schedule
Merging panels (per telescope)

1 2 3 4 5 6 7

1 2

(…)

VISAS - OPC 78
Merging panels (per telescope)

(...)

1
2
3
4
5
6
7

1
2
ANNEX 2
P76 summary

- Nights of science on the telescopes
  - UT1 91% (of this 3.3% lost to technical probs)
  - UT2 91% (2.1%)
  - UT3 89% (4.7%)
  - UT4 90% (3.5%)  Total UT1234= 649n over P76
  - VLTI 71% (8.4%)
  - NTT 85% (1.9%)
  - 3.6-m 79% (1.1%)
  - 2.2-m 86% (2.5%)

- Weather downtime at Paranal: 6% (good!)
P77 schedule
Overview
La Silla P78

• **2.2m**
  - WFI
  - FEROS
  - [ GROND ]

• **NTT**
  - EMMI
  - SuSI-2
  - SofI

• **3.6m**
  - HARPS
  - CES
  - EFOSC-2
  - TIMMI-2
  - (Cigale, PI instrument, P76)
Overview
Paranal P78

• UT1
  – FORS-2
  – ISAAC
  – [ CRIRES ]
    • Commissioning
      + SV in Aug.

• UT2
  – FORS-1
  – UVES
  – FLAMES

• UT3
  – VIMOS
  – VISIR

• UT4
  – NaCo
  – SINFONI
  + LGSF
    • “Seeing Improvement”

• VLTI
  – AMBER
  – MIDI

La Silla Paranal - OPC May 2006
Overview
APEX P78

• **P77:**
  – **APEX-2A** (Facility Instrument)
    • Heterodyne receiver, remotely tunable in 279-381GHz

• **P78:**
  – **FLASH** (PI Instrument)
    • Dual channel DSB receiver: 460-495 GHz + 790-840GHz
    • With MPIfR/Bonn

• **Future:**
  – **LABOCA** (Facility Instrument)
    • Bolometer Array, 870micron
    • Plan: commissioning Jul.+Sep., offered for P79
  – Wobbling Sub-reflector: P79
  – **CHAMP+**
    • Multi-Beam Heterodyne
    • MPIfR PI instrument
    • Commissioning Aug., for P79

La Silla Paranal - OPC May 2006
La Silla Instruments

- **TIMMI-2**
  - Decommissioned

- **WFI**
  - Grisms not offered in P78
  - Contamination: decontaminated!
    - systematic FF monitoring started

- **SuSI**
  - Windowing mode restored

- **SofI**
  - Grism and slit wheels cryomechanical problems
    - work around + intervention
La Silla Instruments

• **HARPS: EGGS, High efficiency fiber set.**
  - Larger aperture: 1.4”
  - No scrambler
  -> **Efficiency gain: 75%**
  - Resolution decreased to 80 000
  - Radial Velocities > 30m/s
  - VM only
News
Paranal Instruments

• **FORS-2** HIT mode:
  – High time resolution (2.3ms to 2.3s)
  – Imaging (VM/SM)
  – Spectro (VM only): object + reference star

• **FORS-1**:
  – VPHGrism 1200B, 373-497nm at 0.61A/pix.
    Replaces 1200g (P77)

• **VIMOS**:
  – VPHgrs for HR-Red
    Improvement > 1.5 over 647-872nm (P77)
  – Improvement on flexure compensation system
    Now: less than 2pix/180deg rotation

La Silla Paranal - OPC May 2006
News

Paranal Instruments

• **VISIR:**
  – MR spectroscopy over large parts of N and Q
  – HR echelle spectroscopy over many lines
  – Target acquisition in Imager Mode
    Targets 10x fainter
News

• Rapid Response Mode
  – Routine operations on FORS1/2, UVES, ISAAC
  + CONICA in P78

• Pipelines:
  ISAAC and SINFONI released
P78 News: LGSF

• Artificial Sodium **Laser guide star**
  – Positioned on top of Science target
  – High order AO corrections
  – Natural guide star required for Tip-Tilt
    • $V=12-17$, distance $< 40''$ from science target

• Commissioning under way
  – Hard- + Software upgrades for Laser mode
  – High order (LGS), TipTilt (NGS), LGS jitter, trombone focus loops closed!

• **P78: NaCo and SINFONI**
  – “seeing enhancement” mode
  – SM only

La Silla Paranal - OPC May 2006
P78 News: VLTI

- **MIDI:**
  - 2UTs: any of the 6 baselines
  - 2ATs: E0-G0=16m / G0-H0=32m / G0-K0=64m
  - As of P77: VCMs on delay lines

- **AMBER:**
  - **Overheads decreased by 25%**
    - Acquisition procedure
    - Fringe detection algorithm
  - **P78**:
    - 3UTs, any of the 4 baselines
    - HR-K offered
  - AMBER @ ATs being commissioned

- **ITF** proceeding toward fringe tracking
  - “Technical” fringe tracking.

Implementing improvements to UTs + DL ( VLTIII)

La Silla Paranal - OPC May 2006
SM / VM P78

- UTs: <~ 60% SM
- ATs: SM
- APEX: SM
- NTT, 3.6m:
  - VM, with few exceptions (<10%)
- 2.2m:
  - WFI: SM, with few exceptions
  - FEROS:
    - VM encouraged
    - SM: Fillers and monitoring
  - restrictions in order to complete existing SM programs.

- OBs ≤ 1h
Telescope usage

Service
Visitor
Engineering
Commissioning
Telescope Usage
Downtime breakdown

- Weather
- Technical Execution
- Preparation
- Other

-78% fraction of operation time
- 69% fraction of science time

UT1 - Antu
UT2 - Kueyen
UT3 - Melipal
UT4 - Yepun

VLTI
ANNEX 3
ESO Public Surveys

Magda Arnaboldi

ESO, User Support Department
ESO Survey Team (EST) leader

Outline

- ESO policies for Public Surveys
- Implementation of Policies
- The ESO Survey Team - EST
- The ESO Tools for Public Surveys
- The recommended VST Public Surveys
- The call for VISTA Public Surveys
- Public Surveys and Virtual Observatory
ESO Policies for Public Surveys

Following recommendations by STC and OPC, >75% of the ESO time on VST (optical) and VISTA (NIR) will be devoted to Public Surveys. ESO does not have the resources (mostly man-power) to conduct Public Surveys on behalf of the community, but it also seems more appropriate if teams interested in the exploitation of surveys are also responsible for delivering the data products to the community. Therefore, ESO decided to open the public survey time on these telescopes to proposals from the community. The policies for ESO public surveys explain the mechanisms that ESO has developed to manage survey projects from proposal preparation, to distribution of data products through the archive.

Implementation of ESO Policies

1. After the OPC recommends the Public Surveys (PSs) and the Director General awards the time, the (single) contact point for the PI’s shifts from VISAS to the leader of the ESO Survey Team (EST) who will remain the single point of contact until the completion of the survey.

2. As part of the process, the PI’s will submit a management plan to ESO, which will be an important part for ESO’s appraisal of the proposal. The ESO Guidelines for the preparation of Survey Management Plans (SMP) are available at www.eso.org/observing/guidelines

3. The SMP will be reviewed by the ESO, iterated with the PIs and the chair of the PSP. The ESO DG will grant final approval.

This is the current step with VST public surveys!
Implementation of ESO Policies

The management plan will be reviewed by ESO as follows:

- The SMPs are reviewed by ESO in consultation with the chair of the PSP. The RIXes thus generated are sent to the PIs for comments and revisions.
- The revised SMPs are reviewed by a panel composed of the heads of the Data Management Division, the VLT programme scientist, and the corresponding Paranal instrument scientist. In the case of VISTA the panel will also include the VISTA project manager. The head of the EST will be part of the panel as rapporteur.
- The review panel recommendations are sent to the Director General, for approval or further actions required.

The ESO Survey Team

The EST is composed of the following ESO staff:

- **Magda Arnaboldi** (Team Leader - User Support Department) responsible for the review of the SMP, Phase II preparation and tools, PS monitoring and team coordination.
- **Marco Lombardi** (VISAS) responsible for proposal handling and scheduling.
- **Mark Neeser** (Quality Control Group within the Data Flow Operations Department; OmegaCam QC scientist) responsible for validation of the data-products.
- **Laura Parker** (ESO fellow - Office for Science) supporting SMP review, Phase II preparation and quality control, PS monitoring.
- **Piero Rosati** (Advanced Data Products Group within the Virtual Observatory Systems Department) responsible for preparing the documentation on data product format guidelines, ingestion of the data products into ESO Science Archive Facility, publishing them in the VO, and advising the PI’s on all issues related to this part of the process.
EST responsibilities:

I

• Reviewing the survey management plan in all its dimensions. To ensure that the Survey teams have the necessary resources and a clear plan so that they can successfully carry out the proposed public surveys.

• Taking part in the commissioning of VST/VISTA and collaborate to finalize PHASE II tools (SADT, p2pp upgrade).

• Definition of the ESO standard calibration plan of Omegacam and configuration of the QC parameter in the DFO pipeline.

• Support the PI’s to optimize the scheduling of the observations (Phase II).

• Monitoring the progress of the public survey - how data is transferred from the Observatory to teams, the percentage of completion of PHASE II OBs in each semester, and the monitoring of data product delivery from PS teams to the ESO archive.

EST responsibilities:

II

• Validating Survey data. As stated on the ESO web pages “The ultimate responsibility for the data quality and the accuracy of the data products delivered by a survey rests with the Principal Investigator”. The EST will act as a referee and will base its assessment of the data quality of the survey products on the quality control parameters and detailed report provided by the survey teams. These quality control parameters are described in the Survey Management Plan, and the EST will ensure that the PS teams comply with these quality control standards. In case of disagreement, then the EST may carry out independent checks on a subset of data products delivered by the PIs, using standard tools and consolidated criteria.

• Issuing and updating guidelines and ESO standards for ingestion and digestion of data products by the ESO archive.
ESO Public Surveys

Tools

- Survey Pointings: A survey area definition tool, SADT, provided by the VISTA consortium, will also be made available for the PHASE II preparation of PSs with both VST and VISTA.
- Observing Blocks: Since for a survey the number of OB's will be large, the PI may either develop special tools to do this, or may use tools developed by ESO, which, however, will be generic and tailored to support all ESO public surveys. The functionalities of P2PP will be upgraded in order to incorporate features required for large surveys such as time series, groupings, and easy ingestion of large numbers of pointings.

The VST Public Surveys

The first generation of public surveys with VST has been selected using these policies:

The first call for Public Surveys was issued on the ESO Web site on December 2004 and generated a vigorous response from the community. A total of 15 proposals were received, most by rather large teams of astronomers from different institutes and countries.

The proposals were reviewed by the PSP in two meetings which took place in April and June 2005. 3 proposals were recommended by the OPC:
1. KIDS - The Kilo-Degree Survey: PI K. Kuijken
2. The VST Atlas: PI T. Shanks
3. VPHAS+ - The VST photometric Hα and broad-band survey of the Southern Galactic Plane: PI J. Drew
The VST Public Surveys

The VST Public Surveys - KIDS I

**KIDS - The Kilo-Degree Survey: PI. K. Kuijken (Leiden+18 co-I’s).**

This massive (1500 sq. deg. in 4 bands) survey targets two areas of the sky where large redshift surveys have taken place: an equatorial strip on the North Galactic Cap, and a patch near the South Galactic Pole.

In terms of sensitivity, the KIDS survey, which has been designed with weak lensing as a major goal, lies between the on-going Sloan Imaging Survey (SIS), which is about 2.5 mag. shallower, but covers 7 times the area, and CFHTLS-Wide survey which is roughly 1 mag. deeper, but covers an area 9 times smaller. The image quality of KIDS is expected to be 2 times better than SIS, and slightly better than CFHT.

The KIDS large homogenous data set with photometry from u’ to K and spectroscopy for about 200,000 galaxies will serve to tackle a number of very important problems in cosmology ranging from the detection of high redshift (z>6) QSO’s and thousands of clusters at z>1, to understanding the structure of galaxy halos as functions of galaxy type and environment.
The VST Public Surveys - KIDS II

KIDS expected to be completed in 2-3 years!

The VST Public Surveys: the VST ATLAS

Aimed at surveying 4500 sq. degrees of the Southern Sky at comparable depths to the Sloan Digital Sky Survey (SDSS). This would be the first step at surveying the entire Southern Sky in the optical bands.

VST atlas covers 2 separate regions: 10:30< α <15:30 and -20< δ<-2.5 and 21:30< α <04:00 -50< δ<-15. To be completed in 3 years.

The science driver is to characterize the dark energy equation of state by detecting the so-called baryon wiggles in the power spectrum of about 450,000, z~0.7 luminous red galaxies for which spectra will be obtained with the new AAOmega instrument on the AAT.
The VST public Surveys: the VPHAS

VPHAS+ - The VST photometric Hα and broad-band survey of the Southern Galactic Plane: PI. J. Drew (Imperial College+27 co-I’s).

VPHAS+ will collect broad-band (u’,g’,r’,i’) and narrow-band Hα photometry across the entire Southern Galactic plane, ~1800 sq. degs, within the latitude range -5 < b < +5 degrees, and longitude 210 < l < 35, down to point source magnitudes of 21-22.

This will allow to fully explore all but the most heavily obscured locations in the Galactic plane, thus allowing to chart the star formation history of the Galaxy. The VPHAS+ catalogue will contain more than 200 million objects, and will complement the on-going r’,i’,Ha sister survey in the Northern part of the plane.

VPHAS requires 4 months VST observing time, distributed over 3 years.

The VST Public Surveys: use of resources

Usage of moon illumination, seeing and sky transparency resources for KIDs, VPHAS+ and VST ATLAS. The histograms show the number of expected telescope hours required.
The VST public Surveys: use of resources

Left: the histograms show the resources needed in years of telescope time in each 2-hrs bin for KIDs, VPHAS+ and VST ATLAS. Right: joined resources needed. Dashed horizontal lines in both plots indicate average completion time in all bins.

The call for VISTA Public Surveys

The Calendar for the submission and appraisal of VISTA Public Survey proposals is as follows:

- **January 15** - Call for Proposals
- **March 15** - Deadline for the submission of VISTA public survey proposals
- **May 2-3** - First meeting of the VISTA Public Surveys Panel - Chair - Duccio Macchetto
- **June 20-21** - Second meeting of the VISTA PSP with participation of PI’s
- **Mid July** - Recommendations of the VISTA PSP communicated to PI’s
- **October 1** - Deadline for the submission of Public Survey Proposals to OPC taking in consideration the recommendations of the VISTA PSP
- **November** - OPC
Public Surveys and the ESO archive

- ESO is working towards making its archive “VO-compliant”
- Public Surveys data products (and those from Large Programs as of P75) will be “ingested” and “published” in a VO-compliant way, as they will be extremely useful to VO users (homogeneous, calibrated)
- The ADP group in the VOS department is putting together a detailed set of requirements (and building the infrastructure) for such a process
- Selected ESO data products (e.g., GOODS), both imaging and spectroscopy, will be used to test the system

Summary

- EST implements ESO’s strong commitment to PSs: to support the PS teams from Phase II to raw data delivery, to assist them in the quality control and timely completion of the Surveys.
- EST assists the ESO VO to make Public Surveys data products accessible through its archive and to have them delivered to the community in a timely manner.
- EST sees after enforcing the standards and requirements needed for publishing PS data in a VO-compliant manner: in the era of the Virtual Observatory, it makes no sense to archive and distribute simply the raw data to the community.