Proposed Economy Measures

A recommendation for increased priority also implies an identification of other areas where a corresponding reduction of effort can be made. Minor, cosmetic measures will not lead to significant overall relief, nor can a single radical measure do so at a scientifically acceptable cost. Hence, the recommendations of the WG have considered a broad range of actions.

Much of the workload on the staff is due to frequent instrument changes. Hence, the WG proposes a system of block scheduling on all telescopes on which the instrument configuration cannot be frozen entirely. Service observing would be introduced as a serious option. Test and setup time can be minimized as part of the benefits.

In parallel, a balanced plan is proposed (summarized in Chapter 6 of the Report) to redistribute the instrumentation among the telescopes so that maximum specialization is achieved at each telescope while limiting the total choice as little as possible. Rare exceptions would still be allowed.

Finally, the WG recommends that a few facilities be decommissioned as no longer competitive on the basis of quality of the data, quality and quantity of recent proposals, and operational and maintenance effort. In addition to a few instruments, this category includes the Schmidt telescope (as a general user instrument), the GPO, and ESO use of the Danish 50-cm telescope.

Lessons Learned

Most reactions to these proposals have shown real understanding of the factual situation: Despite very difficult financial conditions in most of the member states, ESO is nevertheless allowed to proceed with the construction of our most coveted tool: The full-scale VLT – the world's largest telescope. Looking at the fate of some other large research projects in the world, it is not unreasonable that we contribute by trimming some of our lower-priority activities.

Other comments have taken the form of unconditional demands for continued support for this or that favourite facility, regardless of the impact on the rest of ESO. Few of us are in a position to make such demands in our home countries, and even powerful rhetoric cannot by itself make staff and money appear.

The central message of the report is that ESO is now finding itself in the real world of limited resources, and we have to respond rationally to this discovery. This includes the ability to assign priority to certain overall scientific goals in a long-term strategy, and to programme resources so as to actually achieve them. Demands for wholesale perfection beyond ESO's means are basically pointless and lead instead to general dissatisfaction.

Longer-Term Prospects

Human beings are imperfect, and conditions change. The WG therefore strongly emphasizes that the task is not finished with the present report: Reviews of operating modes and adjustment of the facilities offered must become a permanent (e.g. annual) feature of ESO's forward planning.

The compromises reached can never satisfy everybody. The inevitable dissatisfaction of some is best turned into proposals for future improvements. Its least constructive expression would be to criticize those on La Silla who are charged with the execution of these necessary policies.

A final important lesson from this work is how little even relatively major restructuring of the observing facilities on La Silla and the way they are scheduled results in measurable effects on the total workload of the T.R.S. Department, let alone on the budget of ESO/Chile as such. For the longer term, this exposes again painfully clearly how small a fraction of the total effort and budget of ESO has direct impact on the scientific productivity of the La Silla Observatory.

It follows that when further efficiency measures become necessary in 1996, mere reduction of scientific opportunities along the course explored here, leaving the organization itself untouched, is not the appropriate starting point for a rational solution.

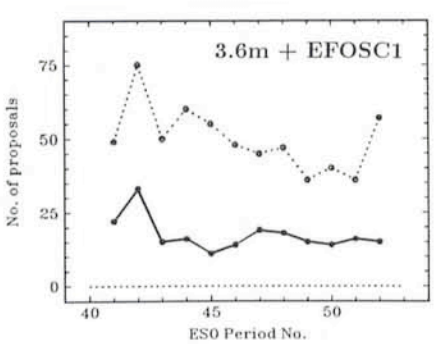
Profound reorganization of the entire ESO infrastructure in Chile will be needed in order for La Silla and Paranal together to serve the ESO community in a scientifically competitive and cost-effective way in the VLT era.

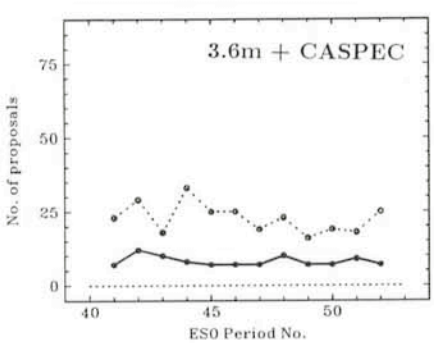
Proposal Statistics

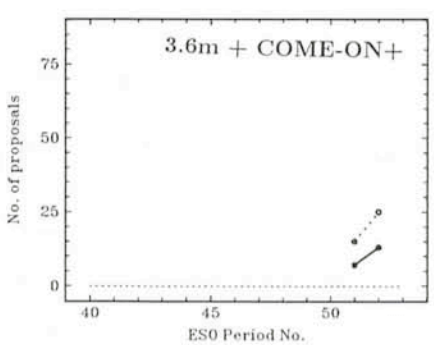
J. BREYSACHER, ESO, and J. ANDERSEN, Chairman ESO-STC

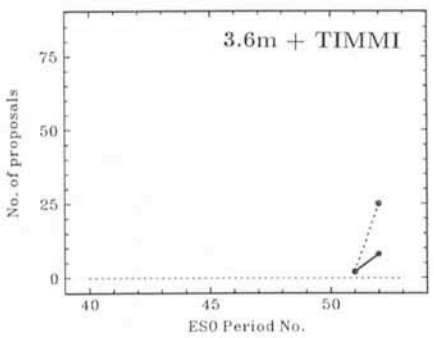
In the following figures, the number of observing proposals received (dotted lines) and accepted by the OPC (full lines) is plotted for each telescope/instrument combination as a function of the ESO period number. The data cover Periods 41 through 52 (1988–1993).

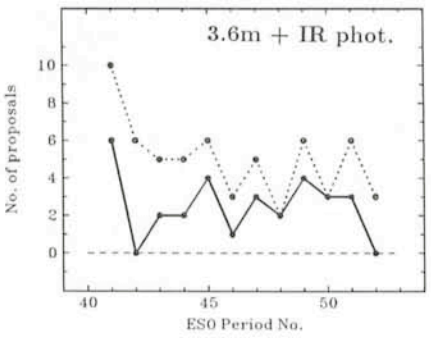
These statistics were prepared for the Working Group on Scientific Priorities for the La Silla Operations.

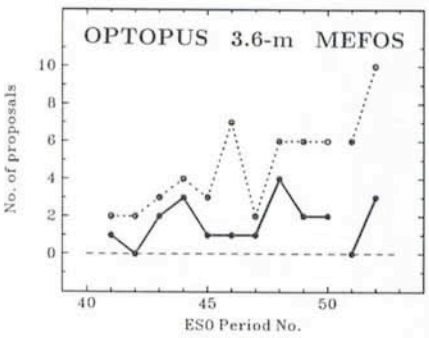


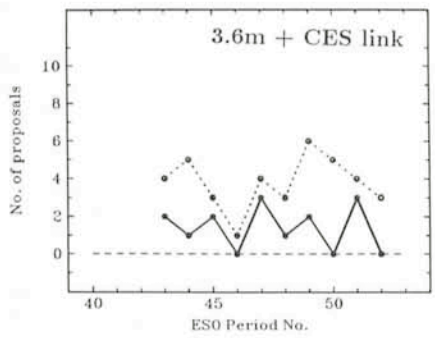


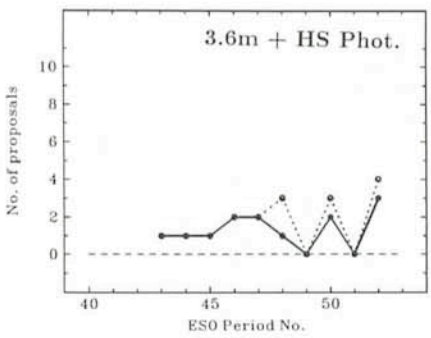


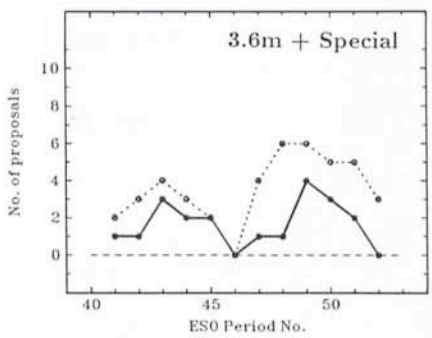

3.6m + TIMMI
No. of proposals
ESO Period No.

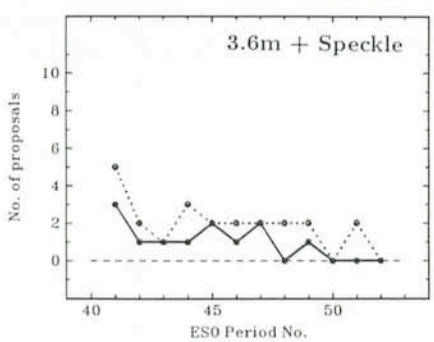

3.6m + IR phot.
No. of proposals
ESO Period No.


OPTOPUS 3.6-m MEFOS
No. of proposals
ESO Period No.


3.6m + CES link
No. of proposals
ESO Period No.


3.6m + HS Phot.
No. of proposals
ESO Period No.


3.6m + Special
No. of proposals
ESO Period No.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No. of proposals
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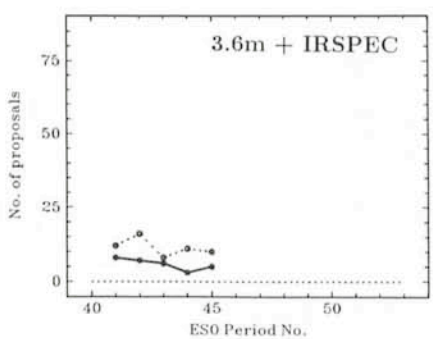
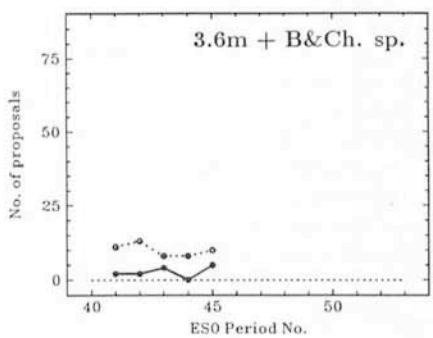
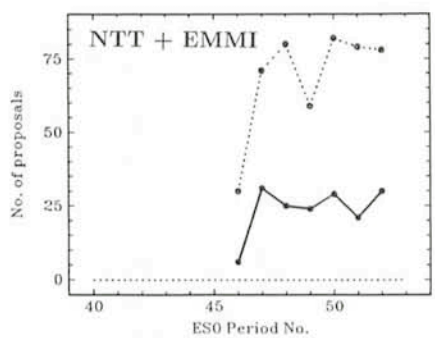
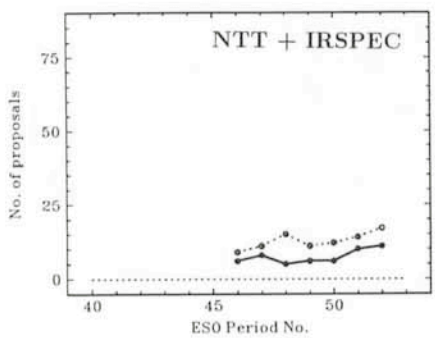
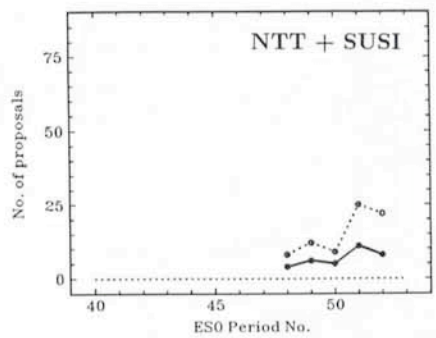

3.6m + IRSPEC
No. of proposals
ESO Period No.


3.6m + B&Ch. sp.
No. of proposals
ESO Period No.


NTT + EMMI
No. of proposals
ESO Period No.


NTT + IRSPEC
No. of proposals
ESO Period No.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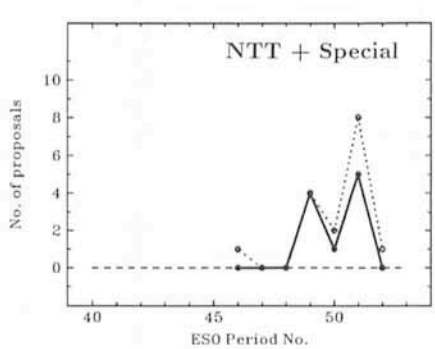
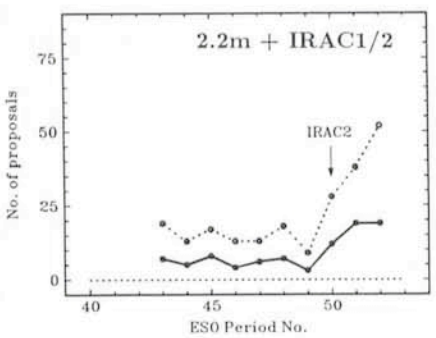
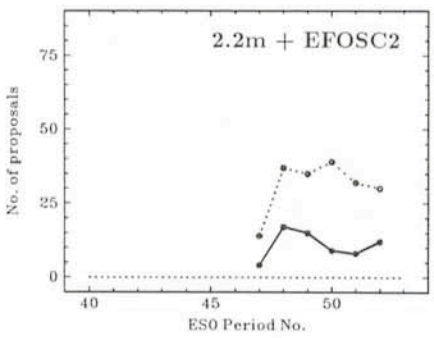
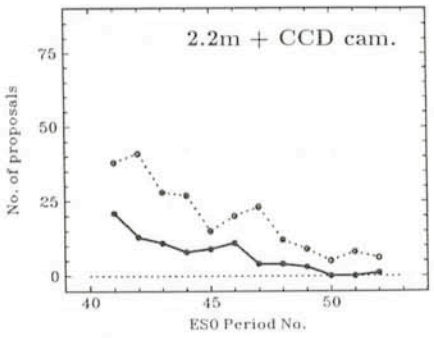
No. of proposals
ESO Period No.


NTT + Special
No. of proposals
ESO Period No.


2.2m + IRAC1/2
IRAC2
No. of proposals
ESO Period No.


2.2m + EFOSC2
No. of proposals
ESO Period No.


2.2m + CCD cam.
No. of proposals
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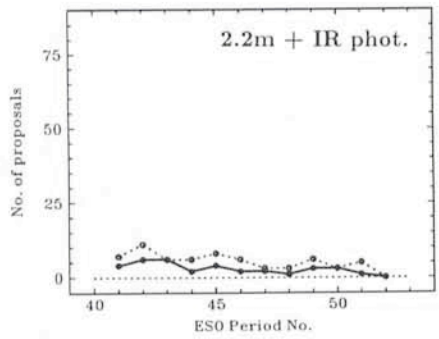
2.2m + IR phot.
No. of proposals
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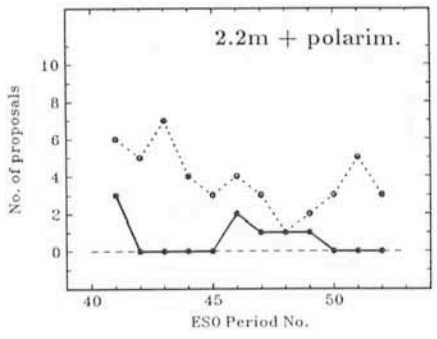
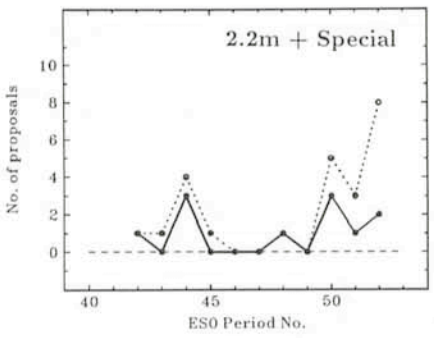
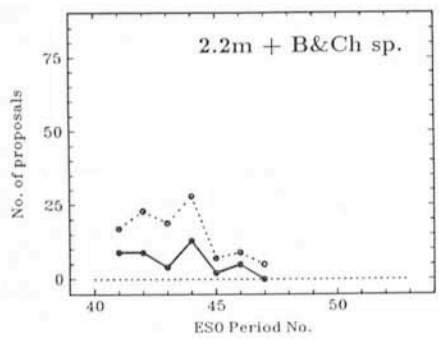
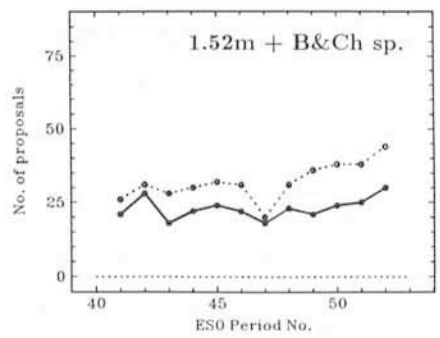
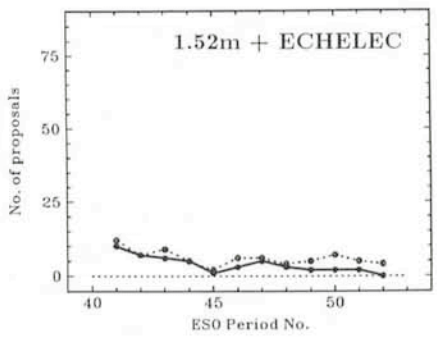
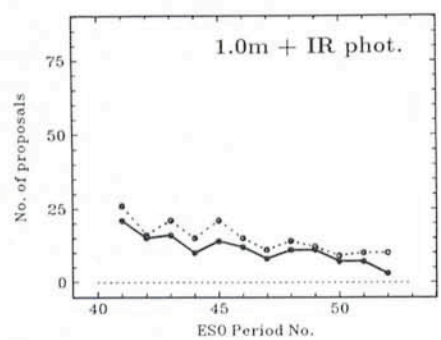

2.2m + polarim.
No. of proposals
ESO Period No.


2.2m + Special
No. of proposals
ESO Period No.


2.2m + B&Ch sp.
No. of proposals
ESO Period No.


1.52m + B&Ch sp.
No. of proposals
ESO Period No.


1.52m + ECHELEC
No. of proposals
ESO Period No.


1.0m + IR phot.
No. of proposals
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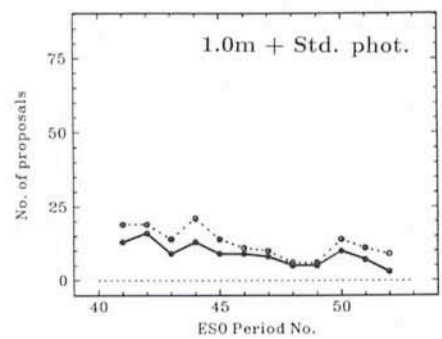
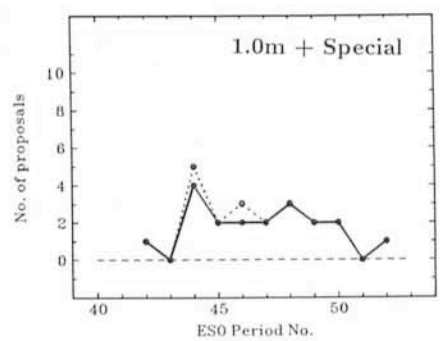
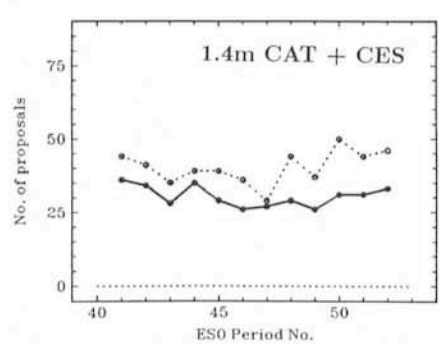
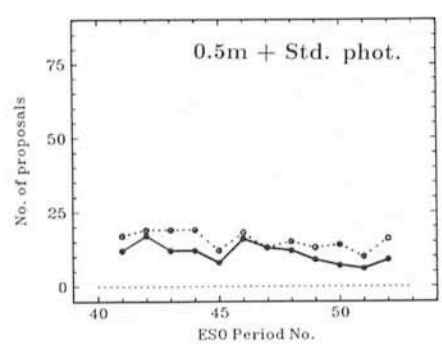

1.0m + Std. phot.
No. of proposals
ESO Period No.


1.0m + Special
No. of proposals
ESO Period No.


1.4m CAT + CES
No. of proposals
ESO Period No.


0.5m + Std. phot.
No. of proposals
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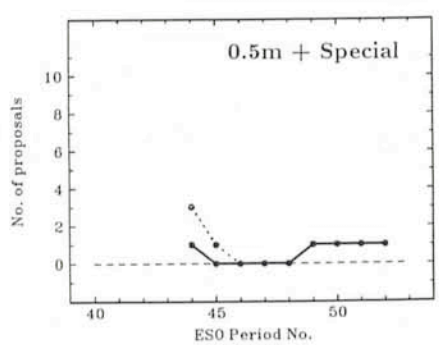
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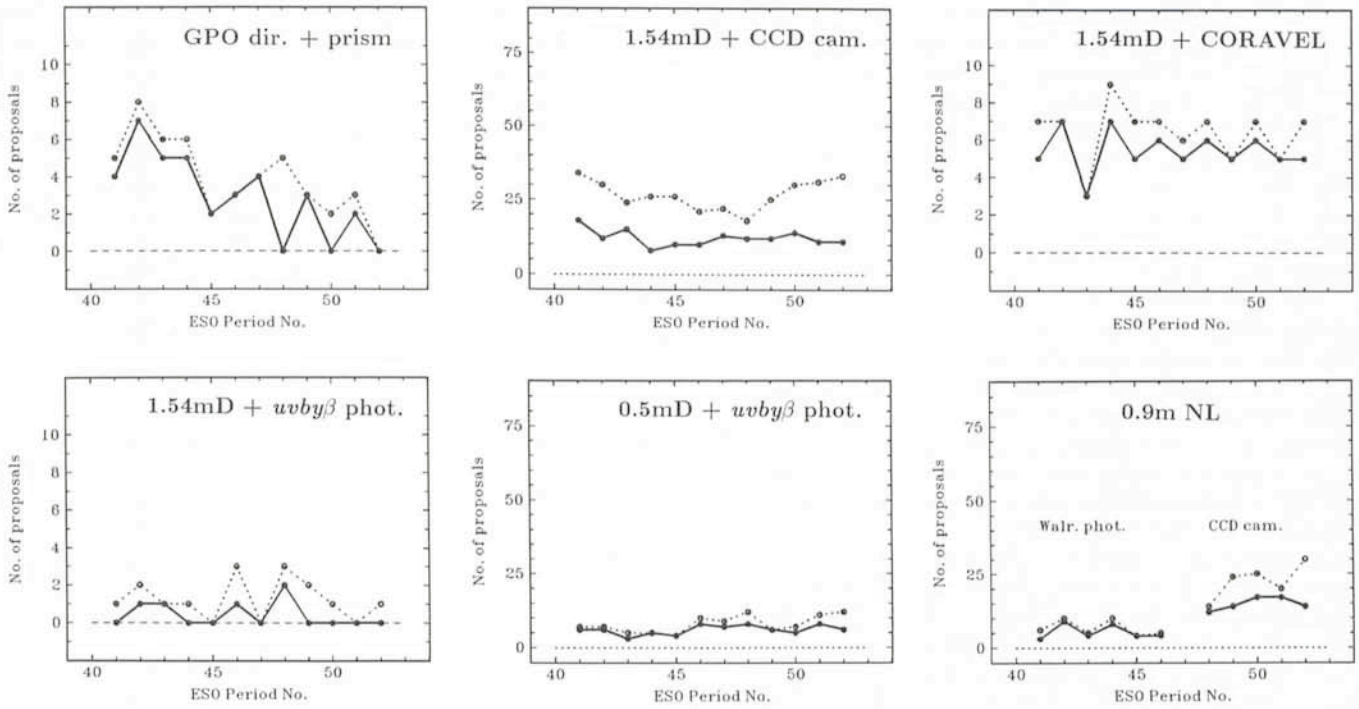
ESO Period No.



The 93NOV Release of ESO-MIDAS

ESO Image Processing Group

The new release of ESO-MIDAS contains a substantial number of improvements and new features. Among these is the implementation of a new set of Graphical User Interfaces based on OSF/Motif, which makes the usage of a number of application packages easier. In the sections below the main improvements are highlighted. For more detailed information we refer to the last issue of the ESO-MIDAS Courier (July 1993).

1. New Features and Application Packages

1.1 System

Significant modifications and enhancements have been implemented in the MIDAS Command Language, e.g. an improved debugger for MIDAS procedures, more robust error handling and direct access to all data structures from within a procedure. To improve the information transfer, the support of help text for descriptors in data files has been added. A prototype of communication protocols has been implemented to enable interaction of any stand-alone programme with MIDAS.

1.2 Data Organizer

A new application package called DO (Data Organizer) for preparation of data reduction procedures has been implemented. The Data Organizer uses as input a list of FITS files or MIDAS images as well as a list of FITS keywords or MIDAS descriptors which are considered to be relevant (e.g., exposure time, telescope setting, instrument mode) to create an Observation Summary Table.

Each entry of this table is then classified according to a set of user-defined rules: the user may for instance group the data according to the exposure type and put together all frames observed in a given instrument mode. An interface based on the Table Editor has been developed to facilitate the formulation of these rules.

The association of science frames with suitable calibration exposures is achieved by using the same rule-generating interface as referred to above even though the rules to be applied are different: One may want for instance to look for all the Flat Fields which have been taken within a certain time interval of the science exposure. The Association Process creates a MIDAS table which can be used by any reduction package. It contains one column for each type of exposure (e.g. SC, BIAS, DK, WCAL), while each row contains for the corresponding science image the set of suitable calibration frames.

The Data Organizer has been tested on the ESO Archive which contains so far 30,000 EMMI/SUSI exposures. This version of the package is still a preliminary version and the structure of the output association table may be changed in the future.

1.3 CCD Package

Since the last update of the MIDAS CCD package in 1986 a number of new instruments have been installed on the La Silla Telescopes. In addition, new CCDs became available offering large pixel areas and higher quantum efficiency. With these innovations the variety of observing modes has grown and, as an obvious consequence, the amount and the diversity of data taken have dramatically increased. It is clear that the MIDAS CCD reduction software should be able to cope with these improvements and hence requires compatibility with the hardware as it exists at present.

When designing the basic layout of the CCD software, a number of basic requirements were kept in mind: e.g. robustness, user-friendliness, easy adaption for new or non-ESO instrumentation, automatic calibration procedures to enable a quick-look facility at the telescope. In what sense these requirements can be realized depends on the data-acquisition system, archiving and, obviously, the data-reduction