ST-ECF Annual Review – Draft Minutes

The Annual Review of the ST-ECF took place in Garching on February 22, 2005.

It was attended by

ESA:	À. Gimenez Cañete, F. Macchetto, C. Turon
ESO:	C. Cesarsky, B. Leibundgut, A. Renzini
ST-ECF:	R. Albrecht, R. Fosbury, J. Walsh, M. Rosa, W. Freudling (part time), L. Christensen (part time)

Following the tradition that the chair alternates between ESO and ESA, C. Cesarsky chaired the review. The proposed agenda was adopted without changes and is attached.

Introduction

R. Albrecht presented the HST status. A brief discussion about the potential refurbishment options followed. In general, the telescope is doing very well. With the loss of STIS, the only remaining UV spectroscopic capability is through ACS grism observations. For the ST-ECF this means an increased support for the ACS slitless mode, for which the ST-ECF provides the user support world-wide. The predicted remaining time of HST operations without a servicing mission is determined by the expected lifetime of the batteries and the functioning of the gyroscopes. HST may become inoperable somewhere between 2007 and 2010, if not serviced before. In any case, the telescope needs to be furbished with a de-orbiting device at some time in the future.

The ST-ECF is adjusting to these changes of the project. The planning for the future of the ST-ECF had been discussed in several meetings throughout the year between ESO and ESA management. In the coming years the staff will be reduced to the original size of 14 positions. The staffing plan for the period until 2006 is in place and the staff has been informed.

The remaining HST activities are the implementation of advanced calibration concepts for STIS, improvement in spectral extraction software for ACS, the maintenance HST archive and provision of HST public outreach.

Future ST-ECF core tasks

The emphasis of the ST-ECF over the coming years will be in four core tasks: science data products, HST archive and Virtual Observatory, public outreach and ESA-ESO coordination activities. They take account of the long-term needs of ESA and ESO.
The core tasks were introduced by R. Fosbury and each of them elaborated in separate presentations.

Science Data Products

One of the long-term focuses will be to provide general calibration procedures and systems applicable for space- and ground-based observatories. Early examples were the NICMOS slitless spectroscopy reductions and the FOS enhanced wavelength calibration; current examples are the ACS slitless spectroscopy mode (the aXe and SLIM software packages) and the STIS calibration enhancement projects. Further improvements of the slitless extraction software and the extension to FORS2 multi-object spectroscopy have started. The FOS and STIS physical modeling calibration principles have already been successfully deployed for the UVES pipeline. It is currently being implemented for CRIRES and discussions on the X-Shooter pipelines have started.

During a brief discussion it was clarified by A. Gimenez that it is too early to decide how this expertise may be used for JWST and NIRSpec. The JWST project has been completely delegated to an ESA project group. The ST-ECF was further encouraged to make their calibration work more widely known within the astronomical community.

HST Archive and VO

The ST-ECF will continue to develop the HST data archive to become a data host for the Virtual Observatory. It should continue its close collaboration with the ESAC and the ESO archives and provide increased support for outreach purposes by providing previews. The WFPC2 associations have now been fully implemented and the archive is starting to think about ACS associations. The archive is also caching some of the relevant, reduced data to avoid on-the-fly-reductions.

The VO work of the archive is continuing and the ST-ECF is well connected to the international VO activities. The future work is to further improve the science products offered by this mission archive.

The discussion concentrated on the question of what metadata need to be produced and provided by archives to allow VO users to have the best possible return. It also became clear that there still are significant differences between the HST and the ESO archives. Although they are based on the same technology, the HST archive, as a mission archive, produces stable and sophisticated data products. The ESO archive has to handle many more instruments with very high data rate in a much less controlled environment. A closer collaboration between the archives would appear advantageous, especially in exchanging some of the data product experience.

Public Outreach

The successful work of the public outreach group has continued and an impressive list of achievements has been assembled. The coordination with the ESO PR department is improving and the synergies between the two groups should be explored in the coming years. The review board was impressed by the full-feature movie put together by the ST-ECF to celebrate the 15-year anniversary of HST. This is particularly impressive as ESA has substantially decreased its efforts in this area.

ESA-ESO coordination

Several activities under this task are active. The most prominent one is the coordination of science working groups of specific topics of interest for both organizations. The report by the Exo-planet science working group is just finished and the one on Herschel-ALMA coordination is expected in a few months. The ST-ECF actively participates in the OPTICON network and is providing manpower for the production of GOODS science data products (ACS image combination, VLT spectroscopy). The ST-ECF is also starting studies of ground-space astronomical cross calibration studies in order to define the calibration needs of future telescopes and missions. It is further involved in the SAMPO project, which will define the requirements for future data reduction and analysis packages.

Concluding discussion

The situation regarding the ST-ECF and the developments for JWST are still unclear. At the moment there is a JWST project team that is independent of the ST-ECF and, given the currently open contractual situation between ESA and NASA on JWST, it is not possible to define the scale of ESA activities for this project. A possibility could be that the ST-ECF would be 'contracted' for certain tasks.

The planned staff reduction in the ST-ECF over the coming two years will affect several people. ESA and ESO will do their best to help find other employment within the organizations for these people, if possible.

Summary of Conclusions

1. The board commended the ST-ECF for the work done over the past year. The planning work is on the right track for a successful transition of the ST-ECF for new functions after the lifetime of the HST.
2. The core tasks as defined right now are the basis for the near-term future of the ST-ECF. The size of the future ESO-ESA entity in Garching will depend on the functions it will be asked to take on.
3. Further discussions on the long-term future of the ESO-ESA group in Garching are needed. In particular, an answer by ESA on the original task list drawn up with ESO is required. The ST-ECF activities and those of the future ESO-ESA group will need to be implemented in the ESO Long-Range Plan and the group will be transferred to a new division in ESA. For both transitions the approval of the respective scientific committees of the organisations will be required.
4. There is a strong interest by both organisations to have a group for the coordination between them.