

Let us now look at the **near future** of the 3.6-m telescope: more and more TCS functions (interlock system, tracking LCU, telescope servos) will be incorporated into the new control system. The HP1000-based TCS will be fully abandoned next April. Already this year we plan to move the control room (next to the telescope on the cold observing floor) to a spacier, more comfortable room located on the third floor. New furniture will underpin the modern "look and feel" when observing with a telescope having one of the most advanced control systems. Regarding instrumentation, the CES will be the next awaiting VLT-compliant instrument control. A fibre-link to the Cassegrain-adaptor of the 3.6-m telescope has already been

installed, and the final commissioning will take place this October. Then EAGAL (ESO And GSFC ALADDIN Camera), a new near IR camera for the 1–5 μm wavelength range, and mainly foreseen in conjunction with the ADONIS adaptive optics system, and TIMM12, the more sensitive successor of the old Thermal Infrared Multi Mode Instrument, will arrive. They will offer exciting and complementary facilities, especially important to bridge the gap until the VLT goes fully into operation. The 3.6-m telescope will remain a cutting-edge telescope in its class, and will gain further importance when science priorities like the High Accuracy Radial velocity Planetary Search (HARPS) programme are conducted at this telescope.

The last few months saw major **personnel movements** in the 3.6-m team. Roland Gredel, team leader of the 3.6-m+CAT Team since 1997, left La Silla in order to assume responsibility as director of the Calar Alto observatory in Spain. On behalf of the 3.6-m Team, I wish him all the best in this new challenge. His function will be taken over by the author of these lines.

At the same time, two new fellows joined the Team: Olivier Marco, now responsible instrument scientist for ADONIS, and Ferdinando Patat, who already played a key role in producing observing templates for EFOSC2. He takes over the responsibility as EFOSC2 instrument scientist. The 3.6-m Team welcomes its new astronomers.

2.2-m Telescope Upgrade Started

The 2p2team, ESO, Chile

On 15 July 1998 the upgrade of the MPG/ESO 2.2-m Telescope was started at La Silla. This project was launched late last year in order to:

- modernise telescope equipment,
- replace worn-out parts and units which malfunction frequently after being in service for more than fifteen years,
- prepare the telescope for the reception and operation of its future only standard scientific instrument, the Wide Field Imager (WFI), a half-degree imager equipped with an $8 \times 8\text{K}$ CCD (see separate report on the WFI in this issue).

The goal is to run the telescope in a modern VME based control environment which will allow the use of a VXWORKS based telescope control system (TCS) and a simple interfacing to the WFI instrument control environment. As a baseline, the 2.2-m TCS will follow the concept of the TCS for the Danish 1.5-m telescope, but will be considerably modified and improved in order to support the autoguiding system of the WFI, the automatic guide-star selection through guide-star catalogues, the new absolute encoders, and the modernised telescope safety system. Since the WFI will finally be operated in service mode, precautions in the TCS are made to interface accordingly with the new instrument control system DAISY+ which is an advanced version of the existing La Silla instrument control package DAISY (currently in use at the Danish 1.5-m, the Dutch 0.9-m, and also foreseen for the B&C and FEROS instruments at the ESO 1.5-m).

During the past 8 months, La Silla engineers, technicians and astronomers analysed the status and health of the telescope optics and electromechanics,

made the design of the new equipment and programmes and prepared the hardware and software for the implementation of the upgrade.

While the telescope optics was found to be of excellent intrinsic quality (optical aberration of below 0.2 arcsec is routinely measured during image analysis tests at this telescope), the electromechanics and telescope control system (computers and software) needed a major overhaul and replacement. The mechanics overhaul concentrates on the gearbox of the alpha drive (the worn-out alpha gear was replaced on 18 July 1998), the hydraulics system, the installation of new encoders (now also at the telescope adapter/rotator unit). The telescope electronics will be based on VME technology and it will receive a new dome control system as well as a distributed system of environmental sensors for the registration of the temperature and humidity at the telescope, instrument and inside/outside of the dome. Furthermore, a major clean-up of the whole telescope cabling is foreseen. On the software side, the TCS is adapted to the new logics of the telescope and instrument control, while interfaces to the DAISY+ software are added. The computer platform for the telescope and instrument control will be based on Hewlett Packard (HP) workstations inserted in a local network that supports high data transmission rates as needed for the WFI (a single WFI image is about 130 MB in FITS format and will be read out by the ESO FIERA CCD controller in about 30 seconds). Beside the HP735 workstation for the TCS, HPC200 and HPJ2240 workstations each equipped with 108 GB disk drives and 35/70 GB DLT units will serve as data acquisition

and data reduction machines for the WFI and will provide support to the users for the on-line inspection through a real-time display (RTD) and for the on-line analysis by means of standard image processing packages like MIDAS, IRAF and IDL. Last, but not least, the control room will be refurbished such that both people and electronics will work in the environment as needed and most comfortable for a successful operation.

The upgrade is underway: after the hardware modifications and installations at the telescope, a test period of about 1 month will start by the end of August 1998 in order to tune and verify the telescope optics and electromechanics in the new control environment. Thereafter, the telescope is – hopefully – ready for the commissioning of the WFI which will arrive at La Silla in the last quarter of 1998.

Near-infrared instrumentation is now no longer offered at the 2.2-m: IRAC2, ESO's near infrared array camera which was a workhorse instrument of the 2.2-m for many years, was decommissioned in mid-July 1998 (it is replaced by the more powerful SOFI instrument at the NTT).

The 2.2-m telescope upgrade team consists of: J. Alonso (project manager), J. Araya, T. Augusteijn, H. Boehnhardt, J. Brewer, R. Castillo, H. Kastowsky, F. Labraña, M. Mornhinweg, R. Olivares, F. Richardson, E. Robledo, A. Torreon.

The following LSO teams and ESO persons are supporting the project: LSO Electronics (R. Medina), LSO Mechanics (G. Ihle), LSO Optics (A. Gilliotte), LSO Software Support Group (G. Lundqvist), LSO Infrastructure Group (F. Luco), LSO Management (G. Andreoni, J. Melnick), ESO Garching (D. Baade).