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M. Rubio
mrubio@das.uchile.cl

OTHER ASTRONOMICAL NEWS

A Fresh Look at the Future: "La Silla 2000++"

B. NORDSTRÖM, Chair, ESO Users' Committee

Background

Investments in observational facilities on a European scale, whether on a VLT or LSA scale or in telescopes of more modest size, must be based on careful medium- and long-term planning. As scientific priorities and external conditions (e.g. budgets!) change, so the plans must be revised periodically.

In 1995, a joint STC/ESO/UC Working Group presented a plan for the mid-term future of La Silla, Scientific Priorities for La Silla in the VLT Era (ESO/STC-174; see also *The Messenger* 83, p. 48, 1996). This report made a first attempt to chart the complementary roles of the Paranal and La Silla observatories in the commissioning phase of the VLT, based on an ESO-wide questionnaire survey of the plans and priorities of the user community.

From an analysis of the replies, recommendations were derived for additions to and reductions in the facilities offered by ESO on La Silla, with the aim to optimise the scientific returns of the resources that could be realistically expected to be available. It was also recommended to revise such planning roughly every three years.

La Silla 1998: Current Status

Three years later, First Light on UT1 has been achieved with tremendous success (see the last issue of *The Messenger*!). The whole schedule for commissioning the VLT telescopes is thus firmly consolidated. Meanwhile, a new set of powerful VLT instruments has been approved for construction on an accelerated schedule. Many of us are already eagerly preparing applications for VLT observing time.

At the same time, many of the chief recommendations for the future of La Silla have been implemented, as evident from the last several issues of *The Messenger*.

Most importantly, the refurbished NTT is back in operation as a superb 3.5-m telescope with much-improved performance and equipped with new instruments (SOFI and SUSI2) which are second to none in their fields. In the process, invaluable lessons have been learned for the commissioning and operation of the VLT.

The 3.6-m telescope has achieved an image quality never seen during its previous 20 years of operation, and will soon receive a new, powerful mid-infrared instrument, TIMMI2. Its control system is also being upgraded. Moreover, the CES has been upgraded to a new class of high-resolution science with the new Very Long Camera, and is being provided with a permanent fibre link to the 3.6-m.

Among the smaller telescopes, the 2.2-m is receiving a new control system as well as a powerful Wide Field Imager based on an 8 k $\times$ 8 k CCD array. The 1.52-m ESO telescope will be equipped with the new FEROS spectrograph later this year, and a dome upgrade programme at the 1.54-m Danish should lead to improved image quality there. Moreover, the DENIS and EROS2 projects are going ahead full blast and producing lots of exciting science.

A top priority need for the future, wide-field imaging with high spatial resolution, is being addressed through the Napoli-ESO project to construct a 2.5-m VLT Survey Telescope on Paranal, covering a 1-degree field on a 16k $\times$ 16k CCD array from about 2001. And on the down side, the Schmidt, the CAT 1.4-m and the ESO 50-cm telescopes have been closed as general ESO facilities.

Last, but not least, ESO is rapidly moving into a welcome position of leadership as regards CCD detector and controller technology, with new 2k $\times$ 4k chips being fielded at a rapid pace with the new, lightning fast and low-noise FIERA controller.

A Fresh Start

The developments outlined above make this an opportune time to give the 1995 plans a thorough overhaul. Accordingly, the Director General has asked the Users' Committee to poll the user community in the ESO countries regarding their wishes for the future of La Silla, and the order of priority of these wishes. The replies must be evaluated on the background of an uncertain, but likely level or even decreasing budget for La Silla, cf. also the policy paper "The Role of ESO in European Astronomy" in the March-98 issue of *The Messenger*.

As before, synergy with the VLT is an important consideration: For many projects, the smaller telescopes (below 4 metres) are the platform we need to plan and prepare VLT projects. For some, the VLT will outperform any likely La Silla facility by a large factor. However, pressure on available VLT time will be great and other programmes can or even must be conducted on smaller telescopes than the VLT.

La Silla is the natural home for such projects, using existing, new or upgraded facilities. The task at hand is to prepare plans that will optimise the scientific returns of the future La Silla within realistic budgetary limits.

"La Silla 2000++"

A working group has been set up, consisting of 2 members from each of UC, STC and ESO, provisionally nicknamed "La Silla 2000++". The WG will solicit the wishes, views, and priorities of the ESO user community for the period 2000–2006 over the next few months, through a questionnaire accessible via the ESO WWW home page (http://support.eso.org/ls-questionnaire) and through other suitable channels. We urge all interested colleagues to give us your imaginative ideas and constructive suggestions for the benefit of us all!

Based on the replies received, the WG will prepare a summary report and a set of recommendations which will be presented to the Director General and eventually to the ESO Council. Readers will be kept informed of the progress of this work through future issues of *The Messenger*.

B. Nordström
birgitta@astro.ku.dk

6th ESO/OHP Summer School in Astrophysical Observations

M.-P. Véron, and G. Meylan

The 6th ESO/OHP Summer School was hosted again at the Observatoire de Haute-Provence (OHP) from 15 to 25 July 1998. The school, held only every second years, selects 18 of Europe's most promising young doctoral students in astronomy. Courses of lectures, observations, and analysis form the intellectual menu which is aimed at teaching the process of extracting astrophysically digestible results from the photons harvested at the telescopes, such as the ESO VLT, whose four telescopes will become available to the community in turn during the next few years.

The OHP is exceptionally well equipped to provide all the required ingredients of success for the school. The four main telescopes, reserved for the students, have state-of-the-art instruments and detectors. The observatory, in its beautiful site, is ideally placed to provide a proper mix of clear skies and other facilities, all contributing to the ambience which insures that the various items on the menu form a coherent whole and inspire the students, their tutors, and all around to pursue the tasks at hand with vigour and enthusiasm.

The basic programme for the school was unchanged from previous years. Students were formed into groups of three, and each group was assisted by a tutor. The tutors helped the students prepare observing programmes for both imaging and spectroscopy. The telescope and instrument set-ups were prepared carefully according to the requirements of the programmes. The observations were performed and data analysed.

The tutors this years were Rodrigo Ibata, Marco Scodeggio, and Patrick Woudt from ESO (Garching), Torsten Böhm from Observatoire Midi-Pyrénées (Toulouse), Catherine Boisson from Observatoire de Paris (Meudon), and Gérard Jasniewicz from Université de Montpellier. There is no doubt that the success of the school is very much a result of their efforts; this was confirmed to us by the students themselves.

R. Ibata led G. Bergond, I. Burud, and J. Vink in a determination of the velocity ellipsoid in the solar neighbourhood. The most direct way to accomplish this is to measure radial velocities to high precision from high-resolution spectra they obtained at the 1.52-m telescope with the Aurelie spectrometer. From broad-band (BVRI) images of the same stars obtained at the 1.20-m telescope, they derived their extinction-corrected absolute magnitudes, addressing the issue of whether the observed dispersion in the Hipparcos main sequence is intrinsic or simply due to the effects of reddening.

M. Scodeggio led J. Dias, R. Kotak, and B. Wolff in a study of scaling relations of early-type galaxies, such as the Faber-Jackson and the Fundamental-Plane relations. Such relations involve determinations of a scale radius and a corresponding surface brightness they obtained from images of the sample galaxies acquired at the 1.20-m telescope; the required velocity dispersion determinations were deduced from their spectroscopic data obtained with the CARELEC spectrometer at the 1.93-m telescope.

P. Woudt led N. Przybilla, M. Van den Berg, and A. Zappelli in a study of an accurate determination of the galactic foreground extinction. The 1.93-m telescope with CARELEC was used to obtain spectra roughly centred on the redshifted Mg *b* lines, i.e., at about 5200–5300 Å, providing a reddening index calibrated with Lick standard stars. Images in *B* and *R* bands were acquired with the 1.20-m telescope. An empirical relation between the Mg_2 spectral index and the $(B-R)_0$ colour of elliptical galaxies was used to determine the reddening of the sample galaxies.

Under the guidance of T. Böhm, J. Kahanpää, P. Kervella, and Y. Momany studied the activity of Herbig Ae/Be stars. According to standard theory of stellar evolution, these stars are not supposed to possess outer convection zones, but rather convective cores surrounded by radiative subphotospheric envelopes. However, observations unveiled spectral variations in such stars, with strong stellar winds. These students used Aurelie spectra from the 1.52-m telescope to monitor possible spectral variability of "active" lines, which are good indicators for the presence of a magnetically structured stellar atmosphere. Images, acquired with the 1.20-m telescope, of Herbig Ae/Be stars in young open stellar clusters provided powerful constraints on early phases of stellar evolution.

C. Boisson led M. Billères, G. Marino, and S. Wolf in a study of the properties of the host galaxies of AGNs, since the relationship of a Seyfert nucleus to its host galaxy remains an important unanswered question. They used spectroscopy, acquired with CARELEC at the 1.93-m telescope, for a sample of AGNs selected to cover the various classes of active galaxies as well as different environments. Broad-band images obtained with the 0.80-m telescope allowed the study of the morphological features of these galaxies.

Under the guidance of G. Jasniewicz, B. Parodi, A. Shaker, and L. Vannier studied a few post-AGB stars, objects which suffer some of the violent and final phases of stellar evolution, such as the He-shell flash. From high-resolution spectra obtained at the 1.52-m telescope with Aurelie, they focused on the C2 molecular bands, the absorption components of the Na I D, and stellar emission lines. Broad-band (UBV) images of the same stars obtained at the 0.80-m telescope allowed estimates of the colour of the central objects and of the surrounding faint nebulae.

The other major ingredient in the school was a series of invited lectures on topics related to observations, instrumen-