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*.

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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-

Figure 1: The official group photo is taken during the break of the talk by H.-J. Röser. From left to right in the first row: M. Billères, J. Dias, M. Van den Berth, A. Shaker, B. Wolff, I. Burud, M. Scodeggio. Second row: H.-J. Röser, T. Böhm, G. Meylan, M.-P. Véron, G. Jasniewicz, C. Boisson, L. Vannier, N. Przybilla, R. Kotak, A. Gonçalves. Third row: J. Kahanpää, R. Ibata, G. Marino, P. Woudt, G. Bergond, J. Vink, P. Kervella, S. Wolf, A. Zappelli, B. Parodi, Y. Momany.

tation, detectors, and data reduction. H.-J. Röser gave a comprehensive overview on imaging and photometry, with careful emphasis on how to avoid all classical pitfalls during observations as well as data reduction. D. Baade presented an equally useful presentation on low- and high-resolution spectroscopy. M. Dennefeld described optical and IR detectors, emphasising their physical processes and limitations, with present and future VLT instruments in perspective. P. Magain presented in a very clear way the subtilities and difficulties of deconvolution techniques applied to the process of data reduction. F. Rigaut gave a stimulating presentation of active and adaptive optics, the former technique being a must for the VLT meniscus monolithic 8.2-m mirrors, the later allowing to forecast major technological improvements in the near future.

On the final day, each group of students presented a summary of their results. Although the analysis techniques had, for the most part, just been learned, all groups presented interesting and in some cases potentially publishable results. This is no small achievement considering that most of them were entirely new to the scientific subject, the observing process, and the data analysis.

Sea & Space – A Successful Educational Project for Europe's Secondary Schools

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1. Background

There are many links between the Sea and the Space surrounding us. Indeed, Space itself is often likened with a new and uncharted Ocean on which we now continue the great voyages of discovery of the past. Space-based satellites allow us to study the processes in the Earth's oceans in unprecedented detail and at the same time to verify complex principles in fundamental sciences like physics, chemistry and mathematics. Space is also our tenuous link to the distant places from where the ingredients of life first came to our planet, and the ocean is where they began the incredible evolutionary processes of which we ourselves are a product.

With the goal to explain and illustrate some of these connections, an international educational programme entitled "Sea & Space" was set up under the auspices of the 1998 European Week for Scientific and Technological Culture. It was also linked directly to EXPO '98, the World Exposition in Lisbon that focuses on the Oceans. The programme was primarily directed towards Europe's secondary school students and their teachers. However, it was based on widely accessible communication links and was open for other interested persons and groups.

This was the fifth time since 1993 that ESO participated in this Week that is coordinated and supported by the European Commission. "Sea & Space" was a collaborative project between the European Space Agency (ESA), the European Southern Observatory (ESO), the European Association for Astronomy Education (EAAE), the German National Centre for Information Technology (GMD) and the Norwegian Space Centre. It drew upon the complementary scientific-technological and educational experience as well as organisational set-up of the partner organisations, including a great diversity of hard- and software and associated communication techniques. The programme was overseen by an International Steering Committee (ISC) consisting of representatives of each of the organisations, together with EAAE National Committees and other partners at the national level. Full information may be found on the web, e.g. at URL: http://www.eso.org/seaspace.

2. Contents

"Sea & Space" consisted of five major sub-programmes, three of which were heavily based on the use the World-Wide Web:

2.1 Remote Sensing of Europe's Coastal Environment

Observations were made with the ESA Earth Resources Satellite (ERS) of coastal and other selected areas, some of these at the specific request by the participants. The data were suitably prepared and made available to the participants via the WWW, to enable the recipients to