

Figure 2: Histograms showing the distribution of the numbers of observing runs as a function of the number of allocated nights. For each telescope the total number of programmes is given within brackets. It is recalled that the ESO shares of observing time at the 2.2-m telescope of the Max Planck Institute and at the 1.5-m Danish telescope are respectively 75 % and 50 %.

2.2-m, 1.5-m Danish and 1.4-m CAT telescopes, about 60 % of the programmes receiving time were affected. At the 1.5-m telescope, the fraction of pro-

grammes concerned was somewhat smaller with a mean value of 45 % only.

Finally, and again during these past four years, the fraction of continuing

programmes which were regularly re-submitted by the same applicant(s) and awarded observing time, has been of the order of 15 %.

Wide-field Photography at the 3.6-m Telescope?

This note serves to gauge the interest of the astronomical community in wide-field photography with the triplet facility at the 3.6-m telescope.

As photographic users will remember, the 3.6-m prime focus is equipped with two Gascoigne correctors (blue and red, field diameter ~ 16 arcminutes, 6×6 cm plates). Two grisms can be used with these correctors. There are also two triplet correctors of Wynne type with a field diameter of 1 degree; behind these an automatic plate changer loads

up to eight 24×24 cm photographic plates. This instrument is rather complicated and after a period of declining use, it was decided no longer to offer it to visitors. Consequently, the 1-m Schmidt is now the only deep, wide-field instrument in regular use at La Silla.

In the past, good triplet plates had a limiting magnitude beyond 24^m . With the advent of the new T-grain emulsions and grid processing, and together with modern reduction techniques, even fainter limits may be reached in the future.

Astronomers in the ESO community who would like to use the 3.6-m triplet, are herewith invited to write to the undersigned. If you feel that the triplet facility should be reactivated, please provide a brief and succinct summary of the type of research you would like to do, the number and type of plates needed and also the total amount of observing time. Kindly note that this invitation does not imply any commitment by ESO.

R.M. West, ESO

Opportunities at the ESO Schmidt Telescope

About 90 % of the red plates for the ESO/SRC Survey of the Southern Sky have now been taken. Although the Schmidt telescope is presently engaged in the continuation of the earlier Quick Blue Survey in the declination zone

-20° to 0° , it shall be possible to perform more observations for "visitors", starting with period 42 (from October 1988).

As before, the red and blue atlas plates will have priority. It should also be

noted that the prism can only be mounted during a modest part of the available time.

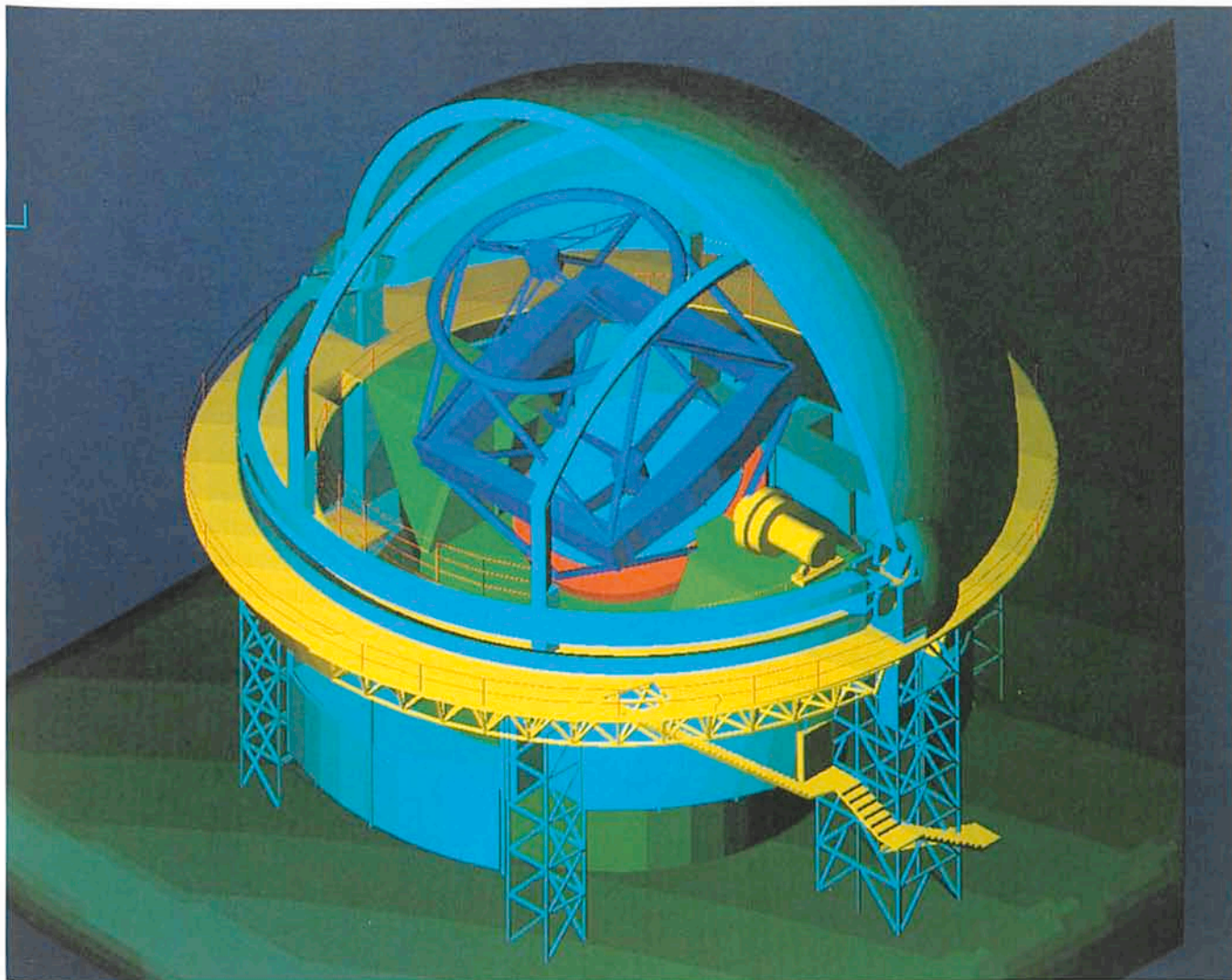
Please remember that applications for period 42 must be received by ESO not later than April 15, 1988.

VLT NEWS

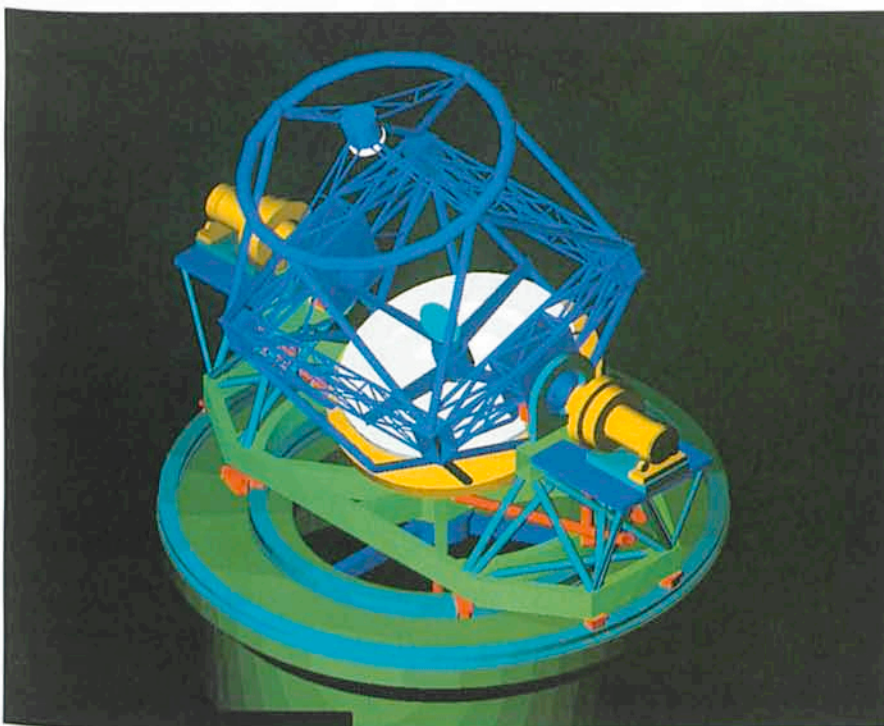
After the approval of the project on December 8, the project management structure is progressively being set up.

The final project schedule will be established soon after a decision on the mirror blank procurement is taken. For the time being two technologies, Zerodur from Schott and fused silica from Corning, are in competition. The

decision will be taken when the final proposals from the two firms have been received. The mirror thickness has been fixed to 175 mm for both cases. This seems to be an acceptable compromise between cost and stiffness. As an alter-



These CAD drawings were made in February 1988 with the newly installed Euclid-IS software, running on a VAX 8600 at the ESO Headquarters. The upper one shows one possible solution to the integration of the telescope into the protecting dome structure; further work may lead to refinements. The lower picture shows the mechanical structure in more detail. It is based on geometrical and mass distribution analyses. The studies were made by the ESO VLT Mechanical Group and the CAD figures were prepared by E. Brunetto.



native, aluminium technology is being developed and a 1.8-m test mirror is going to be manufactured. An 8-m aluminium blank could be built in less than 2 years in case (unexpected) difficulties would be encountered with the glass mirrors.

A contract on the feasibility of direct drives has recently been issued to ETEL/CONTRAVES (Switzerland). The preferred solution would be 2 closed motors of about 2.4 m diameter for the elevation axis and 4 quasi-linear motors, 8 m long, for the azimuth axis. Power dissipated would be about 4 kW peak for each axis. The average power under typical wind speed conditions would not exceed 1 kW, but will nevertheless require cooling. The advantage of the direct drive is that it is a quasi-linear system with an improved frequency response. The extra cost for the motors is expected to be compensated by the elimination of expensive gear wheels.

Some more refined predesign of the building is under way (see CAD drawing). The present conceptual scheme is based on the inflatable shelter (a half scale model is being erected in Chile). The centre of the dome will be on the telescope base so that the primary mirror is always protected from the direct wind stream. Openings at the base of the building will allow a controlled flushing of the mirror surface. Wind tunnel tests of this concept are being done at the Lausanne Polytechnic.

More in the years to come.

D. Enard, ESO

List of ESO Preprints

(December 1987–February 1988)

550. F. Matteucci: Iron Abundance Evolution in Spiral and Elliptical Galaxies. Invited talk presented at the New Orleans Meeting of the American Chemical Society on "The Origin and Distribution of the Elements", Sept. 1987. *World Scientific*, in press. December 1987.
551. D. Baade et al.: Time-Resolved High-Resolution Spectroscopy of an H α Outburst of μ Cen (B2 IV–Ve). *Astronomy and Astrophysics*. December 1987.
552. A. Robinson: Photoionization of Extended Emission Line Regions. Proceedings of the NATO Advanced Research Workshop on "Cooling Flows in Clusters and Galaxies", held at the Institute of Astronomy, Cambridge, UK, 22–26 June 1987. December 1987.
553. M. Aurière and S. Ortolani: CCD Stellar Photometry in the Central Region of 47 Tuc. *Astronomy and Astrophysics*. December 1987.
554. I.J. Danziger et al.: SN 1987A: Observational Results Obtained at ESO. Paper presented at the Fourth George Mason Fall Workshop in Astrophysics, "Supernova 1987A in the Large Magellanic Cloud", October 12–14, 1987, George Mason University, Fairfax, Virginia, USA. December 1987.
555. A. Moneti et al.: High Spatial Resolution Infrared Imaging of L 1551 – IRS 5: Direct Observations of its Circumstellar Envelope. *The Astrophysical Journal*. December 1987.
556. R. Arsenault and J.-R. Roy: Correlations Between Integrated Parameters and H α Velocity Width in Giant Extragalactic HII Regions: A New Appraisal. *Astronomy and Astrophysics*. December 1987.
557. L.B. Lucy: Modelling the Atmosphere of SN 1987A. Paper presented at the fourth George Mason University Workshop in Astrophysics "SN 1987A in the LMC". December 1987.
558. B. Reipurth and J.A. Graham: New Herbig-Haro Objects in Star Forming Regions. *Astronomy and Astrophysics*. December 1987.
559. H. Dekker: An Immersion Grating for an Astronomical Spectrograph. "Instrumentation for Ground-Based Opti-

CNRS–Observatoire de Haute-Provence and
European Southern Observatory

Summer School in Astrophysical Observations Observatoire de Haute-Provence, France, 4–13 July 1988

The school is dedicated to the practice of astrophysical observations and it is organized jointly by OHP and ESO. The aim of the school is to balance the education of young European students in astronomy, offering them an early opportunity to become acquainted with modern astrophysical equipment. Courses and observations will take place at the Observatoire de Haute-Provence where the instrumentation and the facilities for the reduction of digital data are in many respects similar to those available at the world largest optical observatories.

During the school, the students will be asked to carry out a short programme of observations at the 1.93-m telescope with a CCD detector, under the guidance of experienced observers, learn to reduce the data on HP and VAX computers and propose an interpretation of the results.

The courses will mainly be dedicated to the different observational techniques. The preliminary list of speakers and subjects is as follows:

M. Tarenghi (ESO): Modern and future telescopes
S. D'Odorico (ESO): Spectroscopic and imaging instrumentation
M. Dennefeld (IAP): Detectors
F. Rufener (Genève): Optical photometry
P. Bouchet (ESO): Infrared photometry
S. Cristiani (Padova): Low resolution spectroscopy
D. Gillet (OHP): High resolution spectroscopy
H. Schwarz (ESO): Polarimetry
J.M. Mariotti (Lyon): Interferometric observations

Applications: Students from ESO member countries intending to begin a Ph.D in astronomy or in the first years of their thesis are invited to apply using the form available on request from the organizers before May 1st. A letter of introduction by a senior scientist is also required. Fifteen applicants will be selected. Their travelling and living expenses will be fully paid by ESO or OHP.

The Organizers:

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- cal Astronomy: Present and Future", ed. Lloyd B. Robinson (Proceedings of the 1987 Summer Workshop in Astronomy and Astrophysics at Lick Observatory). December 1987.
560. L. Noethe et al.: Active Optics II: Results of an Experiment with a Thin 1 m Test Mirror. *Journal of Modern Optics*. December 1987.
561. J. May, David C. Murphy and P. Thaddeus: A Wide Latitude CO Survey of the Third Galactic Quadrant. *Astronomy and Astrophysics*. December 1987.
562. G. Contopoulos and P. Grosbøl: Stellar Dynamics of Spiral Galaxies: Self-Consistent Models. *Astronomy and Astrophysics*. December 1987.
563. F. Barone et al.: On the Optimization of the Wilson-Devinney Method: An Application to CW Cas. *Astronomy and Astrophysics*. December 1987.
564. T.J.-L. Courvoisier: Multi Wavelength Observations of Active Galactic Nuclei. Invited paper given at the Strasbourg Colloquium "Coordination of Observational Projects", November 1987.
565. A. Renzini and Fusi Pecci: Tests of Evolutionary Sequences Using Color-Magnitude Diagrams of Globular Clusters. *Annual Review of Astronomy and Astrophysics*. January 1988.
566. L. Deharveng et al.: HII Regions in NGC 300. *Astronomy and Astrophysics*. January 1988.
567. R.H. Méndez et al.: Spectra of 3 Planetary Nebulae and a Search for Nebular Emission Around 12 sdO Stars. *Astronomy and Astrophysics*. January 1988.