

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 und 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.

568. E. Brocato and V. Castellani: Evolutionary Constraints for Young Stellar Clusters. II. The Case of NGC 1866. *Astronomy and Astrophysics*. January 1988.
569. R. Arsenault et al.: A Circumnuclear Ring of Enhanced Star Formation in the Spiral Galaxy NGC 4321. *Astronomy and Astrophysics*. February 1988.
570. G. Contopoulos and A. Giorgilli: Bifurcations and Complex Instability in a 4-Dimensional Symplectic Mapping. February 1988.
571. J. Surdej et al.: Search for Gravitational Lensing from a Survey of Highly Luminous Quasars. *P.A.S.P.* February 1988.
572. R. Buonoanno et al.: CCD Photometry in the Metal Poor Globular Cluster NGC 7099 (M30). *Astronomy and Astrophysics*. February 1988.

From the Editors

In accordance with the new management of ESO, it has been decided that the *ESO Messenger* shall above all be a vehicle of communication between ESO and the user community. It is therefore the intention to bring the fullest possible information about new developments at ESO, technical and scientific, as well as those of a more administrative nature. In a similar spirit, we herewith invite contributions from users, in the form of articles and also as shorter Letters to the Editor.

Tentative Time-table of Council Sessions and Committee Meetings for First Half of 1988

May 2	Users Committee
May 3	Scientific Technical Committee
May 4-5	Finance Committee
	Oberkochen
May 31-June 1	Observing Programme Committee, Liège
June 6	Committee of Council
June 7	Council
All meetings will take place at ESO in Garching unless stated otherwise.	

SN 1987A: Spectroscopy of a Once-in-a-Lifetime Event

R. W. HANUSCHIK, G. THIMM and J. DACHS, Astronomisches Institut, Ruhr-Universität Bochum, F.R. Germany

When Supernova 1987A in the Large Magellanic Cloud was discovered by Ian Shelton at Las Campanas Observatory in Chile on February 24, 1987, it immediately became apparent that this would turn out to be one of the most important astronomical events in this century. The timing of the supernova could not have been better – although the light from the site of the stellar collapse had to travel a distance of as much as 170,000 light-years before reaching our planet Earth, it arrived precisely when state-of-the-art photoelectrical detectors had become available at modern telescopes situated at the best observing sites all over the world, together with highly sophisticated spaceborn instruments working in the X-ray and ultraviolet regions of the electromagnetic spectrum. Even elementary particle physicists were well-prepared (except for some problems with their clocks) to catch two dozens of the neutrinos emitted by the dying star thereby providing for the first time the precise date of the collapse. (Only gravitational wave astronomy has still to wait to be born: all potential detectors had been switched off or did not work properly.)

To render the combination of privileges for earthbound observers even more impressive, SN 1987A is just at the optimum distance for convenient measurements in the optical window: a galactic supernova would be too bright for professional astronomical instruments such as photometers and spec-

trometers which are especially designed to achieve the highest possible sensitivity for extremely faint radiation sources, and which therefore are in great danger to be destroyed when exposed to a naked-eye object. This problem has been discussed in greater detail in two papers by Michael Rosa and O.-G. Richter (*Observatory* **104**, p. 90 [1984]) and by Theodor Schmidt-Kaler (same volume, p. 234). Furthermore, a nearby supernova could not tell us very precisely its distance due to the strongly varying amount of dust in the galactic plane.

If SN 1987A were a distant supernova such as they are detected almost once per month, nobody would have ob-

tained enough observing time at large telescopes in order to study and monitor it in sufficient detail for a long time. And again, the distance to a supernova beyond our Local Group of galaxies would be quite uncertain as compared to the well-defined and well-known distance to the LMC.

So it is not surprising that starting on February 25 literally every telescope in the southern hemisphere was directed towards the newly-born supernova (unfortunately enough, no spectrum exists from the night before when Ian Shelton made his discovery). This was of course also the case at the European Southern Observatory in Chile at La Silla where

The Proceedings of the ST-ECF Workshop on

Astronomy from Large Databases – Scientific Objectives and Methodological Approaches

which was held in Garching from 12 to 14 October 1987, have now been published. The 511-page volume, edited by F. Murtagh and A. Heck, is available at a price of DM 50.– (prepayment required). Payments have to be made to the ESO bank account 2102002 with Commerzbank München or by cheque, addressed to the attention of

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