

# ESO'S EARLY HISTORY, 1953–1975

## VII. The Late 1960's: Structural Changes, First Scientific Activities and Some Soul-Searching; the Journal A & A\*

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*“La construction et l'installation du grand télescope — — — sont l'objet de sérieuses préoccupations de la part de la délégation — — —”.*

From a letter of the French Council delegates to the President of Council, June 15, 1969.

### Introduction

The late 1960's were years of transition. With the dedication of La Silla in March 1969, ESO's first phase of constructions had been concluded. Realization of the Schmidt and the 3.6-m telescopes would be the main goals for the next years, besides the Observatory's taking up its functions as a research institute. The transition was accompanied by a change in the structure of the management of the Organization and by the creation of a Scientific Programmes Committee. While the latter, as one of its assignments, reflected on, and suggested, directives for ESO's long-range development beyond the Initial Programme of the Convention, the Organization also underwent some thorough – and sobering – soul-searching. These developments, together with a brief account on the first scientific activities and the role ESO played in the creation of the journal *Astronomy and Astrophysics* will be dealt with in the present article.

### Changes in the Directorate

At the November 1966 Council meeting, Otto Heckmann reminded Council members that it was the present management's task “— — — to construct the Observatory, not to work scientifically — — —”, and that his appointment as Director per November 1, 1962 had been for a term of five years, thus ending per November 1967; a decision would soon have to be taken on his future role. The Council meeting of June 1967 ensured Heckmann's continued supervision of construction activities by extending his appointment till the end of 1969, and responsibility for the development of scientific activity was assigned to myself in part-time association with the ESO Directorate. These moves were formalized by Council decisions of December 1967 at which also Ramberg's position was redefined: Heckmann became Director General until December 31, 1969; Ramberg Technical Director

per January 1, 1968; and Blaauw Scientific Director on 50% time basis per February 1, 1968.

The new set-up functioned till Heckmann's retirement as Director General at which moment he was succeeded by the author. Ramberg continued as Technical Director (he would retire per December 31, 1971). The post of Scientific Director was suppressed per January 1, 1970. Heckmann continued for a limited period as consultant in connection with the work on the Schmidt and 3.6-m telescopes. Some other major appointments made about this time, connected with instrumental developments and administrative affairs will be mentioned later.

Meanwhile, Bengt E. Westerlund had per June 1, 1969 taken up the position of Director for Chile (based on Council's decision of June 1968) after having been associated with Steward Observatory in Tucson, Arizona, bringing to ESO his thorough acquaintance with the Southern Sky gathered during earlier association with Mount Stromlo Observatory in Australia. André Muller, after almost six years of building up ESO in Chile, returned to Europe where he joined the Office of the Director in Bergedorf per October 15, 1969 for the new task of organizing the rapidly growing Visiting Astronomers Programme. As we have seen in article IV, observational activity on La Silla had started at the end of 1966 with the 1-m telescope. It now grew rapidly.

### Earliest Scientific Activities and the Creation of the SPC

About one year after the ratification of the ESO Convention, in its December 1964 meeting, Council appointed a small advisory committee for preparing a discussion on the way the Observatory should operate: on the size and role of permanent and semi-permanent staff, that of visiting astronomers, the allocation of observing time, etc. The group, consisting of A. Blaauw (Chairman), E. Geyer, A. van Hoof, P. Lacroute and B. Lindblad, met at Bergedorf on May 6, 1965 and submitted to Council a document “Considerations and

Recommendations Concerning the Exploitation of the Observatory” [1]. As it reflected what at that time was expected from ESO, let me mention some of its contents.

It started by saying that “*Whereas the role of the observatory as an astronomical institute in its own right — — — should be of great importance, the facilities of the observatory should particularly be available to serve the national interests of the member states.*” To this end, there should be a staff of permanent and semi-permanent members – to be engaged at the ESO establishments – and the facilities should be frequently used by visiting astronomers from the ESO countries. Besides the research by individual staff members and visiting astronomers, the observatory might conduct “*general programmes — — — to provide documents of fundamental significance but not necessarily requiring immediate analysis, such as, for instance, a sky-atlas, astrolabe programmes, systematic observations in Selected Areas, etc.*” and these “*are the responsibility of the Council who, upon the recommendation of the Scientific Programmes Committee, may charge a staff member or, possibly, another astronomer with the supervision of such a programme.*”

“*Semi-permanent staff members — — — normally employed for about 3 years in Chile — — — should be well acquainted with the instruments and are to be charged with the instruction of the visiting astronomers in order to ensure efficient use of the observatory's facilities. — — — they [also] may be charged with the responsibility for the execution of the “general programmes”. — — — At any time, there should be present in Chile and at the disposal of the Director, for each major ESO telescope a permanent or a semi-permanent staff member well acquainted with that telescope.*” With regard to semi-permanent staff the document stated that “*in order that ESO may attract qualified astronomers — — — it is necessary that they possess the guarantee of continuation of their positions in the home countries upon their return from Chile — — — continuation of pension rights and — — — social security benefits. It is of great im-*

\* Previous articles in this series appeared in the *Messenger* Nos. 54 to 59.



By way of introduction to our description of the early observational activities on La Silla, we show the Observatory under the southern sky, as seen by the Chilean artist Nemesio Anthunesz. The painting was made at the request of the Swedish Natural Science Research Council – ESO being one of the many projects this Council supports – and it decorates this Council's Wenner-Gren Centre Headquarters in Stockholm. In 1970, when he made the painting, Anthunesz was Director of the Museo Nacional de Bellas Artes in Santiago.

In the artist's impression we recognize the general layout of the Observatory as seen from the south, with the Schmidt-Telescope building in the foreground and the cluster of intermediate-size telescope domes – and even the ENTEL Communications System relay mast – farther down. (Compare the photograph on page 31 of the previous article.) We also recognize, to the left above the Observatory, the conspicuous constellation of the Southern Cross with, starting from its extreme lower right star Alpha Crucis, in clock-wise order the stars Beta, Gamma, Delta and Epsilon Crucis. Naturally, as it is located at declination  $-60^\circ$ , in reality the Southern Cross can be seen from La Silla only in southerly direction – but never mind . . .

The author is indebted to Dr. M.O. Ottosson, Council member for Sweden, who kindly made the photograph of the painting available for the Messenger.

portance that the respective governments of the member states adopt a cooperative attitude towards this problem."

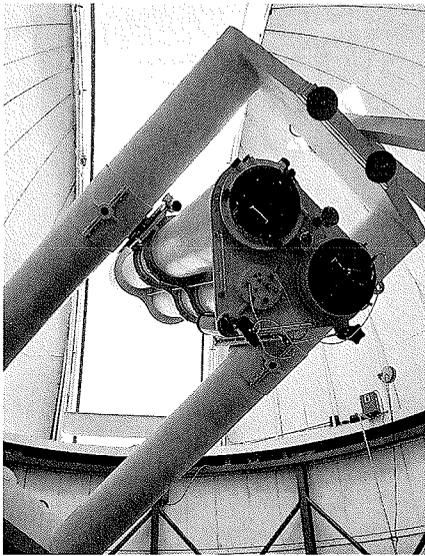
Visiting astronomers were supposed to stay in Chile for periods of two months to one year. The advisory group also proposed that Council establish two kinds of fellowships: those for young students, and those for distinguished scientists invited to do research at an ESO establishment. For the allocation of observing time the advisory committee suggested that applications by visiting astronomers were to be submitted first to national committees to be created for this purpose, who then would pass on the applications with their advice to a Scientific Programmes Committee – SPC – to be created by the Council. Proposals were added for the constitution and the task description of this SPC.

In several respects, the arrangements suggested were modified in actual practice. Not Council, but the ESO Director would be in charge of the execution of general programmes; short stays of visiting astronomers became the rule rather than the exception; applications were not first scrutinized by national committees; special fellowships for distinguished astronomers would not be in order during the first decade; and guarantee for semi-permanent staff's continuation of their employment in the home country has seldom been granted.

### **The Scientific Programmes Committee (SPC)**

In its meeting of June 1965, Council agreed with the suggestions of the advisory committee, and in December 1965 it appointed a working group (con-

sisting of A. Blaauw, R. Cayrel and O. Heckmann) for making a more definite proposal for the task and constitution of the proposed Scientific Programmes Committee. The low priority which these matters still had at that time is reflected by the fact that only in October 1966 the group formulated its advice [2] for submission to the December 1966 Council meeting. This led to some revisions of June 1967 [3], following the Council meeting earlier that month. At that meeting, Council decided to establish a Scientific Programmes Committee, to be selected and appointed at the next Council meeting. Meanwhile, the advisory group dealt with the allocations for the 1-m telescope. The December 1967 Council meeting then appointed the SPC with B. Strömgren (Denmark) as Chairman, and the members J. Delhaye (France), E. Holmberg (Sweden), P. Swings (Belgium), G. Traving (Germany),



### **The Grand Prism Objectif (GPO)**

After having served in South Africa in the context of site testing, the GPO was installed on La Silla where it resumed its work in the middle of 1968. The optical principle according to which the instrument operates has been described in article IV. The photograph shows the twin tubes of which the instrument consists: the left one carrying in front the specially designed objective prism, the right one serving for precise guiding during observing. Once installed at La Silla the GPO continued its work on the Magellanic Clouds, but now under much better atmospheric conditions than in South Africa.

From ESO Historical Photographs Archives.

studied in 1967 early-type stars in southern clusters and associations and carried out a test programme for a new infrared photometer, and guest observers J. Stock and E. Mendoza also used the telescope [5]. Observations were interrupted for a short period in the fall of 1968 when the telescope was moved from the provisional to its permanent dome.

The range of programmes broadened considerably in 1968 as is apparent from the lists of users given in the ESO Annual Report for that year. Apart from the continuing photometry of Magellanic Cloud stars by the Marseilles group, the majority of the observations were devoted to objects in the Galaxy. With the 1.5-m Spectrographic Telescope, in operation since the middle of 1968, after photographic tests with a provisional plateholder, work first concentrated on spectroscopy with the Chilicass Cassegrain spectrograph in which again work on the Magellanic Clouds dominated; it was performed by Dossin, Maurice and Prévot. Fr. Dossin, from Liège, had been associated with the Office of the Director in Bergedorf since February 1, 1966, but from February 1968 joined the staff in Chile. E. Maurice, of Marseilles, became a staff

member in Chile from May 1968, after having been employed by ESO in Marseilles from January 1968 for work on the RV Cass spectrograph. L. Prévot of Marseilles Observatory had been engaged in the GPO programme in South Africa, as described in article II. In 1969 Cassegrain and Coudé spectrographic work was carried out in alternation. As reported earlier, the 61-cm Bochum and the 50-cm Danish telescopes came in regular operation in the course of 1969; for their programmes I refer to the lists in the ESO Annual Reports.

By the end of 1969, the astronomical staff in Chile consisted of the members mentioned already: Westerlund, Dossin, Schuster and Maurice, to whom had been added in the course of 1969 A. Ardeberg of Lund, from May 15, 1969, and J.J. Rickard, formerly of the California Institute of Technology, from October 1, 1969.

### **The First Coopérants**

An interesting addition to the staff in Chile were French “coopérants”. By agreement with the French Ministry of Foreign Affairs, in the context of French service to underdeveloped countries (specifically for Chile), young Frenchmen, preferably astronomy students, were allowed to substitute their military service for work on La Silla. For this service they were proposed by ESO to the Ministry, upon recommendation by the French National Committee for Astronomy. The first ones to enjoy this duty were Jacques Colin from Besançon Observatory who arrived in Chile early in 1970, and Jacques Breysacher from Nice Observatory, who followed in the fall [6]. From then on, each year French coopérants were stationed in Chile. Belgian coopérants soon joined them under a similar arrangement, but the other ESO member states could not be persuaded to interpret military service that scientifically.

### **The Roden Colloquium on Photometry of February 1966 and the Nice Colloquium on Spectroscopy of June 1969**

The early photometric activities with the 1-m telescope had been inspired to some degree by ESO’s first scientific colloquium, held under the title “ESO Colloquium on Photometry” at the Kapteyn Observatory at Roden from 9 to 11 February 1966. About 70 astronomers from the member states and some specialists from other countries attended, and reviewed the field of photoelectric photometry. An extensive report on the Colloquium was published by Borgman in *ESO Bulletin* No. 1 of

November 1966 (which also gave two useful tables with the optical properties of the first ESO telescopes and spectrographs). For those who attended it is of interest to recall the quite unusual weather conditions prevailing at the start of the Colloquium: a sudden, heavy glazed frost causing breakdown of power lines and telephone connections, and thus for a while isolation of Roden Observatory and unheated lodging for some of the participants . . .

A spectroscopic counterpart to the Roden Colloquium was the ESO Colloquium on Spectroscopy, held at Nice Observatory on June 3–5, 1969. We are not aware of a comprehensive report; contributions were published separately, for instance one by A.B. Underhill on Early-Type Stars in *ESO Bulletin* No. 8, June 1971.

### **The Allocation of Observing Time**

For allocating the observing time for 1968, the ESO Directorate called a meeting of the applicants, in its office, on November 23, 1967 [7]. Invitees were A. Ardeberg (Lund), A. Behr (Göttingen), M. de Vries (Roden), E. Geyer (Bonn) und U. Haug (Tübingen). The meeting acquainted the Directorate with the research interests in the member states, and made the applicants mutually acquainted with their projects. Such presentation of research proposals in the circle of fellow applicants was soon abandoned, however, when their number increased.

The SPC took over in the course of 1968. In July 1968 Council adopted rules for the allocation in accordance with a proposal of the SPC [8], the main elements of which were:

- Allocation was to be done for periods of 6 months: March–August and September–February; deadline for applications was six months before the beginning of the allocation period; per proposal the Directorate should request evaluation by at least one member of the SPC; final allocation was to be done by the Directorate at the recommendation of the SPC; for proposals of unusually long duration or heavy financial implication the Directorate should consult with the Chairman of the SPC; applicants were to be informed on the allocations at least four months before the beginning of the allocation period; but for all this, “— — — rules to be handled with flexibility — — —”.

### **The SPC and the Future: More Telescopes and an ESO Centre?**

From the outset, Council considered the SPC’s task as twofold: not only should it advise the Directorate on the

and Th. Walraven (Netherlands), and myself as secretary.

The appointment of Strömgren as Chairman deserves some comment. So far, his name did not occur in these articles except for his presence at the 1953 Groningen Symposium mentioned in article I. Bengt Strömgren, one of the most outstanding astronomers of our era, had left Denmark in 1951 after having been Director of Copenhagen Observatory since 1940, to become Director of Yerkes and McDonald Observatories, and was next, since 1957, connected with the Institute for Advanced Studies at Princeton. He returned to Copenhagen in 1967 [4]. Having always entertained a lively interest in ESO's development, Strömgren now was the obvious choice for the SPC Chairmanship.

The SPC held its first meeting on May 2, 1968 at the Bergedorf Office of the ESO Directorate. A list of the SPC meetings is given in the accompanying table. (It split by Council decision of June 1971 into the Observing Programmes Committee and the Scientific Policy Committee). Already at these first meetings, in 1968, important items of scientific policy were taken up apart from the evaluation of applications for observing time. However, before considering these, let me first review the scientific activities so far.



The last meeting of the Scientific Programmes Committee before it split into the Observing Programmes Committee and the Scientific Policy Committee was held at the Observatory at Roden near Groningen, on November 23, 1971. On this photograph (post-lunch at the restaurant), from left to right: Joke Westra (secretary of the Observatory), Eric Holmberg, André Muller, Martien de Vries (Roden Obs.), Bengt Westerlund, Paul Ledoux, Bengt Strömgren, the author, and Jan Borgman.

From ESO Historical Photographs Archives.

A variety of programmes had been conducted with the 1-m Photometric Telescope since its installation late 1966. Measures of the photometric extinction on La Silla were, of course, a first requirement. A major project was

the photometry of stars in the Magellanic Clouds identified by means of the GPO during its operation in South Africa; this was done by J.P. Brunet of Marseilles Observatory. Observers from the Kapteyn Laboratory at Groningen

**Meetings of the Scientific Programmes Committee, the Observing Programmes Committee and the Scientific Policy Committee\* 1968–1974**

SCIENTIFIC PROGRAMMES COMMITTEE (SPC)			
Chairman: B. Strömgren			
No.	Date	Place	
1	1968 May 2	Bergedorf	
2	1968 October 17	Bergedorf	
3	1969 May 6	Copenhagen	
4	1969 November 10	Marseilles	
5	1970 April 29	Bonn	
6	1970 November 11	Liège	
7	1971 March 9	Geneva	
8	1971 June 18	Paris	
9	1971 November 23	Roden	

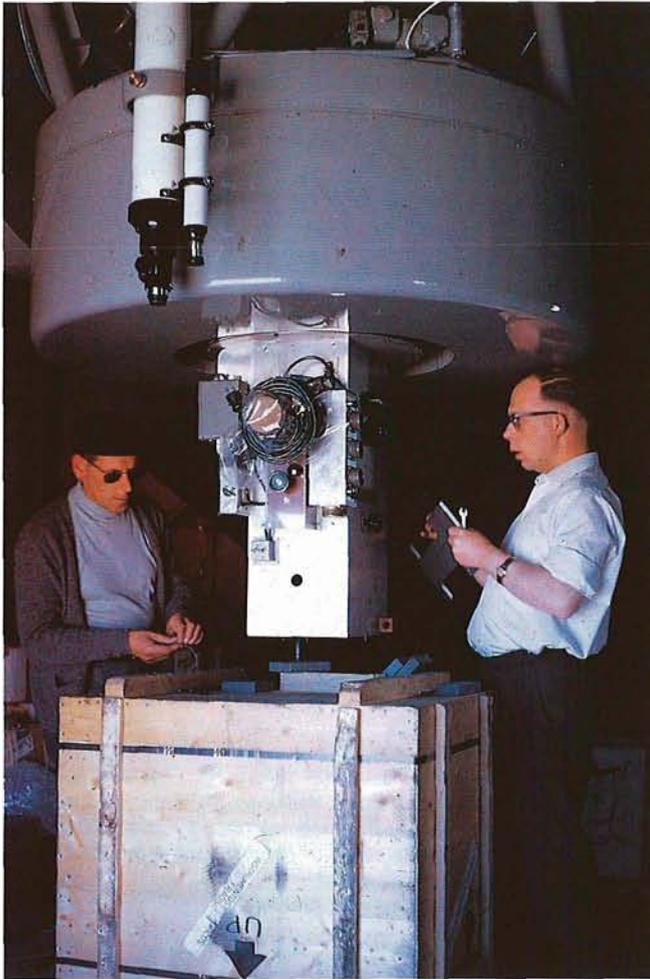
  

OBSERVING PROGRAMMES COMMITTEE (OPC)			SCIENTIFIC POLICY COMMITTEE (SPC)		
			Chairman: B. Strömgren		
No.	Date	Place	No.	Date	Place
10	1972 June 13	Bergedorf	1	1972 April 25	Copenhagen
11	1972 December 15	Heidelberg	2	1972 October 10	Bergedorf
12	1973 May 24	Bergedorf	3	1973 March 28	Paris
13	1973 December 11	Bergedorf	4	1973 September 14	Copenhagen
14	1974 June 17–18	Bergedorf	5	1973 November 7	Paris
15	1974 December 2–3	Obs. Haute-Provence	6	1974 June 18	Bergedorf
			8 <sup>1</sup>	1974 September 3	Trieste
			9	1974 December 4	Bergedorf

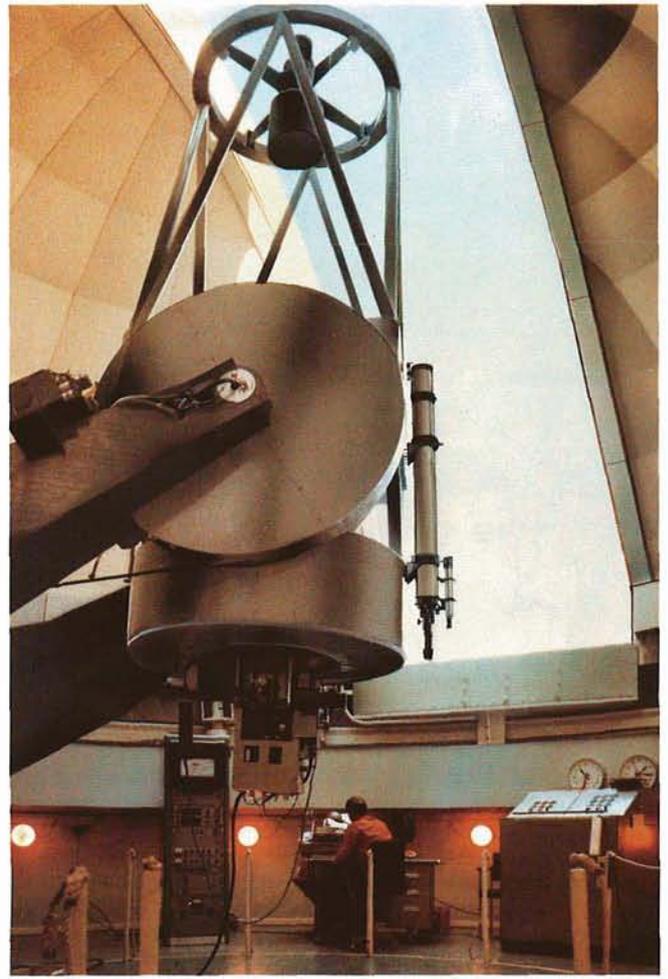
\* By Council decision of June 9–10, 1971 the Sc. Progr. Comm. split into the Obs. Progr. Comm. and the Sc. Pol. Comm.; membership was appointed in the Cou meeting of Nov. 30/Dec. 1, 1971.

<sup>1</sup> In numbering the meetings of the SPC, the number 7 was erroneously skipped.



May 1967. The ESO photometer for the 1-m telescope, built at Roden Observatory, is mounted at this telescope by André Muller, left, and Martien de Vries of Roden Observatory. The 1-m telescope, the first one in regular operation on La Silla, at that time was still housed in its provisional dome and had earlier been used with a simpler, borrowed photometer.

Photograph from a slide by the author.



#### **The 1-m Photometric Telescope**

After having been housed in a provisional dome on La Silla since the end of 1966, the telescope resumed its work in the permanent dome in the fall of 1968. It is shown here after the move, equipped with the ESO Photometer and with Jan Doornenbal, ESO's Chief mechanic in the background. During the first years, the telescope was mainly used for the study of stars in the Magellanic Clouds detected by means of the GPO, and for individual stars, star clusters and stellar associations in our Galaxy.

From ESO Historical Photographs Archives.

allocation of telescope time, it also might suggest long-range research projects and extensions of ESO's observing facilities [9] beyond the "Initial Programme" of the Convention.

In their second meeting, on October 17, 1968, the SPC took up the thread of early Council deliberations of November 1966, in which Council had touched on the broadening of the ESO membership, on extension of its instrumentation, and on the possible creation, somewhere in Europe, of an ESO Centre for the development of measuring instruments and for promoting scientific contacts between astronomers of the member states. Reference was also made to the promotion of Laboratory Astrophysics, a new branch of astrophysics that rapidly gained attention in the mid-1960's [10]. The SPC now formulated more precise proposals and

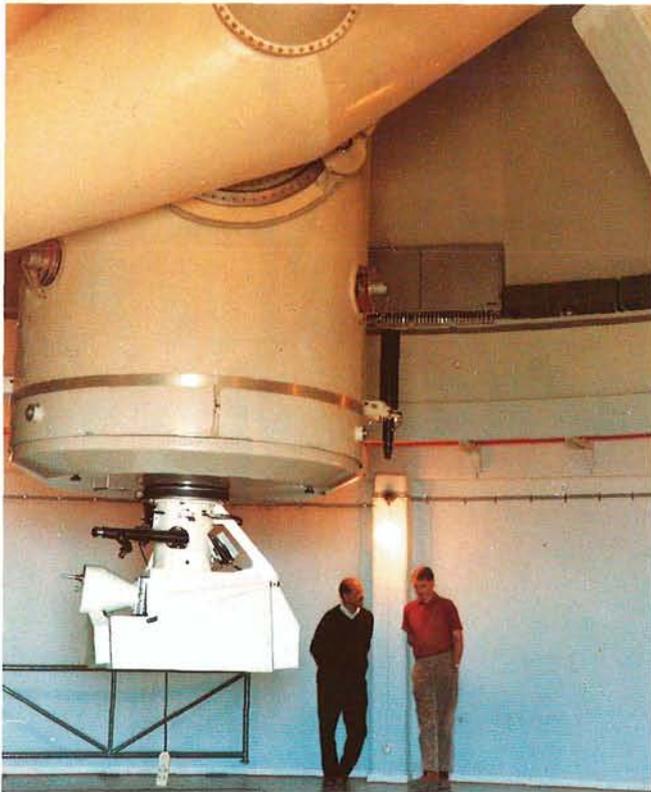
submitted these to Council in letters of the SPC chairman of November 15 and 20, 1968, for discussion in the Council meeting of December 3 and 4 [11]. We review here these proposals and the reactions in Council.

Strömgren's letter of November 20, discussed first by Council in the December 1968 meeting, emphasized that the Headquarters in Santiago should be well equipped with measuring facilities for visiting astronomers and resident staff, especially for the evaluation of photographic plates, but that such equipment should be developed preferably at an ESO Centre in Europe, in collaboration with both institutes in the member states and commercial firms, and this Centre should then also become a place for evaluation of observational data and a scientific meeting ground. As to Laboratory Astrophysics,

shouldn't ESO take advantage of, and possibly support financially, capabilities for such work at institutes in the ESO countries?

Strömgren's letter of November 15, 1968, presented proposals for new, powerful telescopes; these had been supported meanwhile by the Instrumentation Committee on November 5 and 6 and concerned:

- a photometric telescope, intermediate in size between the 1-m and 3.6-m telescopes, for instance with an aperture of 2.0–2.5 m.
- a Schmidt telescope considerably larger than the ESO Schmidt at that time under construction, for instance one with aperture 2 m and focal length about 6 m.
- an astrometric telescope comparable to the one recently acquired by the US Naval Observatory.



**The 1.52-m Telescope** equipped with the Cassegrain "Chilicass" spectrograph, borrowed from Marseilles Observatory. In the background, right, ESO's Chief-mechanic Jan Doornenbal talking to an (yet) unidentified person. In the early years, most of the observing time with the spectrograph was devoted to the determination of radial velocities and spectral types of stars in the Magellanic Clouds that had been detected by means of the GPO observations in South Africa.

From ESO Historical Photographs Archives.



The 1.52-m Telescope, although designed primarily for spectroscopic observations, was also sometimes used for direct photography, especially in the early stage of optical tests. It is shown here equipped with the Zeiss camera.

From ESO Historical Photographs Archives.

### The Proposed New Telescopes

For the photometric telescope the letter mentioned current research problems including: "Wholesale photometry in the Magellanic Clouds of stars down the main sequence; photometry of faint variable stars like those of the Groningen-Palomar Survey; photometry in various globular clusters and in the directions of the galactic center and central bulge. --- It would be unfortunate if work on problems of the type mentioned should have to be postponed until the time when the 3.6-m telescope is available. --- it would certainly be desirable to work on the problems just mentioned with an intermediate-size telescope --- with an aperture of 2-2.5 m --- the SPC favors the Cassegrain type reflector with Ritchey-Chrétien optics, with an effective aperture ratio around 1 : 8. ---"

With regard to the Big Schmidt Telescope (the name used in Strömgen's letter) it stated: "--- it can be foreseen that the development of image amplification as well as photoelectric spectrum scanning with large numbers of channels, will make it possible to push

limiting magnitudes in work with the ESO 3.6-m reflector --- sufficiently far for the ESO 1-m Schmidt Telescope to become inadequate as a companion instrument for survey work. ---" Research problems considered by the SPC included general survey work on faint galaxies demanded by the expected flow of discoveries of radio sources, and many research programmes on galactic structure. "--- what members of the SPC had in mind in considering the possibilities of a big Schmidt Telescope was an aperture of approximately 2 m and a focal length of about 6 m."

The proposed astrometric telescope was to aim at trigonometric parallaxes down to magnitudes 17 or 18, and at proper motions of high accuracy for the study of space motions out to distances of at least 500 parsec.

Highest priority was to be given to the photometric telescope, and to studies for the design of the Big Schmidt.

The above proposals were accompanied by the following cost estimates drawn up by Ramberg.

– Photometric telescope of 2-2.5 m . . . . . \$ 3,020,000.-

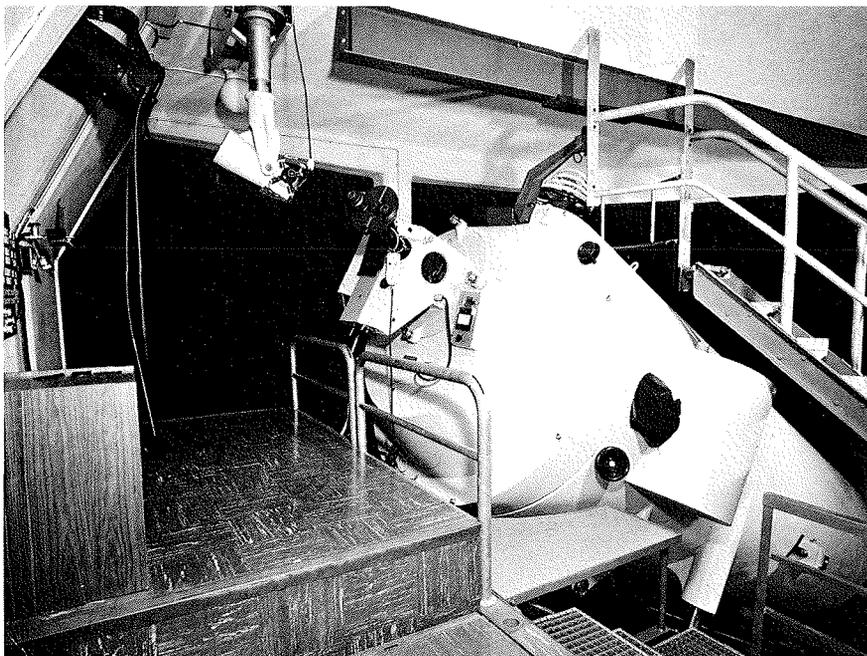
– Big Schmidt telescope of 2 m aperture . . . . . \$ 6,240,000.-  
 – Astrometric telescope of 1.5 m aperture . . . \$ 3,200,000.-  
 all of these including the building and dome.

The total amounted to . \$12,460,000.-

For comparison: the total estimate of the 3.6-m telescope project as it occurs in an estimate of late 1969 compiled by Ramberg (to which we shall refer later) amounted to . . . . . \$ 10,700,000.-.

In the discussions at the December 1968 and later Council meetings, the proposition of an ESO Centre in Europe for development of instrumentation and for the promotion of Laboratory Astrophysics struck a responsive chord because the wish for such a centre had been expressed earlier in Council. We shall later come back to this.

The proposals for additional telescopes were discussed at some length by Council in its meeting of December 1968. Soon after this, however, Council lost interest, for it became more and more clear that the ESO Directorate would have their hands full with the realization of the 3.6-m Telescope. Even



### The Coudé Spectrograph

For observations requiring high spectroscopic resolution the 1.52-m telescope is used in combination with the Coudé spectrograph of which the upper part is shown in this photograph. It is mounted in fixed position below the observing floor of the telescope; the star light collected by the telescope is directed into the spectrograph by means of a set of mirrors of which the position adjusts itself during the motion of the telescope in such a way that the beam enters the instrument in constant direction. Work with the Coudé spectrograph started in the middle of 1969 and was concerned mainly with the study of interstellar lines and the determination of the abundances of elements in the atmospheres of the stars. From ESO Historical Photographs Archives.

worse: concern about this realization soon overshadowed the optimistic views of the SPC about ESO's growth, and ESO was to undergo a short but sobering period of soul-searching. We do note, though, that the project of the Danish 1.5-m national telescope, realized later, would meet to a certain extent the desire for the proposed photometric telescope.

### Soul-Searching in the Late 1960's

In article VI, when describing developments around the introduction of the national telescopes, I mentioned the concern, since late 1968, about the lack of progress in the completion of the Schmidt and large telescopes. Soon signals of discontent on these and some other points grew louder and the Council Meeting of March 1969 in Santiago appointed a Working Group to advise Council, under the Chairmanship of G.W. Funke (former President of the Council), and with the members K.F. Scheidemann (President of the Finance Committee) and A. Alline. Alline had just become the French government delegate on Council and was the one who most strongly voiced feelings of dissatisfaction. The Working Group's task was not strictly defined, but from the

Council discussions it was clear that it should scrutinize many aspects of the functioning of the ESO Administration. These were to include: a confrontation of current activities with the aims as defined in the Convention, with special reference to such matters as the national telescopes and the new proposals by the SPC; the financial implications of such extensions; and certain aspects of the functioning of the administrative management.

In a letter of June 15, 1969 to the President of the Council (Banner), Alline, on behalf of the French delegation, elaborated more specifically, and critically, on these problems [12]: "*--- La construction et l'installation du grand télescope --- sont l'objet de sérieuses préoccupations de la part de la délégation française. --- La délégation demande --- que les provisions budgétaires --- prennent pour objectif d'achever dans les meilleurs délais la réalisation du programme scientifique défini lors de la signature de la Convention [et] d'effectuer des économies sur les chapitres non directement liés à cet objectif ---. L'installation et le fonctionnement d'instruments nationaux --- n'est pas sans poser à cet égard d'importants et délicats problèmes. --- Ni dans son esprit ni dans sa lettre*

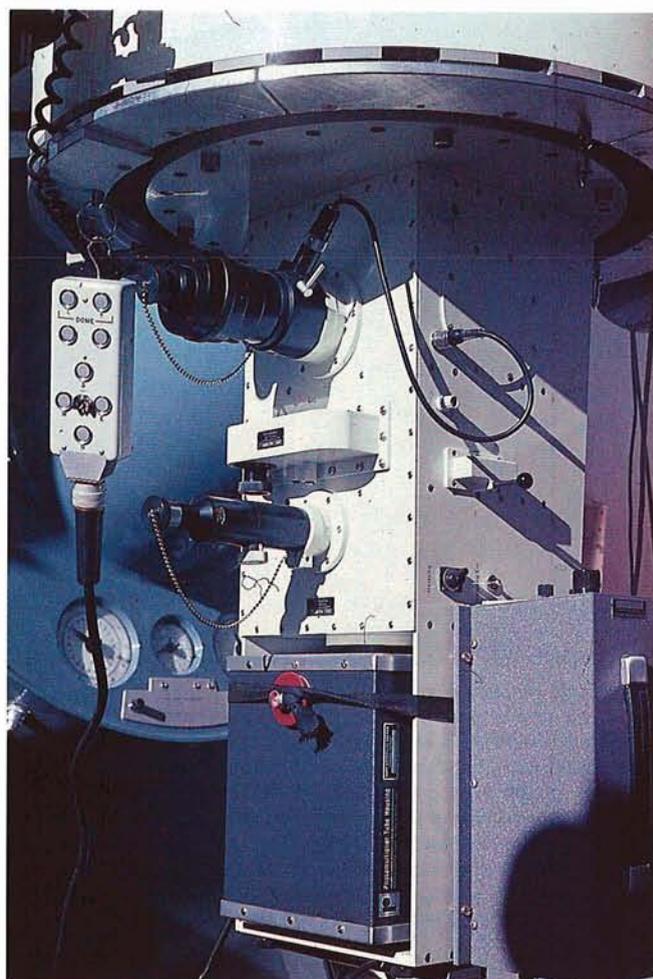
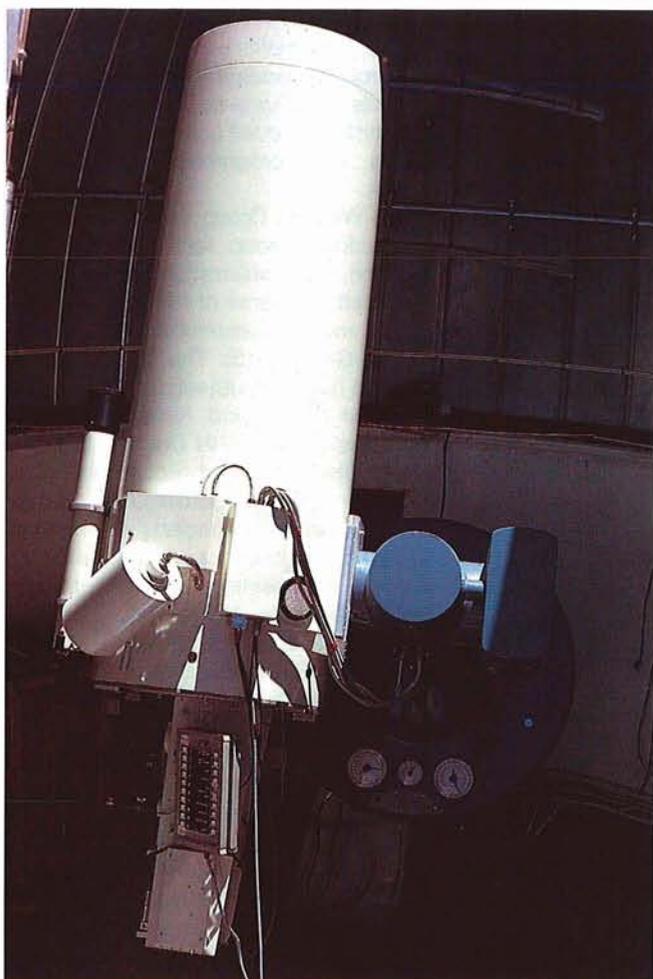
*la Convention n'autorise l'introduction de ces instruments ---. La Convention n'interdit cependant pas l'introduction de ces instruments ---. Il peut notamment être fait appel à cette fin à la notion de "programme supplémentaire ---".*

The Working Group (referring to itself as Working Group for reviewing Programme, Administration Procedures and Staff Problems of the ESO Organization) met on September 11, 1969 at CERN, Geneva [13]. The choice of this location had undoubtedly to do with the fact that Funke and Alline both were members of the CERN Council. But in a way it also was symbolic: in his comments on the ESO Administration Alline had on several occasions referred to CERN procedures as an example. Invited for the meeting were also, for the ESO Directorate, Heckmann, Ramberg and the Manager Bloemkolk.

Main basis for the discussions was, after the definition of the Working Group's task, an extensive document prepared by the French delegation: "Mémorandum destiné à la discussion entre MM. Funke, Scheidemann et Alline, en vue de la rédaction du rapport demandé par le président du Conseil de l'ESO lors de la 12ème session de Conseil à Santiago, le 22 mars 1969" [14]. The French Memo dealt successively with the questions raised earlier: changes in the "Convention-size" of the telescopes; possible ways to speed up the work on the 3.6-m telescope; the structure of the ESO Management in Europe and Chile and the danger of too much dispersion in the latter, suggesting reduction of the "intermediate" stations La Serena and Pelicano between Santiago and La Silla; and the organization and presentation of financial and personnel matters.

### The Report of the Working Group

The report of the Working Group was dealt with by Council at its meeting of December 15 and 16, 1969 [15]. The Group arranged its advice into four sections: The ESO Programme and the Convention; Budget Procedures; The 3.6-m Telescope; and Certain Other Questions. To the first, the Group observed that departures from the Convention with regard to specifications of the instruments so far had been "more from the letter than [from] the spirit of the Convention" and had not involved any appreciable rise in costs [16]. As to the question, which projects to consider as belonging to the regular programme, it recognized the occurrence of borderline cases and it referred to CERN's example of realizing a bubble chamber not foreseen originally as part of the



*The 61-cm Bochum Telescope, installed in September 1968, and the first of the "national telescopes" on La Silla. Financed by Bochum University and the Deutsche Forschungsgemeinschaft, it offered Bochum observers the outstanding observing conditions of La Silla whereas, for the logistic facilities offered by ESO, ESO observers received 30% of the observing time. The telescope, manufactured by Boller & Chivens, was equipped with a photo-electric photometer made at the central workshop of Göttingen University.*

regular programme and including in its regular programme preliminary work for a storing ring project pertaining to the Supplementary Programme.

The Working Group recommended to Council "a certain preparation for the continuous expansion", so as to enable it to consider carefully whether new projects should be included in the regular programme. With regard to national telescopes, the Group recognized that they "can become a worthy addition to the ESO instruments", yet they "---- would normally be allocated to the supplementary programme provision of ---- the Convention or they would be wholly paid by the country concerned ----" unless Council specifically incorporated them in the regular programme. With regard to budgetary procedures the Group recommended the adoption of a procedure similar to that used by CERN (see below). For the 3.6-m telescope project the Group recommended the preparation of a comprehensive status report and a detailed time- and cost schedule. Finally, the Group refrained from submitting any proposal

concerning possible reduction of the dispersion of the facilities in Chile, and it suggested that Council reconsider its salary policy to make staff positions more attractive than they had been so far.

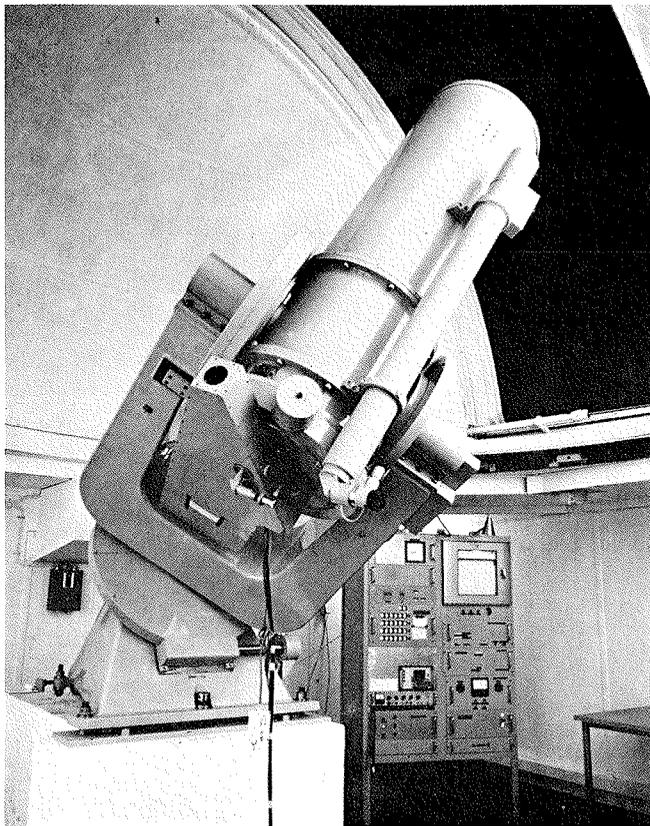
Judging from the minutes, the December 1969 Council Meeting took note of the report without extensive discussion. The meeting had a crowded agenda because of the succession in the General Directorate, and this did include as its principal item important reports concerning the 3.6-m Telescope Project which we will encounter later. Yet, there are several items in the memo and the Report which have distinctly left their mark on later developments in ESO and therefore are worth pointing out here.

First of all, this soul-searching had a sobering effect on the over-optimistic suggestions made by the SPC for extensions of the ESO facilities. However, Council appeared to remain receptive to the idea of the creation of an ESO Centre in Europe, where "the most sophisticated equipment for evaluation should be located, astronomers from

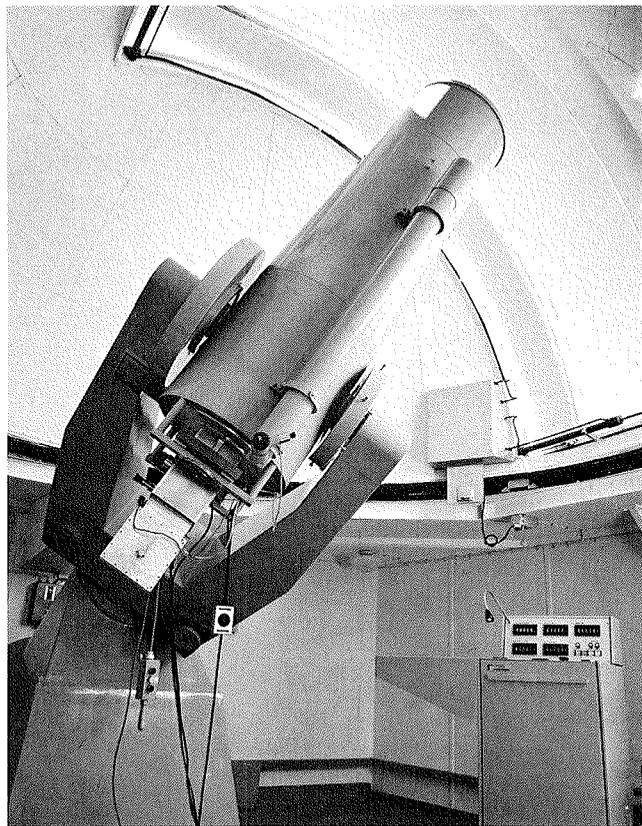
the ESO countries could work together and also, in collaboration, new instruments could be developed ----". To some extent, these wishes would be satisfied by the TP-Division created early in the 1970's.

With regard to financial and personnel matters, dissatisfaction among some Council delegates stemmed mostly from two causes: a lack of stability in the budget requirements, and lack of transparency in the documentation for Finance Committee and Council. The latter was not difficult to understand in view of the fact that the ESO Management had to set up an organization of unprecedented nature and size in astronomy, whereas most of the members of Council and FC were accustomed to streamlined procedures in well-established organizations.

For improving the situation, as a natural example Council tended to look at procedures established at CERN with its ten years longer experience (CERN was created in 1952). An important result was the introduction, in the early 1970's, of the so-called Banner proce-



**The Copenhagen 50-cm Telescope**, the second of the "national telescopes", shortly after it had been installed in its permanent dome in the middle of the year 1971. When it arrived on La Silla early in 1969 it was first mounted in the dome that had served earlier for the ESO 1-m telescope. The photograph shows it with the Copenhagen 4-channel photometer designed for photometry in the so-called Strömrgren narrow-band system.



**The ESO 50-cm Telescope** shortly after its installation in late 1971. The telescope is a duplicate of the Copenhagen 50-cm telescope and was, like the latter, manufactured at Copenhagen. It was acquired by ESO in the context of developments for the control system of the 3.6-m Telescope so that these could first be tried out in actual practice on a small instrument. Initially, as in the above photograph, it was equipped with a one-channel photometer. Like the two 50-cm telescopes, their domes also are twins.

ture adopted by CERN for budget planning; I expect to return to this later when reviewing financial and personnel developments. In order to avoid misunderstandings it should also be recorded here, that the report of the Working Group explicitly stated that "--- Management [essentially consisting of the Manager J.H. Bloemkolk and his staff] has accomplished its work in commendable fashion ---".

### Creation of Committee of Council

Finally, we note that at the March 1969 Council Meeting in Santiago the suggestion was made, by Alline, that ESO follow CERN's example by having a "Committee of Council" for the purpose of discussing in an informal manner, in between Council meetings and with restricted participation, those items which might give rise to controversies between the Council delegations mutually, or with the Directorate – and thus pave the way for smooth Council proceedings. A Committee of Council was established at the December 1969 meeting [17] and did func-

tion from the middle of 1970; it will figure in the list of Council meetings in a later article.

### ESO and the Creation of the Journal *Astronomy and Astrophysics*

It seems appropriate to devote in the present context a few paragraphs to the role ESO played in the year 1968 in the creation of the journal *A & A* which since then has become one of the leading astronomical journals, and still has an administrative link to ESO. Its creation, too, was one of the steps in the process of Europeanization of scientific activity. The close tie between the Journal and ESO, reported below, has led to the incorporation of the documentation related to the Chairmanship of the Board of Directors of the Journal over the first ten years of its existence, into the ESO Historical Archives. Accordingly, reference is made to these archives [18]; helpful has also been an earlier account by the author on the creation of the Journal [19].

On April 8, 1968 some leading astronomers from Belgium, Denmark, France, the Federal Republic of Ger-

(Continued on page 34)

### Centrefold

Giant clouds of molecules and infrared sources are invariably linked to star-forming regions.

The complex star-forming region NGC 3576 is located near the plane of our galaxy, at a distance of about 3.6 kpc. Associated with this nebula lies a giant molecular cloud of mass  $\sim 10^5 M_{\odot}$ . A cluster of 5 infrared sources have been reported. Approximately seven early-type (young) stars would be needed to ionize the entire observed region, some 10 arcminutes in extent.

Spectacular arcs and streaming motions can be seen in this colour-composite, made from three black-and-white Schmidt plates, secured by David Block at La Silla earlier this year. The blue (IIIa-J) and red (IIIa-F) plates were hypersensitized in nitrogen and forming gas and exposed for 60 min and 120 min, respectively through GG 385 and GG 495 filters. The green (103a-D) plate was exposed for 60 min with a GG 495 filter to approximate the V ("visual") waveband.

The composite was made by Claus Madson and reveals important temperature gradations, from the red to the ionized pink-white central area.

D. BLOCK, ESO and University of Witwatersrand, South Africa





many and the Netherlands met at Leiden to prepare a possible merging of some of the principal astronomical journals that appeared in Europe [20]. The meeting had been convened by S.R. Pottasch of the Kapteyn Laboratory who, together with A. Reiz of Copenhagen Observatory and J.-L. Steinberg of Meudon Observatory had been the first to explore attitudes with regard to a possible merger; Pottasch and Steinberg were closely connected with editorial work for a journal in their countries. The idea found general support and nine months later, per January 1, 1969, the first issue of the new journal appeared. The merging journals were: *Annales d'Astrophysique* (founded in 1938), *Bulletin Astronomique* (1884), *Journal des Observateurs* (1915), *Zeitschrift für Astrophysik* (1930), and *Bulletin of the Astronomical Institutes of the Netherlands* (1921), to which was added later the Scandinavian *Arkiv för Astronomi* (1948). First editors of the new journal were S.R. Pottasch and J.-L. Steinberg. The related series *A & A Supplements* appeared one year later, per January 1, 1970 under the editorship of L.L.E. Braes of Leiden, who was succeeded in 1971 by B. Hauck of Lausanne. The *Monthly Notices of the Royal Astronomical Society* refrained from merging, by decision of the Council of the Society on October 13, 1967 [21].

How did ESO come in? The April 1968 meeting had resolved that the affairs of the Journal should be supervised by a Board of Directors consisting of astronomers and representatives of sponsoring national organizations. This Board should be the autonomous owner of the Journal, including the title, with a private publisher acting as agent for the Board. However, in order to enter into a contract with the publishing agent as well as for other reasons, a legal status for the Board would have been required, the accomplishment of which for an international organization would have

been a time-consuming and somewhat complicated affair. An alternative solution was therefore preferred: making use of the legal status of ESO, whose aims as a joint European astronomical programme ran parallel to those of the Journal. The matter met support by the ESO Council in July 1968, so that steps could be taken to prepare the necessary legal documents. These found final approval and confirmation at the December 1968 Council Meeting [22]. They were:

- a statement concerning the creation of the Journal and the relation of its board of Directors to ESO;
  - a formal agreement between ESO and the Board of Directors;
  - the contract between ESO and the publisher, Springer Verlag;
- and accordingly Council authorized the Director General of ESO to sign the contract just mentioned.

The basic idea was, that ESO would make its administrative and legal services available to the Board of the Journal but would carry no financial obligation or responsibility. Apart from making use of ESO's services, the Board would have an entirely independent status excluding influence from ESO side on its scientific policy. As a trait-d'union between ESO and the Board, the author, at that time Scientific Director of ESO, became a member of the Board of Directors – and was, in fact, chosen as its Chairman.

Henceforth, European astronomers would turn to the new Journal for the publication of their work – including that based on observations at La Silla.

### References and Notes

Abbreviations used:

EHA = ESO Historical Archives (see *The Messenger* of December 1988).

FHA = Files Head of Administration at ESO Headquarters.

EHPA = ESO Historical Photographs Archives.

- [1] FHA Doc. ScAct-1.
- [2] FHA Doc. ScAct-2.
- [3] FHA Coc. ScAct-3.
- [4] For a short biography of B. Strömrgren see, for instance, the obituary by M. Rudkjöbing in *Quarterly Journal R.A.S.* Vol. 29, p. 282, 1988.
- [5] See the report by Blaauw in *ESO Bulletin* No. 4 of July 1968.
- [6] See Minutes Cou Meeting, June 1970, p. 41.
- [7] See FHA Docs ScAct-4 and 5.
- [8] FHA Doc. ScAct-6.
- [9] See FHA Doc. ScAct-3 of June 1967.
- [10] Minutes 7th Cou Meeting, p. 29ff.
- [11] Strömrgren's letter of Nov. 15 with accompanying Cou Letter 00/2426/68 of Ramberg, and Strömrgren's letter of Nov. 20 with accompanying Cou Letter 00/2464/68 by Manager Bloemkolk, both in FHA Cou and FC Doc's 1.1.1./1.2.1., Circular Letters.
- [12] Letter marked 3137/69 in file FHA 1.1.1/1.2.1.
- [13] FHA Doc. Cou-2, 2283/69.
- [14] In FHA, attached to the Report of the Working Group referred to under reference [14].; an English translation was made at the request of Funke according to FHA 1.11/1.21, Cou-2 2321/69.
- [15] FHA Doc. Cou-2 3304/69.
- [16] We note that in the W. Group's report the GPO is not considered as one of the three middle-size telescopes of the Convention, contrary to the decision taken by the ESO Committee in July 1960 as reported in article IV.
- [17] See, for instance, FHA Doc. Cou-2 3309/69.
- [18] EHA-I.C.7.; not yet subclassified in December 1989.
- [19] In *Europhysics News, Bull. of the Eur. Phys. Soc.*, Vol. 6, No. 12, Dec. 1975, p. 3–5.
- [20] A report on this meeting by S.R. Pottasch is in the section Earliest Developments of the Archives.
- [21] The Archives contain the relevant correspondence of D.H. Sadler and F. Graham Smith with J.H. Oort and S.R. Pottasch of October 1967, and the report of the R.A.S. Working Group for study of the matter.
- [22] See minutes of this meeting and Doc. FHA Cou-2 CL 2399 of Nov. 14, 1968.

## SN 1990I in the Polar Ring Galaxy NGC 4650 A

L. PASQUINI, ESO

### 1. A Brief History

On the night of April 29/30, 1990, Oscar Pizarro, night observer assistant at the ESO Schmidt telescope found on an ESO Schmidt B plate taken on 27.1 April 1990, a new, rather luminous object, situated very close to the edge of a quite bright galaxy. The discovery was made by comparing the new plate with

an old one taken about 10 years ago. From a first glance at the plate, it was clear that the object was likely to be a new supernova.

The host galaxy turned out to be NGC 4650 A ( $\alpha = 12^{\text{h}} 42^{\text{m}} 05^{\text{s}}$ ,  $\delta = -40^{\circ} 26' 30''$ , 1950 Equinox) with the object located 14 arcsec east and 47 arcsec south of the galaxy nucleus. Before the

end of the same night we managed to obtain 2 CCD frames (B and V filters) at the ESO-MPI 2.2-m telescope. Although the observations were performed at a very high airmass ( $\sim 2$ ), we succeeded in obtaining quite accurate photometry; the mean values were (29.4 April 1990)  $V = 15.6$  and  $B = 16.7$ . Due to the location of the object and to its brightness