

topf used the data collected at Zeekoegat, Flathill and Rockdale Mt., and those collected in Chile by Stock and by Muller and McSharry. We shall return to it in the next article and mention here only that the report confirmed what had been strongly suspected: that the sites in the Andes Mountains around La Serena were to be preferred on several grounds: the number of clear nights, the image quality, and the surprisingly low temperature drop during the night. It was at this meeting, 15 November 1963, that the EC decided in favour of South America.

In the beginning of this article I referred to the deterioration of seeing in the course of the night in the northern part of South Africa, mentioned by Bok. Such systematic change is not explicitly discussed in the reports on the ESO tests. However, while preparing this article, I am informed by André Muller that also on the Klavervlei and Zeekoegat sites this phenomenon was definitely noted and the deterioration was closely related to the decrease of temperature in the course of the night. In fact, according to Muller, this relation provides a strong first indication of the quality of a potential site: the smaller the drop in temperature, the better the site.

Finally, we note that in the course of the tests, the rating of image quality by means of the diffraction rings only was felt more and more as an unfortunate limitation. Nights with "good" rings but appreciable image motion did occur and were of little use for practical work like stellar spectroscopy, as was in fact experienced by observers at the GPO. This was pointed out, for instance, in the report of February 1962 referred to under footnote [21] but it did not lead to drastic modifications of the techniques of observation.

At the End, Bewilderment and Consent

The rather sudden switch from South Africa to Chile did not pass without bewilderment to the young astronomers and their collaborators still at work in South Africa. Had years of effort been wasted? Some disappointment was undeniable. Heckmann was aware of this and expressed it in a letter to me which, unfortunately, I have not been able to recover but of which I do remember the first words: "Mich drückt das Bewußtsein...". Disappointment would soon make room for the conviction that the decision had been right.

References and Notes

Abbreviations used:

EHA = ESO Historical Archives (see the description in the previous issue of the *Messenger*).

The Benevolent Environment

In the description of ESO's earliest history we encountered first of all the astronomers and their immediate collaborators. But their work would not have been possible without strong administrative support in Europe and the logistic services and hospitality of South African institutes.

Throughout the pre-ratification phase, the efforts toward ESO relied heavily on the moral support from the part of individuals in government departments or in science funding organizations. For France, the authorities concerned were in the Ministry of Science and Education and, ultimately, in the Ministry of Foreign Affairs; for the German Federal Republic and Belgium, in those dealing with science and education or technical development. For the Netherlands and Sweden they belonged to the science supporting organization ZWO and the Swedish Natural Science Research Council, respectively. These structural differences also determined the nature of the sources for the provisional funding of the site tests.

Particularly meritorious for ESO's early development was the Director of the Dutch organization ZWO, J.H. Bannier. From the moment of his appointment as Treasurer of the ESO Committee (at its October 1957 meeting) Bannier firmly took in hand the financial management. His task was not only budgeting and bookkeeping, but also the continuous effort to persuade the authorities in the partner countries to provide, on the necessarily *ad hoc* basis, the required funds. Bannier's authority allowed him, when necessary, to take initiatives in funding measures which made it easier for the partner countries to cross the financial bridge. From early 1959, Bannier made his associate Dr. B. van Geelen, a young chemist, available for services including personnel matters, preparation of travel, insurance, etc. – without frowning upon the bill of a water diviner in South Africa [27].

On the South African side, throughout the site testing there was strong interest and support from the part of the President of the Council for Scientific and Industrial Research, Dr. S.M. Naudé. CSIR provided know-how on technical matters required for setting up the testing stations and made vehicles and measuring instruments available for ESO's rather demanding use. Responsible for these services was from 1956 CSIR's Director for International Scientific Relations, Dr. C.G. Hide.

Essential was, of course, the collaboration and support experienced throughout the work from the part of the owner of Klavervlei Farm, the Köster family, and of Mrs. Oosthuizen of Sunnyside Farm at Zeekoegat.

Last but not least, there was the generous hospitality extended to the ESO teams by the South African observatories. With the testing activities gradually shifting to the Karoo, ESO relied more and more on the counsel and support provided by the staff of the Cape Observatory. The outstanding hospitality offered by its Director, R.H. Stoy and Mrs. Stoy, and by his associate David Evans and Mrs. Evans is warmly remembered by all those who participated in ESO's South African venture.

FHA = Files belonging to the Office of the Head of Administration at ESO Headquarters.
EC = ESO Committee (the committee that preceded the Council); for a list of the meetings of the EC, see the previous article.
Heckmann Sterne = O. Heckmann, *Sterne, Kosmos, Weltmodelle*, Verlag Piper & Co., München, Zürich, 1976.

- [1] See the report on the site selection by W.H. Stevenson and H. Knox-Shaw in *Monthly Notices R. A. S.*, Vol. 95, p. 447, 1935.
- [2] In EHA-I.A. 1.3. A paper presented at the Flagstaff Conference on Photo-electric Problems, Techniques, and Instrumentation, Aug.-Sept. 1952.
- [3] In EHA-I.A. 1.3.
- [4] H. Siedentopf: *Climate of the Union of South Africa*, Astron. Inst. of the Univ. of Tübingen, 1955, in EHA-I.A. 1.3.
- [5] Memo of this meeting in EHA-I.A. 1.3.
- [6] A. Danjon and A. Couder, *Lunettes et Télescopes*, Paris 1935, Chapitre V. See also *Comptes Rendus* No. 183, 1032, 1926 for the calibrations.
- [7] EHA-I.A. 1.3. A long report by Elsässer to Heckmann, Siedentopf and Unsöld accompanies this letter.
- [8] See I.A. 1.5. and I.B. 3.
- [9] See I.C. 2.3. a.
- [10] EHA-I.C. 2.3. d.
- [11] *Comm. Obs. de Belgique (Uccle)*, No. 141, 1958.

- [12] See minutes of a discussion on 25 July 1958 following the 8th EC Meeting in EHA-I.A. 1.7.
- [13] See minutes EC Meeting of July 1958, item 13 in EHA-I.A. 1.7.
- [14] See letter of J.H. Oort to the EC of Oct. 21, 1958 in EHA-I.C. 2.3.
- [15] This report in EHA-I.B. 11. and I.C. 2.5. b.
- [16] See the minutes of this (12th) meeting of the EC. The report by Muller seems to be missing from the EHA.
- [17] In EHA-I.C. 2.5. d.
- [18] The report is contained in the minutes of the meeting.
- [19] In EHA-I.C. 2.2. a.
- [20] In EHA-I.B. 11.
- [21] See map EHA-I.A. 1.16.
- [22] EHA-I.C. 2.7. b., H. Siedentopf and F. Unz, *Temperature Fluctuations in the Atmospheric Ground Layer observed at Zeekoegat and Flathill (South Africa)*, March 1964.
- [23] F. Unz, *Mitteilungen Tübingen No. 116 = Meteorol. Rundschau* 23, p. 87, 1970.
- [24] J. Dachs, U. Haug and J. Pfeleiderer, *Mitt. Tübingen No. 87 = J. Atm. Terr. Phys.* 28, p. 637, 1966.
- [25] J. Pfeleiderer, J. Dachs and U. Haug, *Mitt. Tübingen No. 88 = Zeitschr. für Astroph.* 64, p. 116, 1966.
- [26] In EHA-I.C. 2.7. b.
- [27] See letter van Geelen to Blaauw of 11 November 1960 in EHA-I.C. 2.8. d.