ment Series. The first lists have been submitted for publication and more will follow shortly.

These lists will be of great help to southern hemisphere astronomers in picking out objects which are interesting for future research programmes. Some of the galaxies, recognized on the original plates in Chile by ESO astronomers there, have already been further studied.

Wilson to be Consultant for Telescope Project

Following the distribution of Technical Reports Nos. 2 and 3 dealing with the optics of the 3.6 m telescope and methods of testing secondary mirrors, Dr. R. Wilson of the TP Division Optics Group in Geneva has been asked to act as a consultant for the Canadian-French 3.6 m Telescope Project in the field of optical test procedures.

The request came from Dr. H. Richardson of the Dominion Astrophysical Observatory in Victoria, Canada, an acknowledged expert and innovator in astronomical instrumentation, particularly in spectrographs and related equipment. This cooperation between the two groups should further strengthen ESO's good relations with the Canadian-French project.

Mining Commission Visits La Silla

A Chilean Government commission visited La Silla at the end of May in connection with measures that might someday be required to protect the scientific observations from air pollution. Such pollution might result from mining or other operations in the area or from misuse of the La Silla airspace by aircraft.

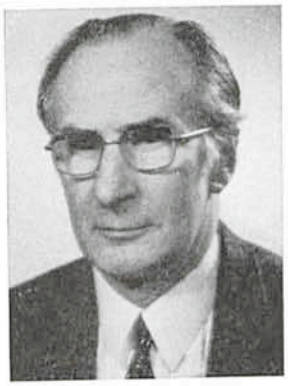
The 9-man mining commission (Comisión Redactora del Nuevo Código de Minería) was shown around by Prof. B. E. Westerlund, Director of ESO/Chile; G. Bachmann, Head of Administration, Hamburg; and G. Anciaux, Administrator, La Silla.

Such visits are very useful and provide better insight into the problems faced by the Commission. These mainly concern the possible measures required under the new Mining Code for safeguarding all sites in the country that are of historical, scientific or cultural interest.

The MESSENGER is at present planned as a quarterly publication. Contributions for issue No. 3 should accordingly be received by the editor by January 15, at the latest. They may be sent directly to The Editor, The Messenger, ESO/Hamburg, or via the local correspondents, namely:

R. Havlen, coordinator, Chile
M. de Groot, La Silla (scientific matters)
M. Becker, Santiago
N. Rodgers, ESO TP Division, Geneva

A New Method for the Alignment of Large Telescopes



Prof. A. Behr

The full advantages of a large telescope of high optical quality can be achieved only if the optical elements are perfectly aligned. Lateral displacements of the two mirror axes of a Ritchey-Chrétien system by a few tenths of a millimetre due to flexure under the unavoidable influence of gravity in different positions of the telescope already show an effect on the quality of the astronomical results, although they are normally not detectable during the time of observation.

The misalignment, however, and deviations of the optical surfaces from their ideal form can be detected from the intensity distribution in an extrafocal stellar image. The following method to keep the alignment of the 3.6 m telescope under permanent control has been developed by Professor A. Behr, visiting scientist at the TP Division.

The intensity in the extrafocal image is measured by an excentrically-rotating diaphragm with a frequency of 10 Hz. The result is found by Fourier analysis. In principle, the necessary correction can be found in about 10 seconds of integration time and can be immediately applied to the telescope. Under normal seeing conditions the method is independent of seeing and guiding errors. With poor seeing, longer integration times are necessary.

Laboratory experiments at the ESO TP Division at Geneva gave promising results. A test on the 1.6 m Ritchey-Chrétien telescope at the Vienna Observatory (September, 1973) was successful. Tests have been made (June, 1974) on the 1 m telescope on La Silla in order to improve the method and to develop foolproof equipment for the 3.6 m ESO telescope.

Professor Behr has written on this subject in Astronomy and Astrophysics (1973).

Passing the time in Hamburg

There are quite a few things to do in Hamburg besides looking at the stars, but apparently still not enough. We can fit in a bit more after work. A Staff Association meeting was therefore held one sunny morning at the end of August to consider this and some graver matters.

Almost everyone present favoured more sport, at least on paper. A 100 % interest in swimming was expressed and written down, more than 50 % were for sailing and horse-riding. The great indoors, as typified by bowling, chess and badminton, aroused varying percentages of response. After the meeting we got down to the nitty-gritty, and five people actually signed up for blowy hours on the Alster.