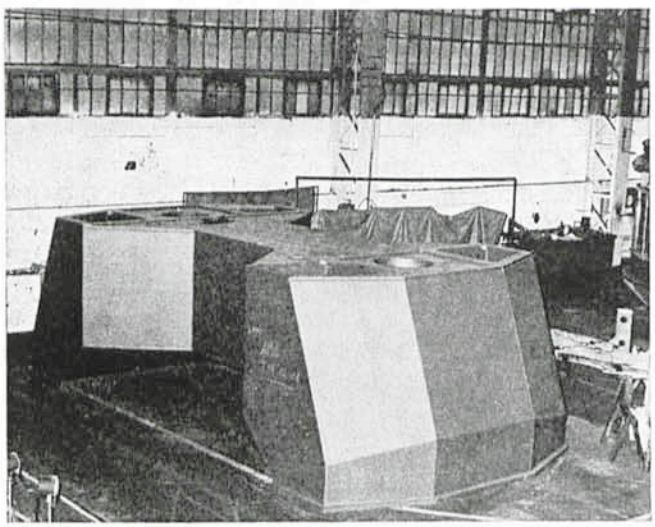
3.6 m Telescope Headed for Testing and Erection

The big telescope moves on towards its big day in 1976. In the Creusot-Loire plant at Saint-Chamond, near Grenoble, where a large part of the work has been done, all the major components have now been welded and stress released. Machining and the manufacture of all the smaller parts will be completed by the summer of 1974. Then, after testing of some 20 sub-assemblies, the assembly of the whole telescope will begin and it will be completed by January, 1975. A six-month period is allotted for the telescope tests and adjustment of the drives. The alignment procedures will also be determined during this time.



The cross-beam linking the two fork prongs to the polar axis is shown here at the stage following welding and before machining at the Creusot-Loire plant at Saint-Chamond. This is one of the larger sections to be transported, being 4 m wide, 2.4 m high and weighing 16,000 kg.

In the latter half of 1975 the telescope will be dismantled and packed for transport to Chile. All components, including the aluminizing plant, will go in the same ship. They will be unloaded at Huasco, a small port some 150 km north of La Silla. From there the convoy heads straight for the mountain. The firm of Creusot-Loire will then put the whole telescope together within about three months.

After the mechanical tests, the mirrors will be aluminized and installed for the first time in the telescope. This event, initiating the final steps towards making the big telescope operational, is scheduled for 1976.

W. Richter

ESO/Hamburg Goes Over to Computer

At the Director-General's Office, the Finance Service switched over to computer on the first day of 1974. The firm selected to carry out the work was Treuarbeit AG, Hamburg, and it used a Honeywell Bull 415 computer. The first tryout, in December, 1973, lasted one week and gave satisfactory results.

An existing programme has been adjusted to the current requirements of ESO book-keeping; the future needs of the Organization are also taken into account.

For the Hamburg Administration this means that the time-lag in operations is now reduced from one month to one week and there will be more time for non-routine work.

However, the manual accounting system was continued until March 31 to permit regular checks on the computer output.

Under the previous system, the ESO / Chile Administration received a single debit note giving the total figure and then made the break-down. This note is now replaced by a complete and detailed specification of expenditure in Hamburg, charged against their budget by budget item.

Early in 1974, definite proposals were made concerning partial implementation of the ESO / Chile accounting in the EDP programme.

P. H. Huijmans

Wilson Completes Optics Study

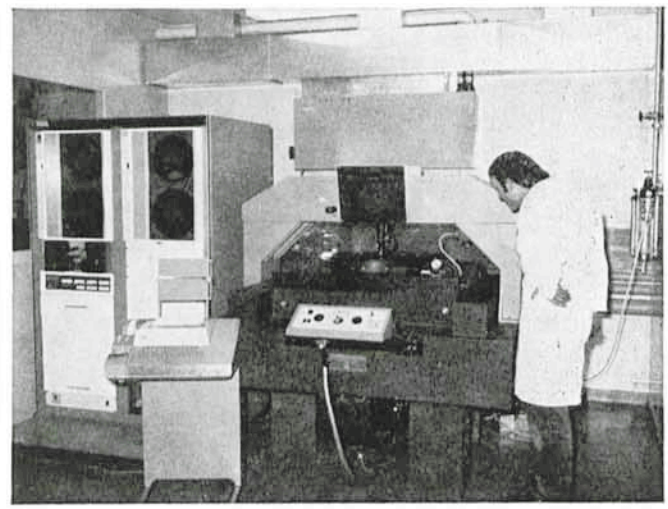
ESO recently was able to make some return for the technical aid given by CERN when Dr. Raymond Wilson, towards the end of 1973, completed a study on the optics of scintillator counters for the 300 GeV experimental area.

Dr. Wilson, who is British, took his doctorate at the Imperial College and came to ESO from Zeiss of Oberkochen in September, 1972. Acknowledged as one of the foremost experts in optical design, he has given many lectures on optics and instrumentation at international conferences, particularly at the last two ESO / CERN conferences. With the linguistic attainments added during his twelve years in Germany he can be regarded as the complete European.

Dr. Wilson is chairman of the Geneva committee of the ESO Staff Association.

ESO Pioneers with S-3000 Measuring Machine

An OPTRONICS S-3000 SPECSCAN measuring machine has recently been installed at the ESO Sky Atlas Laboratory in Geneva where it is undergoing installation tests.



ESO S-3000 measuring machine

This machine, which is the first of its kind in Europe, is capable of measuring positions (to 1μ) and densities (to .02 D) of astronomical plates up to 14″ x 14″. It will first be used for positional calibration of the Sky Survey plates which are taken with the ESO and SRC Schmidt telescopes, and also for quality control by means of image evaluation. However, it is expected that the machine will attract users of Schmidt plates within ESO as well as astronomers from institutes in ESO countries who want to evaluate plate material they have received from ESO.

The manufacturer is the Optronics Co. of Chelmsford, near Boston, USA.

R. West

New Electric Power Plant at La Silla

On March 7, news was received that all three diesel motor generator sets had just become operational. Within the following days they were taken fully into service for the supply of power to the Observatory.

Begun in June, 1973, the new electric power plant is part of the general plan for developing the installations at La Silla to meet the energy requirements of the 3.6 m telescope. It was assembled by Motoren-Werke of Mannheim, Germany. The location is at Km 17.5 on the road from Pelícano to La Silla and about two kilometres from the hotel.

The plant consists of a main engine-room measuring 22 x 8.5 m – i.e. 187 m^2 – and 5.8 m high inside; moreover, a small room containing the 6,000 volt starting cells, the four cells for the transformers that raise the generator tension from 380 V to 6,000 V, and, finally, a small combined workshop-store. The plant will have three groups of diesel generators of 480 kVA each, for a start, with space reserved for a fourth group later on.

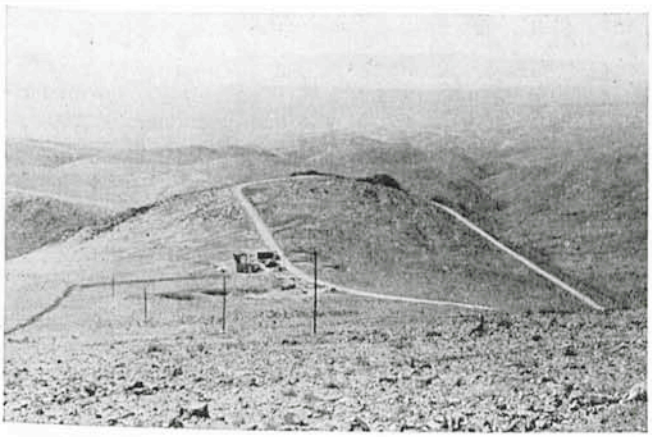
Three external mazout tanks with a capacity of 150 m^3 each will permit independent functioning for more than two months, with one group operating continuously at full strength.

The operation will be entirely automatic and the characteristics of the generator groups have been determined with a view to permitting the Observatory site to be supplied normally by a single group, the second being held as a reserve or a complement, if need be, and the third for maintenance.

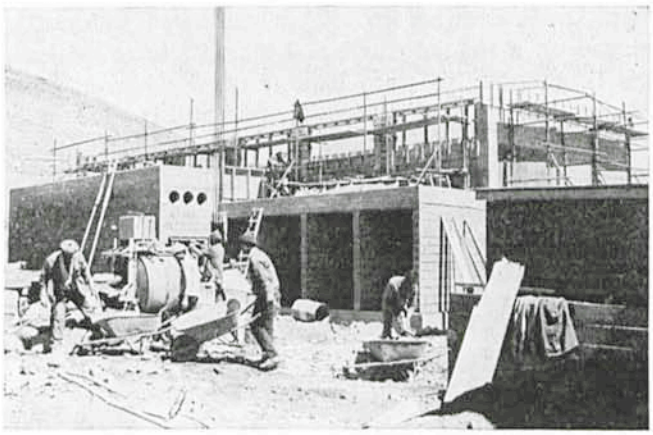
The new power plant will eventually supply the whole La Silla site by means of an underground 6,000 V cable about two kilometres long. It will also supply the installations at Pelícano and the pumping stations along the road through the present 6,000 V aerial electric cable connecting Pelícano with La Silla.

It will replace the plant operating at El Pelícano since 1967. This has been supplying the whole ESO area through the aerial cable, but, with its three old groups of 115 kVA diesel generators, it can no longer ensure an adequate supply for the Observatory.

J. Rouel



Site of the new electric power plant on the road from El Pelícano to La Silla. On the left is the outline of the 6,000 V cable connecting the plant with La Silla.



Construction in progress, October, 1973. View from the road, with the transformer cells in the foreground on the right and the edge of the high-tension cells (6,000 V) with the three orifices for a future cable extension on the left. In the background is the superstructure of the engine-room housing the diesel-generator groups.

Filming the 3.6 m Telescope

The Rodgers-Pillet film unit at Geneva is keeping well up with construction work on the 3.6 m telescope. Footage recently taken at the REOSC plant at Ballainvillers and Creusot-Loire at Saint-Chamond, also in France, has included some larger sections of the telescope, such as the horseshoe and the fork. The film, 16 mm soundtrack and in colour, follows the progress of the telescope, its aim being to provide a visual documentary record of the whole project.

The producer is N. Rodgers and cameraman-for-Europe B. Pillet. They will bring together the material from the various construction locations and edit it at the ESO TP Division in Geneva. The finished product will be distributed outside ESO also—e.g. to observatories and teaching institutions—but not commercially.

N. Rodgers

Letters Department

Letters on subjects of ESO interest are invited. They should be relatively brief and addressed formally to The Editor, ESO MESSENGER, Hamburg.