

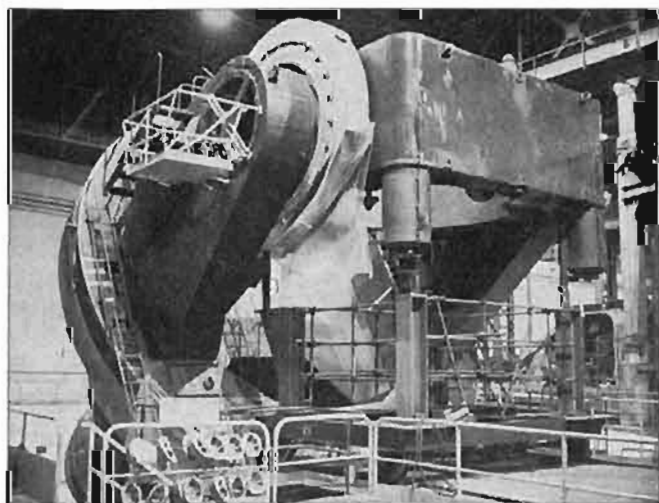
The polar axls (northern end in foreground) mounted on the pedestal.

oil pads which support the horseshoe come from Kugelfischer in Germany. They arrived finally on the day when we decided to stop the assembly until the pads arrived.

A big job was to put the horseshoe into position. Very careful manoeuvring was required to prevent this heavy piece from touching the oil pads and damaging the bearing surfaces.

Rexroth in Germany delivered and connected the oil-pumping station for the supply of the pads. This system went into operation in the middle of December, 1974. It was the first time that the horseshoe with its 9 m diameter was turned on an oil film of about 0.1 mm thickness. The precision of the horseshoe surface is so good that there was no metal contact.

MAAG in Switzerland produced the two main gears for this telescope. The big gear wheels of 3.5 m diameter have 720 teeth which differ not more than 0.005 mm from each other. Both gears came up to the required performance of the MAAG factory and were then shipped to the assembly place at Creusot. The gear wheels were mounted in the beginning of January 1975 onto the telescope, and the polar drive will be completely assembled at the end of the month.



The horseshoe with the fork prongs and the lower part of the telescope.

The two forks and the centre-piece went into position in the beginning of January. Next step is to get the hydrostatic declination bearings into operation. There is a good chance that the main assembly will be finished by the end of February, 1975.

In this phase, there are still a number of subassemblies at the Creusot-Loire and the Bouvier plants in France. These will be mounted as complete units onto the telescope. For one month the Cassegrain cage was in Geneva for testing and it has now been shipped to Creusot-Loire. The cabling of the telescope is still a big job that remains. A start has been made by installing the cables into the cable twist at the end of the polar axis.

Good progress was made during this assembly phase and we have been lucky so far to encounter only a very few small design and machining errors.

When they meet at Lyons in April, Council and Finance Committee members plan to make a side-trip to Saint-Chamond to see the assembly in its final stages.

Flash: La Silla Celebrates End of Concreting!

With all this work, there have to be moments of celebration too. Our local correspondent reports the festivities held on February 14 to mark the completion of concrete work on the telescope building:

The first stage in the construction of the imposing and majestic building to be erected at a cost of Sw. fr. 13 million for the giant telescope on La Silla was inaugurated by the executive of ESO. Arriving for the ceremony were the Director-General of ESO, Prof. L. Woltjer, also two ministers of state (Foreign Minister Patricio Carvajal and Finance Minister Jorge Cauas), diplomatic representatives of most of the ESO member states and various local notabilities. Many had made the Santiago-La Serena trip by chartered plane.

On the evening of their arrival, February 13, a dinner was held at the Hotel de Turismo, La Serena, followed by a folklore performance.

Next morning, the group went by bus to La Silla and, after lunch, was given a tour of the installations. The contract documents were formally signed by Dr. S. Laustsen, Leader of the ESO Telescope Project Division, and Mr. J. Schoenmaeckers, on behalf of Interbeton/Chile, the contractors.

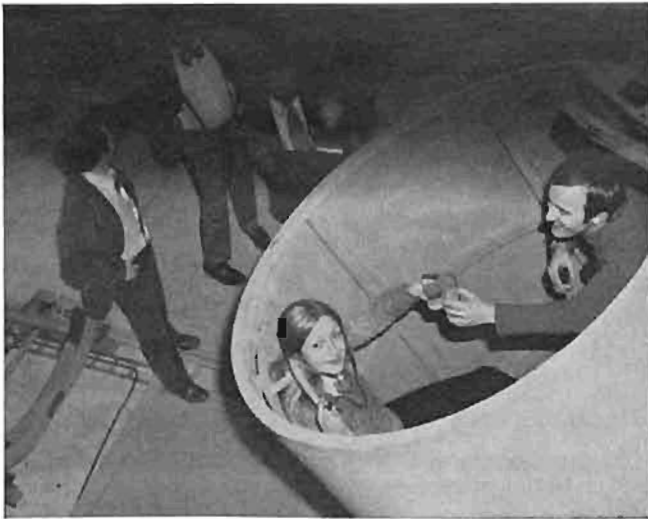
The return flight La Serena-Santiago was made the same evening.

Cassegrain Cage Goes Off on Two Trucks

In the second week of January, the Cassegrain cage for the 3.6 m telescope was taken on two trucks from the TP Division to the Creusot-Loire plant at Saint-Chamond to be included in the forthcoming assembly of the big telescope there.

An astronomer will sit in this cage with a battery of instruments which are used mainly for photography, photometry and spectroscopy. The Cassegrain cage is a lightweight steel structure. Its outside dimensions are prescribed by the horseshoe, which has to be passed freely when the tube rotates about the declination axis.

A chair can be placed in a great number of locations on the floor. Positioning of the chair from one place to the other can also be effected easily in the dark.



The Cassegrain cage arrived just in time ... for the Christmas party. Spotlighted: S. Kay, B. Pillet.

The instruments, together with their support structure, can be raised by a forklift to the height of the cage floor and rolled inside the cage by a carriage that runs over a fixed rail.

Control racks are located at the rear of the cage. Instruments can be screwed to an adapter plate at the rear of the mirror cell which has a big diameter roller bearing, permitting rotation of the instruments about the tube axis. The cage is firmly connected to the telescope centrepiece at four places.

W. Richter, Head of the Mechanical Group, did the preliminary design work on the Cassegrain cage, then J. F. R. van der Ven came in, and Messrs. Simon, Blumenthal and Grobli were also involved.

The cage was made in Denmark by Allerups, Odense, and it came to the new assembly hall of the TP Division in December, 1974, for testing. This phase lasted about three weeks.

Asked how it might feel to work in the cage, Dr. A. B. Muller, senior astronomer, said: "With so many instruments in front of you and on both sides — as many as can be fitted in without making the cage too heavy — your position is not too comfortable. In future it may not be necessary for astronomers to sit in there so much, as we must consider the possibility of remote control for certain kinds of observations."

Electronics on La Silla Move to New Laboratory

For many years the electronics laboratory on La Silla has been on the first floor of the photometric (1 m) telescope building. This is in the centre of the site where most of the telescopes are located, and just under the observing floor of the telescope that uses most of the electronic equipment. However, the laboratory has neither windows nor a ventilation system, so that working conditions are far from ideal.

If the new astronomy building planned for La Silla is realized sometime, this problem will be solved. However, in the meantime an intermediate solution has been found by moving the electronics laboratory to the casino

in the so-called "old camp"; this was done in December, 1974. The casino has nearly double the floor space of the former room at the 1 m telescope and daylight enters freely from all sides. Apart from the big laboratory, there is an office, a computer room and a storage room.

The former electronics laboratory will be used to house the computer systems which are being used with the 1 m telescope. These systems cause deterioration of the astronomical seeing by the heat they generate and they have to be removed from the dome.

In order to provide a relaxation centre for the workers on La Silla, a new casino has been constructed next to the former one.

The service provided by the electronics staff on La Silla has always been excellent, even under the former less-than-ideal conditions. Now that they have a "new" laboratory will it be even better? The coming months will give the answer!

Astronomical Flight to La Silla

On Wednesday November 20, 1974, Professors Blaauw and Woltjer flew in a twin-engined Beechcraft Duke from La Serena via our Pellicano airstrip to Santiago.

Astronomer John Wood arranged that the flight went smoothly. Wood, Danish astronomer Bengt Grønbech and pilot/owner Sr. Santiago Ojeda left Santiago's Tobalaba airport at 8.45 a.m. and touched down in La Serena at 10.10. Professors Blaauw and Woltjer had been driven to La Serena airport by Albert Bosker, and the three of them joined the remaining flight to Pellicano.

Thus the aircraft was fully loaded with six passengers and a certain amount of baggage. In addition, two boxes of astronomical equipment for the Munich University Observatory group on La Silla were packed into the Duke.

The flight from La Serena to Pellicano took 15 minutes and the plane circled the observatory at the most photogenic altitude (low), while Blaauw and Grønbech took photos.

The landing in Pellicano was normal and very comfortable from a pilot's point of view because the runway is so wide and long (1,300 m). The flight from Pellicano to Santiago took an hour and a half.



A toast to inaugurate the Pellicano airstrip. From left to right: A. Bosker, L. Woltjer, A. Blaauw, H. Ponce, E. Bedhmann, S. Ojeda, H. Franz, B. Grønbech.