Editorial

The Board of Directors of the Canada-France-Hawaii Telescope Corporation has requested that an information bulletin be published twice each year to keep the astronomical community abreast of the general evolution of the project, to give technical information necessary for the preparation of observational programs and to inform interested parties about the high points in the life of the Corporation.

We have chosen for the issuing of the first publication a significant date in the history of the project: that of the first light in the telescope (see the corresponding article).

Of particular interest for the astronomical community of Canada, France and Hawaii is the notice concerning the requests for observing time.

Lastly, there is useful general information and the schedule of the commissioning of the pool and instruments at each focus. R. Cayrel G. Ogders

First Pictures Taken with the Telescope

A few nights after the "first light" the first pictures were taken, just before the General Assembly of the IAU at Montreal.

The first picture, on display at the Canada-France-Hawaii stand in Montreal was that of the globular cluster Messier 13, in Hercules. Another picture, of the globular cluster M15, taken the following night was projected at the meeting of Commission 9 (Instruments and Techniques) on August 15. The pictures have been taken by D. Salmon with a 35 mm camera provisionally mounted at the prime focus.

The exposures were only one or two minutes because guiding was not possible due to the focus difference between the camera and the guiding probe. The seeing was satisfactory, the diameter of nonoverexposed stellar images being slightly better than one arc second. A slight triangular astigmatism was perceptible.

First Light in the Telescope

It was during the night of the 6 to 7 August 1979 that the first image was observed at the primary focus of the CFH telescope. The mirror was installed in its cell, after having been aluminized at the beginning of July. The adjustments of the radial lever system and the dorsal fixed points were reset during the day. Early during the evening, a cable feeding the primary cage broke which required feverish activity by the electronic technicians in order to re-establish control in the interior of the primary cage. A re-balancing of the telescope was also necessary because of the difference in the mass of the primary mirror and that of the dummy mirror which had been used until that time.

Several persons, drawn by the solemnity of the event, had gone to the summit or left neighbouring telescopes in order to be present at the moment of the first light in the telescope.

At two o'clock in the morning (local time) the mirror cover was opened and the telescope focused on the bright star, ε Pegasi, by J. C. Fouéré, who was armed with a pair of binoculars and a knife-edge tester.
The wind was strong and the "seeing" mediocre, which did not permit the study of the optical aberrations under the best conditions. However, it was possible to determine the position of the focus, that there was no large off-axis error, and also to verify that the tracking of the telescope was satisfactory.

The day crew, which had started work at 6:30 AM was still there at 4 o'clock in the morning, after almost 24 hours of continuous work.

At 4:30 AM everyone finally went down to the base camp to celebrate the event with a champagne toast (Californian) before going to sleep.

The Last Twelve Months

The tasks of the past year have been concentrated on the reassembly of the telescope at the site and manufacturing of the nine instruments subcontracted to various observatories or astronomical institutes. The telescope arrived in the "Big Island" in the harbor of Kawaihae, on September 12, 1978, onboard the vessel "Lift-off", after a journey of 45 days from La Rochelle. The valuable cargo, 46 crates weighing almost 500 tons, was trucked up Mauna Kea, piece by piece, passing by the office of CFHT in Waimea to reach the summit usually the same night.

The reassembly started in November and most of the structure was in place at the beginning of March. The primary mirror arrived on the 15th of March from Victoria and was placed in the aluminizing room, where it took six weeks to bond the 24 radial pads around the mirror.

The first motion of the telescope took place on March 8. Many fine mechanical adjustments were necessary, in particular the position of the hydrostatic bearings was slightly modified during the tests.

An important problem in the control system of the telescope (destructive instability in the power amplifiers) was solved just before the first tests of the telescope with its mirror. The cabling of the telescope proved to be a much more difficult and longer task than expected.

The instruments ready at this date are the prime focus guiding head and the photographic equipment used at the prime focus.

The data acquisition system, composed of a Hewlett Packard 21 MX computer with 64,000, 16-bit words memory and CAMAC interface is now at the Corporation headquarters in Waimea. The system software is about 70% complete. Several instruments have reached the 75% level of completion: the faint object spectrograph, the infra-red photometer, the visible photometer, the Fourier transform spectrometer and the Cassegrain polarimeter.

The other instruments now under fabrication are the high dispersion coude spectrograph, the long slit cassegrain spectrograph, a focal reducer for the cassegrain focus, a photon-counting t.v. camera and Reticon and CCD camera.

FLASHBACKS

August 78  The telescope was onboard the "Lift-off", which left La Rochelle on the 28th of July.

August 77  Factory tests. Reinforcement of the telescope South beam because of heavy flexure. The dome at the site was completed.

August 76  Shop assembly of the telescope, delayed by strikes in May and June.

August 75  Beginning of the construction of the telescope building on Mauna Kea.

August 74  Beginning of the realization; the first two contracts were signed in July and the Corporation created in June.

N.B.: This first bulletin is the reprint of the bulletin distributed in August 1979 at the General Assembly of the IAU in Montreal, with the exception of the informations concerning the request for observing time for the first semester of 1980 which is no longer of use and of the article on the commissioning of the focii which has been updated in the bulletin No. 2.

The Canada-France-Hawaii Telescope Corporation (CFHT) is a joint organization of the National Research Council of Canada (NRC), the Centre National de la Recherche Scientifique of France (CNRS), and the University of Hawaii (UH).

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CANADA-FRANCE-HAWAII TELESCOPE CORP.
P. O. Box 1597
Kamuela, Hawaii 96743 USA
Telephone: (808) 885-7944 Telex: 633147 CFHT