

# RECENT IMPROVEMENTS AT CFHT

Summarized below are a number of improvements which we have made at CFHT over the past six months.

## BUILDING AND DOME

Thermal Environment/Image Quality: A thermal imaging camera has been purchased to continue the thermal studies program. The cold floor and dome external skin were examined in December. The latter showed very little radiative cooling at night.

Most hydraulic lines in the dome have been thermally insulated.

Dome Skirt Seal: A new and completely redesigned vinyl dome skirt seal has been installed, replacing the one which was damaged beyond repair late last year. The new seal has survived unscathed the recent high wind (>100 knots), snow and ice storms. Careful reworking of the dome skirt environment has assured that rotation no longer poses a hazard to the skirt material.

Dome Shutter: in the past, we have experienced problems with the limit switches on the shutter being activated at inappropriate times by accumulations of snow and ice. This would prevent motion of the shutter and require intervention by the technical staff. The switches have now been relocated to eliminate this problem.

## TELESCOPE & TELESCOPE CONTROL SYSTEM

Aluminizing: The primary mirror was aluminized in May. An excellent result was obtained - 900 Å thickness and no droplets. During the aluminizing period, the primary mirror support system was thoroughly inspected and the optical alignment of all three foci was checked.

Incremental Encoders: New incremental encoders have been purchased from Itek. These will be much more reliable than the original equipment because they use LED's rather than incandescent lamps. New encoder mounts are being built for both telescope axes in order to improve performance and make installation easier.

Coudé Train: The tube which contains the coudé light path between the south pier and the third-floor observing room (the "stovepipe") has been insulated in order to improve coudé seeing.

The problems encountered with getting superblue coatings for the M2 and M6 mirrors have been resolved. We expect to have both mirrors in place by early next semester. All coudé train mirrors were cleaned and two red (silver) mirrors were recoated.

PF Bonnette: The guide-probe servos have been modified to ensure smooth slow motions for guiding at non-sidereal rates.

Cassegrain Environment: The angular position is now encoded and displayed on the TCS monitor to a precision of 0.06 degree.

Cassegrain Bonnette: The Cassegrain bonnette was removed in February and given a thorough inspection and overhaul. It was found to be in very good condition after nearly five years on the telescope. All moving parts were cleaned and protected, and an improved limit switch system was installed for the Y axis to prevent damage in the IR configuration. All of the optics was cleaned and the mirrors realuminized.

Uninterruptable Power Supply (UPS): A small UPS system is being installed to maintain power to clocks and other critical systems during power failures. This will greatly facilitate restarting the TCS after blackouts.

## INSTRUMENTATION

RC2 CCD: (See article this issue)

Summit Image Display System: CCD users will be delighted to learn that an IVAS image display system has recently been purchased from I2S for use at the summit. This device, which has a 1024 x 1024 format, will replace the Pericolor system (256 x 256), which has served as a stopgap CCD display for nearly three years.

FOCAM: FOCAS was extensively modified, eliminating the spectrographic mode and implementing a straight-through light path (i.e. no folding mirror). The new unit has been named FOCAM.

Coudé Spectrograph & Reticon: A complete spectral atlas of the coudé comparison arcs was produced using the Reticon and the recently commissioned 600 l/mm grating.

A new collimator, supplied by DAO, was coated and will be installed later this semester.

We now have a spare Reticon chip.

## COMPUTER SYSTEMS

The VAX System has been upgraded with the addition of a second Unibus adapter, 3 Mbytes of memory, and two Systems Industries 650 Mbyte disc drives.

The IRAF software package from KPNO has been installed.

# STAFF CHANGES

Two new positions were created at the beginning of 1986: the first one, destined to reinforce the software group, went to Robert LINK, who has been a temporary research assistant at CFHT since 1982; the second post, a much-needed purchasing clerk for the accounting department, was filled with the arrival of Tamae IWAMOTO, a resident of Honokaa.

Two long-standing vacancies were also filled during the first semester of 1986. In January, Steven HILL left the Avco Everett Research Laboratory on Haleakala, Maui, to join the CFH optical instrumentation group. David COWLEY, an engineering consultant from Vancouver and CAD/CAM instructor at the British Columbia Institute of Technology, took up his duties as mechanical engineer in May.

In March, Coleen HICKMAN, formerly with the Lucy Henriques Medical Center, replaced Lori KERR, a member of the secretarial staff since 1981. Dennis CRABTREE, who has managed the VAX system since its commissioning in late 1983, took up a position with the Space Telescope Data Centre at DAO, Victoria.

Olivier LE FEVRE was assigned to perform his French national service period at CFHT. Subsequent to his arrival at Waimea in February, he briefly returned to France to defend his thesis on distant galaxy clusters which earned him a doctorate from the University of Toulouse. He replaces Pierre KERN, who completed a similar term in January.

Requests for observing time on the Canada-France-Hawaii Telescope are made to the member agencies on a semi-annual basis. For proposals to the French agency, the requests must be received by September 1 for the first calendar semester (Jan.-June) of the following year and March 1 for the second semester (July-Dec.). Proposals to the University of Hawaii must be received by July 31 and January 31, respectively, while for proposals to the Canadian agency, the deadlines (postmark date) are August 15 for the first semester and February 15 for the second semester. The mailing addresses are:

Canadian Agency:  
Canadian Applications Committee  
CFHT, c/o Director  
Herzberg Inst. of Astrophysics  
National Research Council  
Ottawa, Ont. - Canada K1A 0R6

French Agency:  
M. le Directeur de l'Institut  
National des Sciences de l'Univers  
77, avenue Denfert-Rochereau  
75014 Paris - France

University of Hawaii:  
Director  
Institute for Astronomy  
2680 Woodlawn Drive  
Honolulu, Hawaii 96822  
U.S.A.