

# DIRECTORS' CORNER

## Palila Eulogy

The scanning Fabry-Perot Focal Reducer "PALILA" is the second in the list of initial CFHT instruments to be decommissioned, after having been put in full operation at the telescope (the first being the IR photometer). It is replaced by the Fabry-Perot mode inside MOS/SIS.

The instrument, developed by Y. Georgelin at the Observatoire de Marseille, has been used almost ten years, from December 1982 to June 1992, for a total of 155 nights. Its initial cost, excluding the interference filters, the etalons and the Queensgate controller which remain in use at CFHT, was about 100,000 (\$\$1980).

In its "normal" scanning Fabry-Perot mode, extensive work by the three CFHT communities has for instance led to a better understanding of the physics of giant extragalactic HII region, the kinematics of the gas in barred galaxies, and the existence of super-winds at a galactic scale in M82\_type galaxies. PALILA has also served as a test bed for the development of multi-slit spectrographic technique, leading ultimately to the MOS/SIS. And, somewhat ironically, it is by far, the simplest mode of the instrument, wide-band imagery, that arguably gave its most important result, the first discovery of a giant gravitational arc by B. Fort and his colleagues.

The total number of publications (by end 1991) is 31 and still counting.

*G. Monnet*

## Data Reduction Facilities at the Summit

For the benefit of observers coming to use CFHT in the near future, we would like to describe the present status of the data reduction facilities available at the summit. The hardware is as follows: one Sun Sparc-2 (called wiki) with 32 Mb of memory; four hard disks with a data reduction area of 1.8 Gb local to wiki; one Exabyte-8500 (5 gb capacity); one videopix card for television type picture display and transmission; and one [Postscript] Sparcprinter.

The available software includes: SunOS 4.1.2; OpenWindows 3.0; Fortran compiler version 1.4; Sun's unbundled C compiler, IRAF 2.10.1; STSDAS 1.2.1; Supermongo 2.1.1.i.

With this configuration wiki is integrated into the network so as to give it independence from network link to Waimea via its large local disks, yet the "automount" facility of SunOS gives wiki access to most other directories in the network. Since it also has access to the raw images in /users/observer, there is no need to copy raw data files to waimea to process them. For network security reasons, off-site (i.e. non-CFHT computers) communications are not allowed directly from wiki.

By the time this issue of the Bulletin appears, there should also be a Sun Sparc-2/Exabyte/Sparcprinter system in the CFHT office at Hale Pohaku, which has most recently been

served by an Xterminal connected to the CFHT computer network.

A special reminder to observers: CFHT only supports IRAF for data reduction and processing. Since IRAF is a large, powerful, and sometimes complicated facility, observers not familiar with it should not expect to learn IRAF in a few minutes, or even a few hours. If you foresee the need to do some processing of data during a run, it is your responsibility to learn what you need about IRAF **prior** to your arrival at the summit. Your support astronomer does not have the time either to teach you at the start of the run or to do the reductions for you afterwards.

A word of warning also about the technical support for wiki and the Hale Pohaku system: there is currently no spare workstation that could be used as a backup in case of a hardware failure. Any repairs would be carried out on the next **working day** at best, not during a night, a weekend or a holiday.

*J. Glaspey, R. Link*

## Service Observing

CFHT is accepting proposals for "small" observational programs for the 93II semester using either FOCAM (with CCDs) or with the Redeye 1-2.5  $\mu\text{m}$  infrared cameras that can be carried out in a service observing mode. Proposals should be limited to standard instrument setups involving very specific observations easily carried out by a CFHT Resident Astronomer, and should not require any special equipment or complicated instructions. Total time required for taking data (including any calibration frames) should be no more than one night. The characteristics of FOCAM (and CCDs) are given in the current FOCAM Users Manual available from CFHT Headquarters. The performance of the Redeye cameras is described in this Bulletin.

The proposals should use the same Observing Time Request form as normal proposals, and should be sent to the normal agencies at the normal deadlines. (See page 20.)

*J. Glaspey*

## Dangers Lurking at CFHT

For obvious reasons, the Information Bulletin tends to be filled with reports of technical progresses and astrophysical successes, with very little place for setbacks, e.g. unplanned shutdowns or repeated telescope/instrumentation failures.

While it is not indeed a very pleasing subject, it is important that our community realizes that the CFH Telescope, and its associated instrumentation, is a complex machinery evolving in the severe environment of the summit of Mauna Kea. No wonder then that, despite a comprehensive maintenance plan and regular, almost yearly, 2 to 3 weeks carefully planned shutdowns for extensive repairs, catastrophic failures still happen from time to time. Observers and CFHT staff, for instance, painfully remember the September 1990 Mercury spill disaster and the June 1992 Dome crane break. For observers it means precious observing time lost, for CFHT staff incredible pressure

and harsh, potentially dangerous, overtime work, with a price tag easily in the \$ 40,000 range.

What is perhaps less well known is that we regularly experience near misses, where a combination of careful checking, thorough planning, and sometimes even a bit of good luck, just averts a disaster to be. A good recent (November 1992) example is the replacement of the dome shutter control cable: after 10 hours of extremely hard work during a single day, this operation was achieved, with no time lost for the observers during the subsequent night. Examination of the old cable, which had given clear sign of weaknesses during the previous months, showed that we were at best weeks before a catastrophic failure, which could have left the dome stuck open during winter time!

There are still now, as has been and probably will always be the case, a sizeable number of such known dangers lurking at CFHT: the dome shutter moving unit has been only half-repaired, from lack of time, during the 1991 July shutdown. We have all the necessary parts at hand, and can only hope that the sure mishap will wait until the next planned shutdown (most likely during July 1993). And of course that is only one example, to which we can add the old/ailing control of the Cassegrain Bonnette, the lack so far of spare parts for critical components of the complex LASer MACHine, the horrendous mechanical behavior of the Cassegrain f/8 focussing unit, and more.

We are, of course, continuously working to solve, hopefully in time, these recognized problems, which unfortunately divert a lot of manpower and hefty sums of money which could otherwise be used for upgrading of image quality, detectors and instruments. We also know, from painful experience, that unexpected failures still occur, and ask for your understanding, however frustrating such event could be.

*G. Monnet*

## Changement au sein du Personnel

**Stéphane Béland** a quitté le CFH en janvier 1992 après quatre années de loyaux services au sein du groupe optique. Stéphane a été à l'origine de plusieurs améliorations apportées au spectrograph Herzberg. Sa connaissance approfondie du logiciel IRAF constituait un atout sans conteste non seulement au sein du groupe optique mais du CFH aussi. Il a joint le groupe informatique du VLA à Socorro, où il contribua à développer un système d'archivage pour les données de l'interféromètre radio. Good Luck DUDE!

**Tom Gregory** and wife Gwerfyl left Hawaii at the end of July to return to the balmy shores of Wales after seven years at CFHT. While he was here Tom was well known and highly regarded not only at CFHT, but at all the telescopes on Mauna Kea, as the resident expert on optical coatings. His constant vigilance and attention to detail was and I'm certain still remains the hallmark of all his work on whatever project, be it the setup up of the coude spectrograph, mirror coating, the setup of our laser mask cutting equipment, or the fabrication of his underwater camera. We wish both he and Gwerfyl all the best in their new endeavors ... and want to let him know that we're still looking for the pictures of the undersea hordes to be had for the taking (after the finding) off the Welsh coast !

Since **Ann Boesgaard** of the Institute for Astronomy will be moving from the Big Island in late 1992 to become a Professor at Penn State University, the CFHT staff would like to thank her for her contributions to the scientific life at CFHT while she has been Visiting Scientist, since September, 1990. During this period, she has continued her observational study of the evolution of Beryllium abundances in the Galaxy using the f/8.2 coude spectrograph to measure the difficult-to-observe Beryllium line near 3130 Angstroms.

**Mark Laurance** joined the optics group of CFHT last summer. He comes from the University of Washington, where he completed a master degree thesis under the direction of George Wallerstein and Pat Waddell. Mark has demonstrated his skill by putting into operation and characterizing a CCD at the Manastash Ridge 30" telescope. He will be responsible for the Coude f/4 and f/8 spectrographs at CFHT.

**Gregory Barrick** comes from the University of Colorado (Denver) where he interrupted his Ph. D. to take up a position in the optics group of the CFHT. His master thesis dealt with plasma confinement techniques. He will be responsible of MOS/SIS and is already involved in the commissioning of the new Coude f/4 spectrograph.

**François Rigaut** est arrivée à Waimea au début août 1992, pour débiter son terme d'astronome résident. François nous arrive de l'Observatoire de Paris-Meudon, où il a terminé une thèse sur les techniques d'optique adaptative pour l'astronomie avec le Pr. P. Lena. Il a été largement impliqué dans les projets d'optique adaptative, COME-ON et, COME-ON+. Inutile de dire que ses compétences sont déjà mises à profits au CFH, car François a joint l'équipe d'optique adaptative du CFH et participe à la définition du projet AO Bonnette.

**François Hammer** se joint au petit groupe d'astronome du CFH pour une période d'un an, en tant que visiteur. François est très actif dans le domaine des lentilles gravitationnelles, de la matière noire, et des galaxies à haut redshift. Il mettra à profit cette période d'un an pour poursuivre ses recherches dans ce domaine, et aussi s'impliquer dans la détection IR des objets à haut décalage spectral. Il nous arrive aussi de l'Observatoire de Paris-Meudon.

**Scott McArthur** brings the electronic group to a full staff status. Scott spent the last 7 years at the Naval Ocean System Center (Kaneohe, Oahu) where he has been working, as an electronic engineer, on fiber optics telemetry system and underwater acoustic. He will be supervising the electronic group in concert with W. Cruise and C. Clark, and some rumors want that he might get involved in the refurbishing of the Cassegrain Bonnette electronic control.

**Linda Evans** has joined the CFHT software group for a one year period. She will be involved in the development of a graphical interface editor for PEGASUS. She spent the last 1.5 year at Redwood City (CA) working for Adaptive Corporation where she was responsible of Networking Management System.

**Dan McKenna** left the Institute for Astronomy to join the CCD group at CFHT. He is an electronic engineer, and was a member of the prestigious adaptive optics group of F. Roddier. Before that, he spent 7 years at the Meteorology Department of the UoH, where he developed instrumentation for the study of atmospheric seeing.