

Optical observatory opened

Waimea, Hawaii - The world's newest optical observatory, the Canada-France-Hawaii telescope, has been officially opened, concluding nearly five years of planning and construction.

Located at the 4,200 metre-high summit of Mauna Kea, an extinct volcano on the island of Hawaii, the facility was built as a joint project involving the National Research Council of Canada (NRC), the Centre national de la recherche scientifique de France and the University of Hawaii. Among the largest observing instruments in the world, the new telescope will enable Canadian and French astronomers to look farther into space and to collect data unavailable from older and smaller telescopes in their own countries.

Mauna Kea is one of the best places on earth for carrying out astronomical observations. The air above the peak, the highest point of land in the Pacific Ocean, is much drier than at sea level, a condition particularly well suited to detection of infrared emissions from space. The atmosphere around the site is also very still and transparent, affording clear, unblurred images of stars. Most nights at the summit are cloud-free and therefore suitable for observation. Cloud layers normally form at lower levels on the mountain, blocking out interfering lights from Hilo, the major city on the island. Mauna Kea's location in the tropics also provides an excellent vantage point from which to view almost the entire sky.

The new telescope's main mirror, which is used to collect and focus starlight, is nearly twice the diameter (3.66 metres) of any other now available in Canada or France. At present, the largest telescopes in Canada are the NRC's Dominion Astrophysical Observatory near Victoria, B.C. and the David Dunlap Observatory near Toronto.

It is one of the first telescope mirrors made from Cer-Vit, a special ceramic material which doesn't expand or contract with changing temperatures. The painstaking three-year project of grinding and polishing the 14-tonne component was carried out by optical technicians at the Dominion Astrophysical Observatory. Early in 1978, after exacting tests on its completed surface, master opticians judged the mirror to be one of the finest ever made ... good enough to enable the new telescope to make out both eyes of a person standing 20 kilometres away or even pick up the glow of a light bulb on the darkened side of the moon. The mirror was installed on Mauna Kea in July of this year, to complete construction of the main telescope structure.

Beforehand, all the other components of the telescope had been built and tested in various locations in Canada and France, then shipped to Hawaii for assembly. The work on all phases of the project was coordinated by the Canada-France-Hawaii Telescope Corporation, an agency set up by the three partners. The construction costs of \$30 million U.S. were shared equally by Canada and France while the University of Hawaii provided the mountaintop site and other support facilities.

The telescope's computerized control system was designed and built by Canadian Marconi in Montreal. Aimed and pointed by this system, the new telescope is one of the most highly automated observing instruments yet built.

The observatory's rounded steel dome was designed in Montreal by Surveyer, Nenniger and Chenevert Inc. Both the dome and the telescope building were pre-fabricated by Brittain Steel Ltd. in New Westminster, B.C., then erected in Hawaii.

The telescope's heavy mechanical mounting and drive structure was designed in Paris, France and

fabricated by a naval shipyard new LaRochelle on the Atlantic Coast. The huge metal mounting assembly supports the "seeing" parts of the telescope and allows the whole 300-tonne structure to move with the accuracy of a fine clock.

Also constructed in France were three interchangeable top pieces which convert the telescope's "seeing" framework from one mode of operation to another. This choice of optics gives astronomers the benefits of several telescopes in one.

On Mauna Kea, astronomers will use various auxiliary instruments such as special cameras, photometers and spectrographs to measure and analyze the collected starlight. These specialized detectors, incorporating the most up-to-date technology, were designed and built by scientists in Canada and France. As more of these instruments are installed in the coming months, the telescope will approach its full observing potential.

Although the Canada-France-Hawaii telescope is not the largest in the world (the 5.08 metre Mt. Palomar instrument in California and a 6.0 metre Soviet telescope hold that distinction), the quality of its location and the innovative design of its detectors make it one of the most effective.

The first observation was made with the new instrument on August 11 of this year when a globular star cluster (called M-15) in the constellation Pegasus was photographed. By astronomers' standards, the resolution and quality of the images were excellent. Larger-scale observing programs will begin in earnest by early 1980.

Canada and France will each be entitled to 42.5 per cent of the available observing time while the University of Hawaii will receive 15 per cent. In Canada, a committee will be set up to establish priorities among the

CHSR 700:

Our first disco of the year, held last Friday, was a big success, as I'm sure anyone who attended it will attest. But if you missed it - fear not! We'll be holding another one in two weeks' time. This is another of many services brought to you by the people of College Hill Student Radio.

If you're interested in any aspect of radio, whether it be announcing, producing, news-researching or business and public relations - orientated aspects, drop up to our offices, in the Student Union Building. And if you're a listener with a song you'd like to hear, remember our request line: 453-4979.

Once again CHSR 700, Your Friend on the Hill, has begun regular programming for another year. We began broadcasting from 7:00 a.m. until 12:00 midnight as of last Monday. Within a few weeks, we hope to have the excellent specialty shows you're accustomed to hearing, integrated into our programming schedule. There are a lot of new faces this year, and a lot of promising ability has been absorbed into the station membership.

Along with regular musical programming, our regular newscasts also began Monday; in addition to our major broadcasts at 9:00 a.m., 12:45 p.m., and 5:45 p.m., we have hourly news summaries to keep the campuses informed.

proposals submitted by professional astronomers seeking viewing time. Year-round, a staff of 30 will work both on Mauna Kea and at the Canada-France-Hawaii Telescope Corporation headquarters in the village of Waimea at the foot of the mountain.

During their viewing periods, many Canadian astronomers will be studying the structure of the galaxies. Of special interest will be the quasars, remote and mysterious quasi-stellar objects believed by many scientists to hold the key to understanding the origins of the universe. Some French astronomers, on the other hand, will concentrate on the study of nebular objects, the

clouds of hot gas found in a galaxy.

Sue a prof?

What can you do about lousy grades? Well, Bob Higgins decided to sue.

Higgins just graduated from the University of Michigan with a single black mark on his record - a "D" in German. Well, Bob isn't one to take such things lying down, so he called his lawyer - and filed an 885-THOUSAND DOLLAR suit against his professor and the university, claiming "conspiracy, fraud, breach of contract, and loss of profit."

The case is now before a judge. (Newsprint)

Could you run a university?

Ever think you'd like to try your hand at running the university?

The Council for the Advancement and Support of Education offers undergraduates in member institutions the opportunity to learn about careers in university administration through a special program of discussions and workshops in Boston, January 28-30.

The Boston meetings will explore such areas as alumni administration, fund raising and development, public relations, publications, information services and developmental relations.

Six scholarships for the conference are available to undergraduates in New England, Quebec and the Atlantic Provinces. UNB undergraduates interested in participating in the competition should contact the Department of Public Relations and Development (local 4793) for additional information and application forms.

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
For information and application forms, see your campus placement office or your nearest Public Service Commission of Canada staffing office. Your application must be postmarked no later than October 15, 1979.

FOREIGN SERVICE:

If you are interested in a career in the Foreign Service, you must also write the Foreign Service Exam, on Saturday, October 13, at 9 a.m. Check your campus placement office for the location of the exam centre nearest you.

Competition 80-4000

Open to both men and women.

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Cette année, la Fonction publique du Canada aura bel et bien besoin d'étudiants parmi les meilleurs finissants, mais en nombre restreint et uniquement dans les secteurs suivants:

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
Pour obtenir des précisions à ce sujet et des formules de demande d'emploi, veuillez communiquer avec le centre de placement universitaire ou le bureau de dotation de la Commission de la Fonction publique du Canada le plus rapproché. Les demandes d'emploi doivent être postées au plus tard le 15 octobre 1979, le cachet d'oblitération en faisant foi.

SERVICE EXTÉRIEUR

Les personnes désireuses de faire carrière au Service extérieur doivent subir l'Examen du service extérieur qui aura lieu le samedi 13 octobre à 9 h. Pour connaître le lieu de l'examen le plus rapproché, veuillez communiquer avec votre centre de placement universitaire.

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