

N 9 2 - 1 2 8 1 4***Operation of the University of Hawaii 2.2M Telescope on Mauna Kea***University of Hawaii
Institute for Astronomy**Donald N.B. Hall*****Strategy***

NASA's planetary astronomy program provides part of the funding for the operation of the University of Hawaii's 2.2 meter telescope. This funding provides access by planetary astronomers to a guaranteed fraction of the observing time on this telescope. At present this fraction is approximately 20%. Proposals for use of the planetary observing time coming from within and outside the University of Hawaii compete for this observing time on an equal basis, and applications are judged on scientific merit by a time allocation committee at the University of Hawaii. Current scheduling periods and corresponding deadlines are:

<u>Observing Period</u>	<u>Due Date</u>
April-July	January 31
August-November	May 31
December-March	September 30

Applications for observing time should be addressed to The Director, Institute for Astronomy, 2680 Woodlawn Drive, Honolulu, HI 96822. A newsletter is published shortly before each observing deadline, and it contains the latest information on instrument availability. Requests to be added to the mailing list for this newsletter can be sent via e-mail to 88inch@galileo.ifa.hawaii.edu.

Progress and Accomplishments

A major instrumental highlight in the past year has been the commissioning of a 256 x 256 near-infrared camera which utilizes a Rockwell NICMOS-3 array. At the $f/10$ focus, image scales of 0.37 and 0.75 arcsec/pixel are available. A new, high quantum efficiency Tektronix 1024 x 1024 CCD saw first light on the telescope in February 1991, and will be available as a regularly scheduled instrument from April 1991. Data from both of these new detectors are transmitted directly to the Sun workstation for immediate analysis by the observers.

The autoguider software has been enhanced to permit guided tracking on objects having non-sidereal motions (i.e., solar system objects). This feature has been very well received by the planetary community.

The Coudé spectrograph has been considerably modernized in the last year. Improvements include a new direct CCD camera and associated remotely operated optical system for slit and

field viewing and guiding. A new camera mount giving remote CCD focus and translation has also been installed.

Projected Accomplishments

In the coming year, higher resolution imaging in the near-infrared and optical will be possible with the commissioning of the new optimally figured f/31 secondary mirror. This will be mounted on a tip-tilt platform to remove image motion produced both by the atmosphere and telescope shake. A new spectrograph designed to make use of the properties of this f/31 secondary mirror is expected to be commissioned in August 1991. Another improvement planned for the coming year is enhanced communication between instrument and telescope computers.

Publications

Cruikshank, D.P., Tholen, D.J., Hartmann, W.K., Bell, J.F., and Brown, R.H. (1991) "Three Basaltic Asteroids and the Source of the Eucrites" *Icarus*, **89**, 1.

Hammel, H.B. (1990) "CCD Imaging of Neptune at Methane-band Wavelengths" *Adv. Space Res.*, **10**, 99.

Hartmann, W.K., and Tholen, D.J. (1990) "Comet Nuclei and Trojan Asteroids: A New Link and Possible Mechanism for Comet Splittings" (1990) *Icarus*, **83**, 1.

Hartmann, W.K., Tholen, D.J., Meech, K.J., and Cruikshank, D.P. (1990) "2060 Chiron: Colorimetry and Possible Cometary Behavior" *Icarus*, **83**, 1.

Jewitt, D.C. (1990) "Observations of Cometary Nuclei" in *Asteroids, Comets, Meteors III*, p. 347.

Jewitt, D.C. (1990) "Cometary Photometry" in *Comets in the Post-Halley Era*, in press.

Lockwood, G.W., Thompson, D.T., Hammel, H.B., Birch, P., and Candy, M. (1990) "Neptune's Cloud Structure in 1989: Photometric Variations and Correlation with Ground-Based Images" *Icarus*, in press.

Luu, J.X., and Jewitt, D.C. (1990) "Cometary Activity in 2060 Chiron," *A.J.*, **100**, 913.

Meech, K.J., and Belton, M.J.S. (1990) "The Atmosphere of 2060 Chiron," *A.J.*, **100**, 1323.

Meech, K.J. (1990) "Aging in Comets," in IAU colloquium 116 (in press).

Ridgway, S.E., Jewitt, D.C., Campins, H., Luu, J., Joy, M., Sisc, C., and Telesco, C. (1990) "An Albedo Map of Comet Brorsen-Metcalf," in *Astrophysics with Infrared Arrays*.