

The NIST neutron source operated for 255 full power (20 MW) days or approximately 100 % of the scheduled time. A typical operating year consists of seven cycles. A cycle has 38 days of continuous full power operation, followed by 11 days of shutdown maintenance, refueling, and startup preparations. The number of operating days in this fiscal year has increased significantly

been completed on the Thermal Column Tank Cooling System, fulfilling the design requirement to provide cooling without drawing water or helium from the main heavy water systems. A second pump was added and a purification loop was installed, with purification of the system heavy water achieved using particulate filters and an ion exchanger column. The system has had no adverse affect

on the operating schedule; a replacement tank has been fabricated for future installation. Other upgrades accomplished in FY2003 include the permanent addition of camera equipment for monitoring refueling operations and replacement of the electronics for both intermediate range nuclear channels. These new electronics have worked well and are also serving as an evaluation platform to determine the type of replacement instrument for all of the nuclear channels.

All security measures

requested by the U. S. Nuclear Regulatory Commission for the facility have been implemented fully. Items necessary for 20 more years of operation, such as secondary cooling water pumps and motors, control rods, heavy water, and a new operating console, have been acquired, are in production, or are in various stages of planning.



Recently licensed as NCNR operators are: (left photo) Randy Strader, and (right photo) Greg Heller and Chris Grant. Jim Moody (far right) is in training as an operator.

over the previous year because of improvements to the physical systems. The new shim arm seals have reduced leakage as expected and a sample of seal material undergoing testing has exhibited no noticeable corrosion. The new cooling tower has performed well, allowing full power operation through all of the summer of 2002. All work has