Advanced Accelerator Concepts Progress at 11th Workshop

At the Accelerator Test Facility (ATF), Vitaly Yakimenko (left), ATF Deputy Director, explains ATF equipment to Amir Kesar of the Massachusetts Institute of Technology, a workshop participant.

Litvinenko, Wei Elected APS Fellows

Vladimir Litvinenko and Jie Wei, both of the Collider-Accelerator Department (C-A), were elected Fellows of the American Physical Society (APS). With over 43,000 members, APS promotes the advancement and diffusion of the knowledge of physics in the belief that an understanding of the nature of the physical universe will be of benefit to all humanity. Each year, no more than one-half percent of the society's membership are recognized by their peers for election to the status of Fellow. Litvinenko and Wei were among a total of 215 new Fellows elected in 2003.

Vladimir Litvinenko's Fellowship citation reads: “For fundamental and pioneering contributions to the physics of beams in electron storage rings and free electron lasers including demonstrating the optical klystron and advancing the short wavelength limit of free electron laser oscillators.”

An FEL is a research tool that combines the focus of lasers and the intensity of synchrotrons, and it is useful in studying a wide variety of materials and chemical interactions. Litvinenko and his team built a number of FELs based on the design of an optical klystron, an advanced version of an FEL. In 1988 and 1999, their team was the first in the world to extend the range of an FEL to the ultraviolet wavelength and to the vacuum ultraviolet, respectively. This work makes possible a wider variety of experiments in numerous scientific fields.

At Stony Brook University, Litvinenko discussed generating and accelerating electrons by a laser-plasma wake field, achieving over 85 million-electron-volt (MeV) energy with excellent beam quality over a distance of a few millimeters in a tabletop device, and Victor Malka of the Laboratoire d’Optique Appliquée, France, who spoke on high beam quality high-energy 170 MeV produced by laser plasma wakefield acceleration.

The workshop program included a visit to BNL, including the ATF, the Relativistic Heavy Ion Collider, and the National Synchrotron Light Source, a user’s facility plenary session at Berkner Hall and dinner, hosted by BSA.

Litvinenko, Chair of BNL’s Accelerator Test Facility (ATF), talked with a group of workshop participants who are visiting the facility.

Environmental Awards Won By Upton Reserve Developers

Three scientists and an administrator working at BNL have been awarded U.S. Environmental Protection Agency (EPA) Region 2 “Environmental Quality” awards for developing and managing the Upton Ecological & Research Reserve, a 530-acre conservation area located within the Lab.

The awardees are Timothy Green, BNL’s Natural Resource Manager; Frank Crescenzo, Deputy Manager of DOE’s Brookhaven Site Office; and Peter Kelly, a research associate in the science park. The EPA Region 2 headquarters in New York City on April 23 awarded U.S. Environmental Protection Agency (EPA) Region 2 “Environmental Quality” awards for developing and managing the Upton Ecological & Research Reserve, a 530-acre conservation area located within the Lab.

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The reserve has funded several data-acquisition projects, such as a vegetable map of Brookhaven Lab, deer population surveys, and exotic plant invasion studies. Reserve funds have also supported Pine Barrens-related research and have been used to create (continued on page 2)