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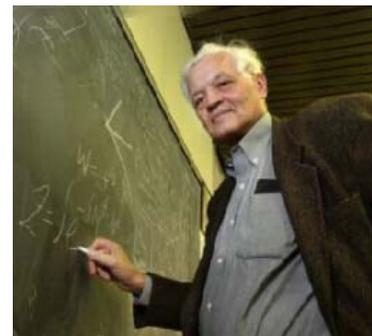
## **New Science Facilities at Brookhaven National Laboratory**

- Dr. Raymond Orbach, Director of the Department of Energy's (DOE) Office of Science, spoke at the Laboratory to local business leaders and community members about the DOE's 20-year outlook for new science facilities.
- Three BNL-based facilities are listed: The National Synchrotron Light Source-II, and two upgrades to the Relativistic Heavy Ion Collider (RHIC), known as eRHIC and RHIC II. The NSLS II will provide beams of light that are 10,000 times brighter than those at the current NSLS so that materials can be studied in much greater detail and over shorter times than ever before. eRHIC, an electron accelerator ring, will be added to the existing RHIC to create the world's first electron/heavy-ion collider. In this new facility, scientists will be able to learn about the structure of protons and the sub-atomic particles that bind them. RHIC II will raise by ten-fold the rate at which physicists can cause particles to collide, enormously increasing the amount of data available to scientists studying the first microseconds after the Big Bang.
- Orbach said that the Laboratory will also contribute to another seven of the 28 total projects. "The quality of this Laboratory is, internationally, on the highest level," he said. "It is an asset, not just to the United States, but truly for the world."

## **A Lifetime of Achievement in Scientific Research**

- James Glimm, Brookhaven National Laboratory's Director of the Center for Data Intensive Computing (CDIC), was one of eight U.S. scientists and engineers that President Bush named as a recipient of the 2002 National Medal of Science, the nation's highest honor for lifetime achievement in scientific research.
- Currently, Glimm and his associates from BNL, Argonne National Laboratory, and Stony Brook University (SBU) are using computers to simulate the breakdown of diesel fuel into droplets, a subject that is of great interest to everyone because much of the pollution caused by diesel fuel comes from unburned fuel deposited on the walls of the engine's chamber. The object of the work is to reduce pollution by controlling the size of droplets so that they are very fine.
- In another current promising project, Glimm joined Wei Zhu and other researchers from SBU and the Long Island Cancer Center to measure the mass of certain proteins in the blood of patients with ovarian cancer. They hope to develop a definitive detection method for early-stage ovarian cancer, which, if detected early, has a 90 percent cure rate. So far, their statistical detection method, which uses six protein markers, is 100 percent accurate. They plan further tests to confirm their results.

John Griffin/Media Services/SBU



James Glimm

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## Brookhaven National Laboratory's Community Advisory Council

- September 1998 marked the first meeting of Brookhaven National Laboratory's Community Advisory Council (CAC). The Council includes representatives from 26 organizations, all of which have a keen interest in the Laboratory and its operations. Applications for membership from new organizations are welcome.
- CAC meetings are held monthly and are open to members of the public. At the meetings, the Council discusses issues important to the community and offers advice to the Laboratory's Director, Dr. Praveen Chaudhari.
- The CAC has been closely involved in resolving the Laboratory's environmental issues, and recently hosted a forum with the Lab's environmental regulators: the U.S. Environmental Protection Agency, the New York State Department of Environmental Conservation, and the Suffolk County Department of Health Services. This important gathering generated very valuable information on the cleanup and restoration of the Peconic River.
- Currently, the CAC and the Laboratory are preparing a pollution prevention workshop for April. The workshop will be held at the Laboratory and will focus on ideas to minimize pollution for those responsible for fleets of vehicles.
- The Department of Energy and the Laboratory's management have named the CAC as a very effective and valuable community group. The members are dedicated and hard working and provide the Laboratory with an excellent perspective of the community's interests. The Lab is grateful for their continued help and support.



Currently, the CAC has representatives from the Affiliated Brookhaven Civic Organizations; Brookhaven Retired Employee Association; Citizens Campaign for the Environment; East Yaphank Civic Association; Environmental Economic Roundtable; Suffolk County Fire, Rescue, & Emergency Services; Friends of Brookhaven; Huntington Breast Cancer Coalition; International Brotherhood of Electrical Workers; Lake Panamoka Civic Association; Long Island Association; Long Island Pine Barrens Society; Long Island Progressive Coalition; Longwood Alliance; Longwood Central School District; Neighbors Expecting Accountability and Remediation; PACE Union; Ridge Civic Association; Towns of Brookhaven and Riverhead; Brookhaven Lab's User Executive Committee; Wading River Civic Association; Yaphank Taxpayers and Civic Association; and from the education and senior citizen communities.