

## **Synopsis of a June 2005 Report to NSAC on the Implementation of the 2002 Long Range Plan for Nuclear Physics**

A report released in June 2005 from an Advisory Committee to the Nuclear Science Advisory Committee (NSAC), the body that advises the Department of Energy (DOE) and NSF on its investment in nuclear physics in the U.S., notes that the future of Jefferson Lab might be at risk if stringent budget scenarios for the long-range support of nuclear physics should come to pass.

In 2002 NSAC proposed a long-range plan for nuclear science that called for an overall increased support for and the upgrading of existing facilities as well as an investment in new facilities – to maintain U.S. leadership in nuclear science.

In March 2005 the DOE and NSF asked the Committee to consider the impact of alternate future budget scenarios on the long-range plan for nuclear physics, including the impact on existing nuclear physics facilities such as the Continuous Electron Beam Accelerator Facility (CEBAF) at Jefferson Lab and Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Lab, and planned facilities, e.g. the Rare Isotope Accelerator (RIA). NSAC established a subcommittee to advise it on the impact of these alternate scenarios. That subcommittee reported back to NSAC in June 2005.

The worst-case scenario (and the one that tracks with the forecasts of the current Administration) calls for several years of flat-flat funding for nuclear physics at the level of the President's FY06 budget, which is 8% below the FY05 level. In its final report to NSAC the subcommittee states: "Continued flat-flat funding for the next several years would have a devastating effect on U.S. leadership in nuclear science. Even funding at a constant level of effort with the FY06 [President's] budget as a base [8% below 2005 in DOE] would not allow the U.S. nuclear science community to effectively utilize our existing facilities, much less invest in the future."

Asked to make a judgment call as to which of the existing facilities – CEBAF or RHIC – to keep open under the worst-case scenario, the subcommittee responded: "RHIC and CEBAF are *the* two premier facilities for studying QCD in the world... The subcommittee spent considerable time deliberating on the merits of the two facilities... The present budget scenario, however, represents a crisis that would preclude running both machines simultaneously and force an immediate choice while RHIC is still in its initial discovery phase... Based on this additional consideration, the subcommittee, while split in its decision, has a slight preference for the choice that maintains operations at RHIC." DOE has, as yet, taken no public stance on this stated "preference" of the Advisory Committee.