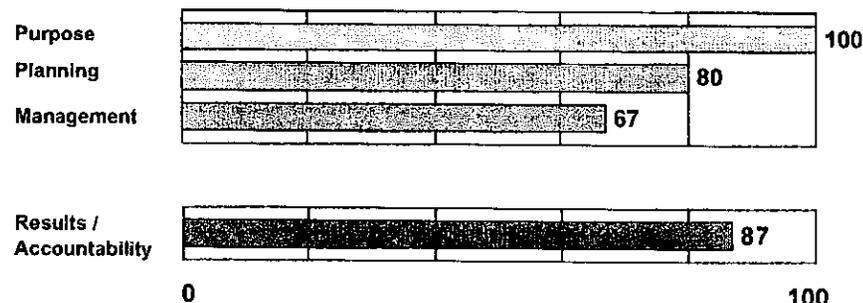


Program: Nuclear Physics

Agency: Department of Energy

Bureau: Office of Science



Key Performance Measures

	Year	Target	Actual
Long-term Measure: Progress in searching for, and characterizing the properties of, the quark-gluon plasma by recreating brief, tiny samples of hot, dense nuclear matter. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a quinquennial basis.	2007	Excellent	
	2012	Excellent	
	2017	Excellent	
Annual Measure: Weighted average number (within 20%) of billions of events recorded by experiments in Hall A, Hall B, and Hall C, respectively, at the Continuous Electron Beam Accelerator Facility. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 20% is currently under review by OMB.)	2002		2.8, 9.9, 2.7
	2003		3.0, 9.0, 2.6
	2004	2.4, 7.2, 2.1	
	2005	2.9, 9.6, 2.8	
Annual Measure: Weighted average number (within 30%) of millions of heavy-ion collision events recorded by the PHENIX and STAR detectors, respectively, at the Relativistic Heavy Ion Collider. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 30% is currently under review by OMB.)	2002		170, 8.2
	2003		5500, 38
	2004	900, 40	
	2005	1800, 40	

Rating: Effective

Program Type: Research and Development, Competitive Grant, Capital Assets and Service Acquisition

Program Summary:

The Office of Science's Nuclear Physics (NP) program operates nuclear accelerator facilities, funds research in fundamental nuclear physics and related fields, such as nuclear astrophysics, and trains people for a variety of nuclear-related areas.

The assessment found that the NP program has developed a limited number of adequate performance measures, as recommended during the 2004 PART process. Additional findings include:

- The program's management is excellent. The program produces a relatively transparent budget justification, and engages its advisory committee in a manner that produces fiscally responsible advice.
- The program recently instituted a Committee of Visitors process, but the program's merit review processes have yet to be validated—for impact on quality, relevance, and performance of the research portfolio—since the assessment(s) have not been completed.
- The program has already engaged its advisory committee in developing research milestones against which future outside panels may judge interim progress toward achieving the long-term goals of the program.
- The program does not include its long term research goals in grant solicitations, does not use strict quality control on performance data filed by laboratory contractors, and does not make annual aggregated grantee performance data available to the public in a transparent and meaningful manner.

In response to these findings:

1. The 2005 Budget provides funds to operate the program's five national user facilities at 88 percent of maximum capacity (up from 79 percent in 2004), including a funding increase of \$12 million in order to significantly increase the operating hours for the two primary facilities.
2. The Department will develop an appropriate action plan in response to the findings and recommendations of the Committee of Visitors within 30 days of receipt of the report(s).
3. The Department will work to include the long-term goals of each program in grant solicitations, and will improve performance reporting by grantees and contractors by September, 2004.
4. The Department will ensure that a thorough, independent scientific assessment of the proposed Rare Isotope Accelerator is carried out by October, 2005.

Program Funding Level (in millions of dollars)

2003 Actual	2004 Estimate	2005 Estimate
380	390	401

Link to PART details on OMB website.