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March 19, 2013

Dr. W. F. Brinkman,
Director, Office of Science,
U.S. Department of Energy,
SC-1/Forrestal Building,
1000 Independence Ave., SW
Washington, DC 20585

Dear Dr. Brinkman,

On December 20, 2012, the Office of Science Federal Advisory Committees were charged by you to provide an assessment of current and proposed major research facilities, as input to an overall 10-year prioritization of Office of Science User Facilities. The charge requested that both current and proposed facilities be assessed for their ability to contribute to world-leading science over the next decade (2014-2024), and that proposed facilities and major experimental upgrades be assessed for their readiness for construction. The charge specified the criteria and associated letter grades for this evaluation. A prioritization of the facilities by each FAC was not requested. A written report was requested by March 22, 2013.

While your charge letter was addressed to Dr. Donald Geesaman, who is Chair of NSAC, Dr. Geesaman is at the same institution as one of the facilities under consideration, and he recused himself from participation in NSAC discussion of the report. I was appointed by Dr. Timothy Hallman, of the DOE Nuclear Physics Office, to serve as Acting NSAC Chair for discussion of this report.

In order to address the charge, NSAC convened a Subcommittee on Scientific Facilities to assess the facilities under the purview of the OS Office of Nuclear Physics. The Subcommittee was chaired by Professor Robert Redwine (MIT), and its membership included experts from all major areas of activity within the NP Office. The Subcommittee met in Bethesda, MD, on February 15-16, 2013, to hear presentations on all current and proposed major facilities under consideration.

Additional context for the Subcommittee deliberations was provided by the NSAC 2007 Long Range Plan; by the recent National Research Council Report entitled "Nuclear Physics: Exploring the Heart of Matter"; and by the recently completed NSAC Report entitled "Implementing the 2007 Long Range Plan". These documents provide the roadmap for the nuclear physics community established in 2007, together with more recent assessments of the scientific achievements and future promise of NP facilities.

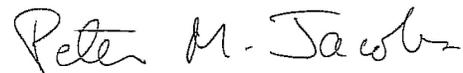
The current User Facilities considered by the Subcommittee are ATLAS at Argonne National Laboratory, CEBAF at Thomas Jefferson National Accelerator Facility, and RHIC at Brookhaven National Laboratory. The Subcommittee ranked all three facilities as "absolutely central", in terms of their ability to contribute to world-leading science in the next decade.

The proposed facilities considered by the Subcommittee are an Electron Ion Collider (EIC) and the Facility for Rare Isotope Beams (FRIB), both of which would build on existing facilities. Additionally, a ton-scale Neutrino-less Double Beta Decay experiment (NLDBD) was considered. The Subcommittee ranked all three in the category “absolutely central”, in terms of their ability to contribute to world-leading science in the next decade. The Subcommittee ranked FRIB as ready to initiate construction, and EIC and NLDBD as having significant scientific/engineering challenges to resolve before initiating construction.

The Subcommittee was unanimous in its recommendations.

Accompanying this letter please find the final Subcommittee report. The report was discussed by NSAC at its meeting in Gaithersburg, MD on March 8-9, 2013, and NSAC has unanimously endorsed the report.

Sincerely,

A handwritten signature in black ink that reads "Peter M. Jacobs". The signature is written in a cursive style with a horizontal line at the end.

Peter M. Jacobs,
Lawrence Berkeley National Laboratory
Acting Chair, NSAC