Department of Energy
Washington, DC 20585

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SUBJECT: FY 2022 DOE/HEP Energy Frontier Laboratory Comparative Review Reporting Requirements Prior to the September 2022 Review

For the upcoming FY 2022 National Laboratory Energy Frontier Research Program Review scheduled for September 19–23, 2022, the DOE Office of High Energy Physics (HEP) requests each lab that will be reviewed to have the following items submitted via email – sent to: Abid Patwa abid.patwa@science.doe.gov:

1) A **Progress Report** covering the period since the last FY 2015 laboratory review of Energy Frontier Research and emphasizing significant achievements and accomplishments by the laboratory group's Energy Frontier research program. There should be separate sections for each of the following two research thrusts in your lab's program (where applicable):

   a. Large Hadron Collider (LHC) program at CERN: ATLAS or CMS experiments, including any efforts towards the LHC [Phase-I] or High-Luminosity LHC [Phase-II] detector upgrades; and

   b. Physics studies and pre-conceptual R&D towards specific and potential future Energy Frontier collider experiments, including but not limited to those for CERN's proposed Future Circular Collider or Japan's proposed International Linear Collider.

   There is a total limit of fifteen (15) pages, including references and figures but excluding publications for this Progress Report. Include a list of relevant publications, talks, and other documents as a separate appendix for *each* thrust area.

   Note: for this Progress Report narrative, you may divide the total number of pages for each of the above two thrusts as you deem necessary, but the overall number of pages discussing both thrusts should not exceed 15 pages.

2) The upcoming three (3) year proposed **Research Plan** organized along the above two thrust lines addressing the project period of FY 2023–2025. The plan should list appropriate deliverables expected during this next period. It may consider various options that may be pursued by the lab group as a result of the recent Snowmass 2022 studies and discussions. For this Research Plan, ***there is a limit of twenty-five (25) pages including references.*** For this plan's narrative, you may divide the total number of pages for each of the above two thrusts as you deem necessary, but the overall number of pages discussing both thrusts should not exceed 25 pages.

3) **Appendix summarizing the major accomplishments** by your lab's Energy Frontier research group during FY 2016-2022. Each accomplishment must be **listed in bulleted format**, **one page for each fiscal year**. **Therefore, this appendix should not exceed seven (7) pages**.

4) Brief **Curriculum Vitae** (CV) at ***one (1) page maximum per individual*** that includes the most significant publications (no more than 8) of each group member currently classified as "Permanent PhD." The one-page CV per individual should also list any primary leadership responsibilities or roles for that individual within the Energy Frontier program. These CVs should be compiled into a separate appendix.

5) **Brief – limited to two (2) pages total – description of the support and infrastructure** provided to the Energy Frontier research groups at the lab. If any significant differences exist among the thrusts, please address such differences. This should be compiled into a separate appendix.

6) **Appendix – limited to five (5) pages total – describing the lab group's interactions and nurturing of its scientific community, including its efforts to develop a diverse, equitable, and inclusive workforce and workplace**. The narrative in this appendix should describe the group's efforts in mentoring early-stage researchers as well as any external relations with universities and global collaborators. Moreover, it should address a) how your lab group helps foster a sense of belonging among all research personnel, including but not limited to, mentoring and professional development opportunities, b) the group's plans to address barriers to participation by underrepresented individuals and institutions, and c) successful approaches on recruiting and retaining individuals from diverse backgrounds.

7) **Personnel and Funding Guidance Tables** for FY 2021 (Actual) and FY 2022 (Enacted) as well as for each of the next three years of the next period (FY 2023–2025), in the format of the attached MS Excel templates. Each worksheet has tabs at the bottom of the sheet corresponding to the research thrust areas described above. Enter information only in the worksheets for each thrust area. Do not alter in any way the format of these spreadsheets. Please note that there are two templates each corresponding to two scenarios for Energy Frontier research:

   Scenario A: Baseline budget scenario based on the FY 2022 funding level, kept flat-flat per year during FY 2023 and FY 2024, followed by an increase of 2% in FY 2025 relative to the FY 2024 plan. Please use "FY22-EnergyFrontierInfo-ScenarioA.xlsm" for this scenario.

   Scenario B: Opportunity budget scenario based on +3% for FY 2023 relative to the FY 2022 funding level in Energy Frontier research, and subsequently kept flat-flat in FY 2024 and FY 2025. Please use "FY22-EnergyFrontierInfo-ScenarioB.xlsm" for this scenario.

   Please complete both templates.

DOE Office of HEP requests that the above material be provided in PDF format ***NO LATER THAN September 9, 2022, at 11:59 pm Eastern Time.***