American Physical Society
1 Physics Ellipse
College Park, MD 20740

March 29, 2024

The Honorable Patty Murray
Chair
Committee on Appropriations
154 Russell

The Honorable Kay Granger
Chairwoman
Committee on Appropriations
2308 Rayburn

The Honorable Susan Collins
Vice Chair
Committee on Appropriations
413 Dirksen

The Honorable Rosa DeLauro
Ranking Member
Committee on Appropriations
2413 Rayburn

Dear Chair Murray, Chairwoman Granger, Vice Chair Collins, and Ranking Member DeLauro:

As President of the American Physical Society (APS), representing more than 50,000 physicists in universities, industry, and national laboratories, I am writing to reemphasize the importance of long-term, community-driven consensus reports in determining the most effective uses for federal science funding. APS strongly supports the process and purpose of these reports. As you consider future appropriations, we hope that you will continue to consider these documents as roadmaps for ensuring American scientific competitiveness.

These survey and prioritization activities, which typically operate on roughly decade-long cycles, have produced a new round of reports since the start of the 2020s. Community-led prioritization efforts such as those of the National Academies of Science, Engineering, and Medicine (NASEM) and the federal scientific advisory committees (FACAs) represent an important tool to inform appropriations for science, enabling us to pursue our most important scientific questions while also being responsible stewards of public funds. *Exploring the Quantum Universe: Pathways to Innovation and Discovery in Particle Physics* from the high energy physics community, *A New Era of Discovery* from the nuclear physics community, and *Pathways to Discovery in Astronomy and Astrophysics for the 2020s* from the astrophysics community are just a few examples of long-ranges plans published in recent years.

Many of the major programs, instruments, laboratories, and collaborations that enable physics research in the United States are primarily funded by the Department of Energy Office of Science, the National Science Foundation (NSF), and the National Aeronautics and Space Administration (NASA). To ensure that these

federal investments reflect the national interest, a variety of physics sub-disciplines are charged with developing long-term strategic plans. APS members are involved at every level in these processes, performing a valuable service for their communities and for the U.S. research enterprise.

Each of these reports is the result of collaborative, democratic efforts, incorporating input from hundreds of physicists in each subfield. The expert panels leading the reports ensure that science is the prime motivator and develop a methodology of prioritization that identifies the most important research areas where substantial progress can be made.

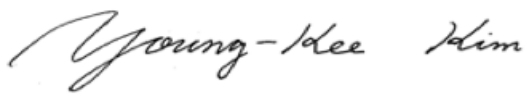
For their decadal surveys, the National Academies organizes committees of experts in each field to incorporate input from their communities. These groups review their fields' recent accomplishments, identifying new opportunities, challenges, and compelling scientific questions. They provide recommendations for infrastructure and programs that secure U.S. leadership in a given research area or, where appropriate, enhance collaboration and coordination internationally. FACAs for areas of research including nuclear (NSAC), basic energy sciences (BESAC), fusion energy sciences (FESAC), and high energy physics (HEPAP), also carry out long-range plans. The resulting reports help inform appropriators, who can then make budgetary decisions knowing that the priorities put forward have the support of the full community in a given sub-discipline.

The suggestions of previous decadal surveys and long-range plans have pushed forward our understanding of the universe by leaps and bounds. These community-consensus projects have resulted in some of our most ambitious infrastructure and most important scientific achievements—from discovering gravitational waves and probing the subatomic realm, to pushing the frontiers of fusion energy and exploring the physical processes of biological life. Importantly, these explorations into fundamental questions have also resulted in cutting-edge applications for national security, medicine, and clean energy, as well as opportunities for STEM workforce development. The 2020 series of planning exercises builds on this heritage of success.

We appreciate the strong, bipartisan support that Congress has shown for fundamental physics research with annual appropriations to the federal science agencies over the years. I hope that you will view the careful consideration inherent in these community-consensus processes as due diligence from the physics community with respect to the resources granted to us. The exploration of fundamental physics and discovery of innovative applications thereof would not be possible without robust and sustained funding for federal science agencies.

Thank you for your time and consideration. If you have questions or would like to further discuss the reports outlined above, please do not hesitate to contact APS Director of Public Affairs Mark Elsesser (elsesser@aps.org; 202.846.8121).

Sincerely,



Young-Kee Kim
President, American Physical Society