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Office of Science Accelerator R&D Programs

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The Office of Science within the Department of Energy supports accelerator R&D to develop technologies needed for building next generation particle accelerators for discovery science facilities. The near-to-midterm, facility-driven R&D is supported by each of the respective program offices, namely, BES, NP and HEP. In addition, HEP also supports directed accelerator R&D under the LHC Accelerator Research Program and the Muon Accelerator Program, as well as the long-range exploratory research aimed at developing new accelerator concepts, understanding the science underlying the technologies used in particle accelerators, and the fundamental physics of charged particle beams. This paper describes the research activities that are currently of interest to and supported by these programs.

In collaboration with Glen Crawford, Manouchehr Farkhondeh, and Eliane Lessner, US Department of Energy.