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The Status of Muon Accelerator R&D for Future High Energy Colliders[1] MARK PALMER, Brookhaven National Laboratory, INTERNATIONAL DESIGN STUDY FOR A NEUTRINO FACTORY (IDS-NF) COLLABORATION, INTERNATIONAL MUON IONIZATION COOLING EXPERIMENT (MICE) COLLABORATION, U.S. MUON ACCELERATOR PROGRAM (MAP) COLLABORATION — Muon accelerators offer unique potential for high energy physics applications. Muon storage rings can provide intense, pure, and precisely measured neutrino beams for neutrino oscillation studies. TeV-class muon beams offer a potential route to an energy frontier collider operating at several TeV with luminosities approaching 10^{35} cm^2 s^1. The ability to accelerate muons with multi-pass acceleration systems offers significant benefits for the energy efficiency of a collider utilizing these beams. Interest in continued R&D on these machines has recently re-kindled and current studies of the potential physics performance of a detector operating at such a collider appear very promising. An overview of the status of key feasibility R&D for such a collider, based on a proton-driver source, is presented.

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