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## **RF Cavity Needs for Future Muon Accelerators**

*Thursday, 10 November 2022 09:30 (30 minutes)*

The future of high energy colliders beyond the high luminosity upgrade to the LHC is presently unclear. Physics and economics arguments are being made for hadrons vs. leptons and circular vs. linear machines. A muon collider is now being considered in Europe as a potential Future Circular Collider at CERN. Among the technological challenges inherent to a muon accelerator are beam cooling and acceleration. The RF cavity requirements for each differ, and were studied under the US Muon Accelerator Program, which concluded in 2017. Renewed interest in muon accelerators has warranted the results of this R&D program be revisited. This presentation will review the designs and progress made on cooling channels and acceleration schemes, the logical next steps for each, and how these pertain to advanced accelerator concepts.

### **Acknowledgments**

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