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Snowmass'21 Perspective on Future Muon Colliders

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There has been a recent explosion of interest for a Muon Collider (MuC) as evident by the number of journal publications, related workshops and white papers submitted for the 2021 Snowmass Study. In light of this strong interest and in order to provide input for Snowmass, a MuC Forum has created in 2020. It facilitated a strong bond and exchange of new ideas between the particle physics community and accelerator experts with the ultimate task to make a physics case for a MuC. This paper discusses three key achievements of this Forum. These were: (1) Highlight transformative new developments in detector and accelerators technologies that address many of past concerns about MuC feasibility. (2) Identify key areas where US can provide critical contributions to the global R&D efforts and, (3) present US sites that could host a MuC as well as the relevant R&D needed in order to achieve this.

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Footnotes

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Yes

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