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Normal Conducting Radio Frequency Cavities for Ionization Cooling in a Muon Collider

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The TeV muon collider relies on the ionization cooling to significantly reduce the muon beam emittance within a short time. Achieving high gradient in the NCRF cavities with multi-tesla B field background is one technical challenge for the ionization cooling channel. Recent R&D progress has demonstrated the feasibility of such cavities in principle and developed several key engineering features. Future R&D will aim at the engineering maturity for building a cooling demonstrator, as well as further increasing the operation gradient with novel methods to overcome the RF breakdown.

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Session Classification: Contributed Remarks