

A 325 MHz Front End System for a Muon Accelerator

In previous versions, the muon front end was matched to 201.25 MHz, the baseline Fermilab Linac acceleration frequency. In this note we rematch the front end to 325 MHz, a baseline acceleration frequency for Project X. The rematch requires shorter, higher-gradient rf cavities, but results in a more compact and possibly more affordable system. We demonstrate that a 325 MHz system is possible with similar acceptance to that of the previous 201.25 MHz system. Matching into a neutrino factory or Muon Collider complete cooling channel is discussed.

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