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CiADS and Plan for Muon Research

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With a design power of 2.5 MW and a proton beam energy of 500 MeV, the CiADS superconducting linear accelerator (Linac) will be the most powerful continuous wave proton accelerator. In addition, the CiADS accelerator possesses a upgrade plan at the beginning. From the perspective of beam energy and power, CiADS accelerators are well suited for driving a high-intensity muon sources. In this presentation, the construction background of the CiADS project is introduced firstly. Secondly, main design parameters and current development progress of CiADS are reported briefly. Thirdly, the research objectives of the device, the experimental terminal layout, the operation mode and future upgrade plan of the Linac are introduced. Moreover, the demands for a high-intensity muon source or dedicated muon beam line for the high-precision experiments and the muon application technologies are discussed, Finally, the preliminary scheme and future possibilities of a high-intensity muon source based on the CiADS Linac are presented.

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