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RFQ Beam Cooler for SPES project at LNL

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The SPES project is the new Radioactive Ion Beam facility under construction at Laboratori Nazionali di Legnaro (LNL), Italy. Neutron-rich RIBs are produced by the ISOL technique, by the interaction of a primary proton beam of 13 kW with a target of UCx. The high intensity beam is supplied by a Cyclotron able to accelerate up to 50 kW beam power (700 uA @ 70 MeV), whose installation will start on March of this year. To select the low energy RIBs with a resolution of 1/40000, a Mass Spectrometer coupled with a RFQ Beam Cooler are foreseen. The RFQ Beam cooler is designed to improve the quality of the RIBs in terms of reduction of trasversal emittance and to get very low final energy spread (1 eV). The device is under construction at LNL and the installation of the test stand started in January. The performance and the technical details of the cooler will be presented and discussed.

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