

Abstract Submitted
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Presentation of the High Intensity Frontier Initiative (HIFI) to design a nuSTORM and a Neutrino Factory based on the ESSnuSB facility JEAN-PIERRE DELAHAYE, CERN, Geneva, Switzerland, MARCOS DRACOS, IPHC-IN2P3/CNRS Universit de Strasbourg, France , TORD EKELOF, Uppsala University, Sweden, ESSNUSB COLLABORATION¹ —

1 When the 5 MW, 2.5 GeV, 1.3 μ s proton pulses hit the ESSnuSB neutrino target there will be a copious production of not only neutrinos but also of muons. These muons can be used to realize low energy versions of nuSTORM for neutrino cross-section measurements and sterile neutrino searches and of a Neutrino Factory for high precision PMNS parameter measurements. An overview will be given of the implementations of nuSTORM and Neutrino factory projects on the ESS site and the design work that will be required to evaluate their technical challenges and physics performances.

¹European Spallation Source neutrino Super Beam

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