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ESS neutrino Super Beam plus

The neutron facility of the European Spallation Source –ESS is currently undergoing construction and installation in Lund, Sweden with the goal to achieve a 5MW proton beam of 2 GeV Linear Accelerator (LINAC). This LINAC could also be used to produce an intense neutrino beam, which combined with a megaton water Cherenkov detector could observe CP violation in the leptonic sector for the first time. Such a neutrino experiment could help to understand the matter-antimatter asymmetry in the Universe.

This project, called the ESS neutrino Super Beam plus (ESSνSB+) is a proposal to upgrade the ESS facility and accommodate for ESSνSB+ operations, with a new accumulator ring, a 2nd target station, a near detector and a far detector.

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