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ESS Accelerator Status and Commissioning Plans

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The European Spallation Source (ESS), currently under construction in Lund, Sweden, will be the brightest spallation neutron source in the world, when its driving proton linac. Such a high power requires production, efficient acceleration, and almost no-loss transport of a high current beam, thus making design and beam commissioning of this machine challenging. achieves the design power of 5 MW at 2 GeV. The linac could be used for projects like the ESS Neutrino Super Beam (ESSNuSB), currently, an ongoing project to study the viability of using the ESS linac as a driver for a neutrino beam by interleaving a H- beam with the protons and further increasing the machine average power to 10MW. The ion source and LEBT commissioning happened already in 2018/2019 and will continue with the RFQ in 2021, MEBT and all DTL tanks in the following year. This talk will summarise the status of the linac project and commissioning, with focus on the normal conducting linac plans.

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