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Operational Experience During Commissioning of ESS

Wednesday, October 22, 2025 11:00 AM (30 minutes)

The European Spallation Source (ESS) is a neutron research facility based in Lund, Sweden. Its linear accelerator will operate with a high peak current of 62.5 mA and a long pulse length of 2.86 ms at a repetition rate of 14 Hz, enabling it to deliver 2 MW of beam power to the target. In the first half of 2025, accelerator commissioning was completed with the achievement of a beam energy exceeding 870 MeV, establishing ESS as a 2 MW-capable installation. For the first time, the entire linac was operated using both normal-conducting and superconducting cavities. The operational challenges during commissioning included coordinating installation and work activities, daily planning, and maintaining beam delivery to the tuning beam dump for the studies planned in this phase. In addition to these challenges, this contribution will present an overview of major operational incidents that impacted the commissioning timeline.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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