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Cryogenics at the ESS - On the way to steady state operations

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The European Spallation Source (ESS) is a neutron-scattering facility being built with extensive international collaboration in Lund, Sweden. Cryogenic technology is utilized in essential parts of the project, particularly in the superconducting linear 2.0 GeV proton accelerator (linac), in the liquid hydrogen moderators and for cryogenic cooling and creation of large magnetic fields for the sample environments of the neutron instruments.
Most of the cryogenic system has been installed, commissioned and acceptance tested. However, the complex interaction of the entire system with its clients and system flaws that could not be detected earlier bring about new challenges on the way to steady state operations of the ESS facility.
This talk gives an overview of the cryogenic subsystems at ESS, explain the background of some special requirements, inform about the current status, challenges we faced in the last operation and commissioning runs and how they are addressed.

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