

## **ESS accelerator technology and challenges**

*Monday, 20 March 2017 10:00 (30 minutes)*

The European Spallation Source, now under construction in Lund, Sweden, aims to be the world's most powerful pulsed neutron scattering facility. The project is now about 30% complete, with significant progress in civil construction. Driving the neutron source is a 5-MW superconducting proton linear accelerator operating at 4% beam duty factor and 14-Hz repetition rate. At this unprecedented beam power, beam losses are an important consideration in the design. The status of the accelerator will be presented along with highlights of some technical aspects related to beam loss and efficient delivery of the beam to the target station. Nineteen partner institutions from across Europe are working with the Accelerator Division in Lund to design and construct the linac and related systems. While many systems are still in the design phase, production of major components is underway and the commissioning of the ion source has recently begun.

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