

THE EUROPEAN SPALLATION SOURCE ACCELERATOR: OVERVIEW AND STATUS

J. G. WEISEND II, H. DANARED, M. LINDROOS

*European Spallation Source, ERIC
Lund, Sweden*

The European Spallation Source (ESS) will provide neutrons for a wide range of experiments in fields such as chemistry, physics, materials science, biology and pharmacology. Once completed in 2027, ESS will enable new areas of neutron science due to its brightness and long neutron pulse capability.

Neutrons are produced at ESS via a spallation process driven by a 2 GeV, 2 MW (upgradeable to 5 MW) proton linac. The bulk of the acceleration in the linac is provided by superconducting RF cavities operating at 2 K. This paper gives an overview of ESS, describes the linac design and details the current status of the accelerator. The use of In-kind partners and heat recovery is also discussed.