

The European Spallation Source, the world's brightest source of neutrons for the study of materials

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The European Spallation Source (ESS) is a joint European project to build the world's brightest neutron source for the study of materials and fundamental physics. The ESS is a large accelerator project as much as a materials research facility with neutrons. ESS aims to accelerate protons up to 2 GeV and 50 mA to generate neutrons using spallation from a heavy element target. The neutrons that will be generated will be used to study materials from proteins to superconductors to machine components as well as fundamental physics. The ESS is supported by 17 European countries and it is currently in its pre-construction phase. It is aimed that it will produce its first neutrons before the end of the decade.