



Contribution ID: 190

Type: **not specified**

Particle Physics at the European Spallation Source

In this paper we outline the opportunities for fundamental nuclear and particle physics at the European Spallation Source, which will eventually be the world's most powerful pulsed neutron source and simultaneously the world's brightest pulsed neutrino source. The ESS provides unprecedented and unique opportunities to address outstanding questions in the Standard Model of particle physics, which we know is incomplete. Using as many probes as possible is a most fitting approach to discover the missing elements in our understanding of the fundamental forces and building blocks of matter. This note as input to the European Strategy Update briefly summarizes the complementary contributions neutron sources can provide to addressing the biggest fundamental challenges to modern physics.

Authors: DEMARTEAU, Marcel (Oak Ridge National Laboratory); EKELÖF, Tord (Uppsala University); SANTORO, Valentina (Lund University)