

A COLD NEUTRON BEAM FACILITY FOR PARTICLE PHYSICS AT THE ESS

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Pulsed beams have tremendous advantages for precision experiments with cold neutrons. In order to minimise and measure systematic effects, they are used at continuous sources in spite of the related substantial decrease in intensity. At the pulsed neutron source ESS, such experiments will gain up to a factor of 30 in event rate, and novel concepts become feasible. Therefore, the cold neutron beam facility for particle physics ANNI was proposed as part of the ESS instrument suite.

Scientific case, concept and expected performances of ANNI will be presented.