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## THE SPES PROJECT AT THE INFN-LEGNARO NATIONAL LABORATORIES

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### ABSTRACT

The SPES Radioactive Ion Beam (RIB) facility at INFN-LNL is now in the construction phase.

The aim of the SPES project is to provide high intensity and high-quality beams of neutron-rich nuclei to perform forefront research in nuclear structure, reaction dynamics and interdisciplinary fields like medical, biological and material sciences. The SPES project is supported by the INFN national laboratories LNL (Legnaro) and LNS (Catania). It is based on the ISOL method with an UCx Direct Target able to sustain a power of 10 kW. The primary proton beam is delivered by a high current Cyclotron accelerator with energy of 35-70 MeV and a beam current of 0.2-0.5 mA. Neutron-rich radioactive ions will be produced by UCx target at an expected fission rate in the target in the order of  $10^{13}$  fissions per second. The exotic isotopes will be re-accelerated by the ALPI superconducting LINAC at energies of 10 AMeV and higher, for masses in the region of  $A=130$  amu, with an expected rate on the secondary target of  $10^7 - 10^9$  pps.

The general overview and the status of the project will be presented.

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