

Solenoidal spectrometer for HIE-ISOLDE

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The study of transfer reactions in inverse kinematics with radioactive beams will be a centrepiece of the programme once HIE-ISOLDE commences operation in a few years' time. There are several different approaches to such studies including the use of silicon arrays like T-REX and SHARC. An alternative is to use a solenoidal spectrometer such as HELIOS at Argonne National Laboratory. In this approach, light ions perform helical trajectories in the field of a large solenoidal magnet and are detected on axis in a compact silicon array. This leads to certain advantages over competing techniques such as the removal of kinematic compression and performing particle identification from the cyclotron period.

A project to build such a solenoidal spectrometer for HIE-ISOLDE has got off the ground over the last twelve months, with two international workshops held, and a redundant solenoid acquired from the University of Nottingham which could form a testbed system. The present status of this project will be given and highlights of the workshops in terms of Physics ideas and technical discussions will be presented.

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