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# The ISOLDE Solenoidal Spectrometer

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One of the main limitations when performing nuclear reactions in inverse kinematics is the so-called kinematic compression. This effect is a consequence of the large centre-of-mass velocity of the scattering system, which greatly diminishes the energy resolution for a given laboratory-frame. The most successful way to suppress this effect is the use of intense magnetic fields, which avoids the complication of determining the energy of the outgoing ion as a function of the longitudinal velocity component. The outgoing ions are transported in an homogenous magnetic field parallel to the beam axis. The reaction products describe helical trajectories returning to the magnetic axis after one cyclotron period, where a detector array records their energy and position. By knowing the field intensity, all the needed observables can be extracted in order to resolve the nuclear reaction.

This is the approach followed by the new ISOLDE Solenoidal Spectrometer (ISS). ISS is installed at HIE-ISOLDE, CERN, where it can received a wide range exotic isotope beams produced at ISOLDE and reaccelerated up to 10 MeV/A. Inside the superconducting magnet, ISS can install a Si array and a $\Delta$E-E telescope, as well as a number of ancillary detectors. In this talk, this newly commissioned setup will be described and some of its first experiments preformed will be discussed.

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