

DESIGN AND STATUS OF THE SUPER SEPARATOR SPECTROMETER FOR THE GANIL SPIRAL2 PROJECT

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Abstract

The Super Separator Spectrometer (S3) is a device designed for experiments with the very high intensity stable heavy ion beams of the superconducting linear accelerator of the SPIRAL2 Project at GANIL. S3 is designed to combine high acceptance, a high degree of primary beam rejection, and high mass resolving power to enable new opportunities in several physics domains, e.g. super-heavy and very-heavy nuclei, spectroscopy at and beyond the drip-line, isomers and ground state properties, multi-nucleon transfer and deep-inelastic reactions. The spectrometer comprises 8 large aperture multipole triplets (7 superconducting and 1 open-sided room temperature), 3 magnetic dipoles, and 1 electrostatic dipole arranged as a momentum achromat followed by a mass separator. A summary of the beam-optical simulations and the status of the main spectrometer components will be presented with special emphasis on the design of the superconducting multipole triplets.

**CONTRIBUTION NOT
RECEIVED**