

ACCELERATOR SEMINAR

Chiara Nociforo

GSI Helmholtzzentrum für Schwerionenforschung GmbH

Thursday, 7th December at 4 p.m.

KBW lecture hall

Planckstraße 1, 64291 Darmstadt

"Isotope separation and particle identification at the Super-FRS"

To move closer to the extreme limit of stability, the next generation of in-flight magnetic separator Super-FRS under construction at FAIR will provide fragment beams at relativistic energies ($q \approx Z$) with large angular acceptance ($d\theta = \pm 40$ mrad, $d\phi = \pm 20$ mrad) and momentum distribution ($dp/p = \pm 2.5\%$) together with a high resolving power of 1500. Rare isotopes of all elements up to uranium produced via fission and/or fragmentation will be separated within a few hundred nanoseconds and delivered to the three Super-FRS branches. Their identification at the final focal plane will require precise time, position, and energy measurements. In this contribution we will present the technical challenges - high intensity and high resolution - of the detecting system and we will discuss some technical solutions in connections with a few key experiments.



Coordinator: Manuel Heilmann

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