

Recent Achievements and Future of Mass Measurements with Fast Radioactive Beams

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Mass measurements with fast radioactive beams offer complementary methods to the slower techniques. Primary beams accelerated to relativistic energies can produce in a production target a large variety of exotic ions. I will focus on two facilities, GSI in Germany and NSCL at MSU in the USA, which have devices and projects for mass measurement with fast radioactive beams.

Two complementary methods at the storage ring at GSI are already implemented and are producing results. Recent achievements in fast mass spectrometry of individual ions with the storage ring in isochronous mode will be presented and discussed.

Several projects of mass measurements are running at the NSCL facility and first results are expected within a year. A general overview of the NSCL program will be given, and the TOF-B ρ measurement method will be described in detail.

A comparison of various methods will be made.