FIRST RESULTS FROM THE JYVÄSKYLÄ COOLER FOR RADIOACTIVE IONS

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In the Department of Physics in the University of Jyväskylä (JYFL) an ion guide based isotope separator (IGISOL) facility has produced many new exotic isotopes for nuclear structure research. Extension of these studies requires new means to handle ion beams so that the rare isotopes can be identified and separated from more abundant reaction products. For this purpose we have started a new project, where IGISOL technique, a gas filled radiofrequency quadrupole and a Penning-trap are uniquely combined to reduce emittance, cool, bunch and mass-purify IGISOL-beams. The project, its motivation and the first results from ion cooler will be reported together with future perspectives.

