



Contribution ID: 321

Type: **Invited Presentation**

## **First Experiment in the 100Sn Region Using HIE-ISOLDE**

*Thursday, 1 June 2017 11:55 (25 minutes)*

In this presentation results from the first experiment with the new post-accelerator HIE-ISOLDE at CERN will be given. HIE-ISOLDE expands the possibilities offered by its predecessor, REX-ISOLDE, by increasing the final energy of the radioactive beam (RIB) to 5 MeV/u and 10 MeV/u in two steps, using a set of new superconducting cavities. The first step, to 5 MeV/u, facilitates e.g. the use of heavier targets in the the Coulomb excitation program that was started with REX-ISOLDE. In practice this means that the earlier measurements, that were largely restricted to excitation of the lowest lying states in the RIB, now can include states at higher energies, and simultaneously substantially increase the statistics for the states addressed in the REX-ISOLDE campaign. The first production run with HIE-ISOLDE was part of the program in the 100Sn region. In this case the use of the new post-accelerator means that the measurements of the transition probabilities from the ground state to the first excited 2+ state in the light even Sn isotopes, that earlier were statistics limited, now are observed with some two orders of magnitude higher statistics. In addition, multi-step excitation is observed providing further information on the yrast sequence in these isotopes. The new results will be discussed and put into the context of earlier measurements and theoretical interpretations.

**Primary author:** Prof. CEDERKALL, Joakim (Lund University)

**Co-author:** SNALL, Jacob (Lund University)

**Presenter:** Prof. CEDERKALL, Joakim (Lund University)