

The CRIS experiment: progress and highlights from 2010

Friday 10 December 2010 12:50 (20 minutes)

Over the last two years a new experimental beam line has been designed and installed to perform collinear resonant ionization spectroscopy (CRIS) experiments at ISOLDE. The initial series of experiments will study the francium isotopes up to and including ^{201}Fr and $^{218,219}\text{Fr}$. This work aims at answering questions on the ordering of quantum states, and effect of the $1/2^+$ intruder state, which is currently believed to be the ground state of ^{199}Fr . This work will also study the edge of the region of reflection asymmetry through measurement of the moments and radii of $^{218,219}\text{Fr}$. The CRIS technique also offers the possibility of producing ultra-clean isomeric beams, which can be studied independently of the ground state or other isobars.

This presentation will present the recent progress and results from the off-line and on-line experiments performed in 2010.

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Session Classification: Heavy Mass Nuclei