



Physics Division Heavy Ion Discussion

James Keatings

University of the West of Scotland

“Gamma-ray spectroscopy of Sb nuclei
near ^{132}Sn ”

Friday, Sep. 8, 2017 3:30 p.m. – Bldg. 203 Room R-150

Various Sb nuclei below and above the $N = 82$ magic shell gap have been studied through Gamma-ray spectroscopy. The $A = 128, 129,$ and 130 Sb isotopes have been produced through proton-induced fission using JUROGAM II at the University of Jyväskylä Accelerator Laboratory. High spins states in these nuclei have been studied for the first time. The $A = 136, 137,$ and 138 Sb isotopes have been produced following beta decay from their respective Sn parents at the RIKEN-Nishina Center. The BigRIPS/ZDS set up was used to identify projectile fission products, which were then studied using WAS3ABI and EURICA. This is the first observation of prompt decays from excited states in these nuclei. Results from both of these experiments have been compared to leading edge shell-model calculations.