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Decay Spectroscopy with EURICA in the region of Sn-100

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100Sn is the heaviest doubly magic N=Z nucleus. Calculations in the extreme single particle model predict a pure Gamow-Teller transition [1] and more recent realistic large scale shell model (LSSM) calculations also show that this transition is fragmented by less than 5% [2]. Thus, the transition 100Sn ! 100In is the ideal playground in order to derive the full transition strength and probing the shell model. The results for half-lives in this region serve as input for astrophysical rp-process calculations. We have performed an experiment concerning the Gamow-Teller transition strength BGT of the -decay of 100Sn using the BigRIPS separator of the Radioactive Isotope Beam Factory (RIBF) of the RIKEN Nishina Center, Japan. Focusing on the production of 100Sn and new isotopes, we used a 124Xe beam at 345 MeV/u fragmentating on a 4-mm 9Be target. For decay spectroscopy, the detector arrays EURICA and WAS3ABi were used which consist of High Purity Ge- and LaBr-detectors for
-spectroscopy as well as Si-detectors for calorimetry of positrons. The
N=Z-2 nuclei 90Pd, 92Ag, 94Cd and 96In were discovered [3]. The number of nuclei with NZ in this region has been significantly increased compared to previous experiments [4]. We present results of the half-lives of these nuclei where half-lives of the most exotic species could be determined for the first time. Furthermore, the systematic study on the Q-value of 100Sn revealing an improved value for the GT-strength and results from the analysis of
-spectra along the N=Z line
will be discussed.
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