Abstract Submitted
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β-decay of very neutron-rich Pd and Ag nuclei KARL SMITH, Univ. of Notre Dame, Joint Institute of Nuclear Astrophysics, National Superconducting Cyclotron Laboratory, Helmholtzzentrum fur Schwerionenforschung, S323 / S410 COLLABORATION — The astrophysical origin of about half of the elements heavier than iron have been attributed to the rapid neutron capture process. The modeling of such a process requires not only the correct astrophysical conditions but also reliable nuclear physics. The properties of neutron-rich nuclei in the region just below the $N = 82$ shell closure are of particular interest as they are responsible for the $A = 130$ peak in the solar abundance pattern. An experiment to investigate half-lives and β-delayed neutron emission branching ratios of very neutron-rich Pd and Ag isotopes was performed at the GSI projectile FRagment Separator (FRS). The FRS was used to separate products from in-flight fission of a 900 MeV/u ^{238}U beam. Ions of interest were then implanted in the Silicon IMplantation detector and Beta Absorber (SIMBA) array. The high pixelation of the implantation detectors allowed for time-position correlation of the order of several seconds between implants and decays. Neutrons emitted during the decay were detected by the BEta deLayEd Neutron detector (BELEN) which surrounded the SIMBA array. Resulting analysis of half-lives and neutron emission branching ratios including a time-dependent background will be presented.

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