Abstract Submitted
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Recent β-delayed neutron branching ratios of measurements with heavy nuclei.[1] ROGER CABALLERO-FOLCH, IRIS DILLMANN, TRIUMF (Vancouver BC - Canada), JORGE AGRAMUNT, JOSE LUIS TAIN, IFIC - CSIC (Valencia - Spain) — The understanding of the nuclear structure of the neutron-rich nuclei and several astrophysical phenomena, such as the r-process, is a challenge that need new experimental values to provide more realistic data inputs in theoretical models. The aim of this study is to achieve new β-delayed neutron branching ratios, Pn, of very neutron-rich nuclei. Experiments recently performed at the RIB facilities of GSI Darmstadt (Germany) and IGISOL in Jyväskylä (Finland) allowed to determine Pn values for heavier isotopes than those measured so far with a 4pi neutron detector based on ^{3}He counters. At GSI it was possible to measure β1n emitters for several Hg and Tl isotopes with masses beyond A>200 and N>126, and at IGISOL the β2n emitter ^{136}Sb, which represents an important leap in terms of mass since the heaviest known were around A˜150 for β1n and A˜100 for β2n. Results of P1n and P2n values will be presented, together with the new plans for β-delayed neutron emitter measurements at RIKEN (Japan). The BRIKEN project aims to measure more than a hundred of β1n, and many β2n and β3n emitters, a lot of them for the first time. These isotopes will be the most neutron-rich species measured so far.

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