

Decay Spectroscopy at the Radioactive Isotope Beam Factory (RIBF) at RIKEN

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Identification of heavy 2p emitters

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The heaviest two-proton emitter known today is ^{67}Kr produced at the BigRIBS separator at the RIBF facility. In order to search for heavier 2p emitters, a setup consisting of a segmented silicon detector array surrounded by germanium detectors is ideal allowing to not only search for 2p emitters, but also to study at the same time nuclei in the vicinity of the 2p emitters.

Possible new 2p emitters include ^{71}Sr , ^{75}Zr , ^{79}Mo , ^{83}Ru , ^{87}Pd , ^{91}Cd , and ^{95}Sn .

To search for these heavier 2p emitters and to study their decay characteristics, the best beams would be ^{92}Mo for the first three, and ^{112}Sn for the following four. A ^{124}Xe might be considered for the last four 2p emitters. These opportunities will be presented at the workshop.

Primary author(s) : BLANK, Bertram (CENBG); GIOVINAZZO, Jérôme (LP2iB / CNRS-IN2P3 / Univ. Bordeaux)

Presenter(s) : BLANK, Bertram (CENBG)

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