

Beta-Decay Studies of *r*-Process Nuclei Using AIDA

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The *r*-process is responsible for the production of around half the isotopes heavier than iron[1] yet our knowledge of this process is relatively lacking compared to the much better understood *s*-process. The Advanced Implantation Detector Array (AIDA)[2] represents the newest generation of silicon detection systems for use in β -decay studies at fragmentation facilities. The detectors in the array are sensitive to both the implantation of exotic ions and their subsequent decays. AIDA can be used in combination with gamma and neutron detectors to obtain a complete image of the channels involved in the decay. In this talk the methods of using data obtained at RIKEN to determine the half-lives and P_n values of exotic nuclei of importance to the *r*-process will be discussed.

[1] Y.-Z. Qian Prog. Part. Nucl. Phys., vol. 50, no. 1, pp. 153199 (2003).

[2] C.J. Griffin, *et al.* β -decay studies of *r*-process nuclei using the Advanced Implantation Detector Array (AIDA). In Proceedings of Science, volume 07-11-July, page 52502. Proceedings of Science (PoS), 2014.