



JYFL-ACCLAB, in-flight separators MARA and RITU, status and prospects

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The Nuclear Spectroscopy Group (NSG) at JYFL-ACCLAB is employing two complementary in-flight separators in their spectroscopic studies. Recoil Ion Transport Unit (RITU) [1] is a gas-filled recoil separator and has been in operation for almost 30 years. Mass Analyzing Recoil Apparatus (MARA) [2], is a vacuum-mode double focusing mass separator, has been in use for about four years. As said separators are complementary and allow us to perform spectroscopic studies at and beyond the proton-drip line and in the Very Heavy Element (VHE) region starting from mass $A=40$ onward. RITU is ongoing a major upgrade where the focal plane system is updated. In this presentation a status report of the separators will be given. In addition, prospects related to the future experimental program, relevant for the SHE-community, will be outlined.

References

- [1] J. Sarén, J. Uusitalo, M. Leino, and J. Sorri, Nucl. Instr. Meth. Phys. Res. A **654**, 508 (2011).
- [2] J. Uusitalo, J. Sarén, J. Partanen, and J. Hilton, Acta Physica Polonica B **50**, 319 (2019).