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## **AGATA@GANIL(E706) (ONLINE): Shape evolution in neutron-rich fission fragments in the mass $A \sim 100$ region (2. Report)**

*Thursday, 11 November 2021 12:00 (20 minutes)*

The goal of Experiment E706 was to measure lifetimes of excited states in neutron-rich fission fragments in the mass  $A \sim 110$  region. A beam of  $^{238}\text{U}$  was incident on a  $^9\text{Be}$  target, which was mounted in the OUPS plunger device together with a Mg degrader foil. The fission fragments were identified in mass and atomic number in the VAMOS++ spectrometer, while  $\gamma$  rays were detected with the AGATA and FATIMA arrays. The data analysis from the experiment, which is proceeding at IJCLab Orsay, CEA Saclay, and the University of Oslo, has so far resulted in a PhD thesis at Université Paris-Saclay [1]. The general overview of the experiment and results on even-even nuclei will be presented in the contribution of G.Pasqualato.

In this report, we will present the optimization of the analysis procedure to improve the mass resolution and identification of ions in VAMOS. An overview of the wide range of nuclides for which lifetimes are being extracted will be given, with a focus on odd-even nuclei. We will furthermore present new ideas on how to utilize the information on the ion velocity from a spectrometer for determining lifetimes with the recoil distance technique.

[1] S. Ansari, "Shape evolution in neutron-rich Zr, Mo and Ru isotopes around mass  $A=100$ ", PhD Thesis Université Paris-Saclay 2019

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