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Performance and Recent Results with the the Advanced GAMMA Tracking Array (AGATA)

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The AGATA array [1], is the European forefront instrument based on semiconductor Germanium detectors, for high-resolution position sensitive gamma-ray spectroscopy.

AGATA is being built in a collaborative effort of more than 40 institutes in 11 countries. The conceptual design of AGATA foresees a 4π array with 60 triple clusters containing 180 Ge encapsulated detectors [2]. Nevertheless, smaller sub- arrays of AGATA have been implemented, first as a prove of concept for a tracking array at INFN-LNL [3] and later to prove the potential of AGATA in different experimental conditions as well as to profit from the scientific possibilities offered by European large scale facilities. Since 2012 AGATA sub-arrays have been installed at the FAIR/NUSTAR-precursor PRESPEC set-up [4], placed at the focal plane of the FRS Fragment Separator in GSI, where experiments with in-flight highly relativistic exotic beams were performed, and in 2014 at GANIL and SPIRAL where experiments with high-intensity stable beams and reaccelerated ISOL radioactive beams are expected to be performed till 2020 [5]. In this contribution the AGATA project will be presented, emphasising the capabilities and performance figures, relevant for the present and future European facilities. Finally the recent results of the AGATA experimental activity, coupled with different complementary instruments in the mentioned host laboratories, will be reported.

[1] The AGATA Collaboration, Nucl. Instrum. Methods Phys. Res., Sect. A 668, 26 (2012).

[2] E. Farnea et al., Nucl. Instrum. Methods Phys. Res., Sect. A 621 (2010) 331.

[3] A. Gadea et al., Nucl. Instrum. Methods Phys. Res., Sect. A 654, 88 (2011).

[4] N. Pietralla et al., EJP Web of Conferences 66, 02083 (2014) and <http://web-docs.gsi.de/~wolle/PreSPEC/>

[5] E. Clément et al., Nucl. Instrum. Methods Phys. Res., Sect. A 855 (2017) 1

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