

## Preliminary results from thick target measurements of the $^{27}\text{Al}(\alpha,n)^{30}\text{P}$ reaction cross-section using miniBELEN-10A

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The miniBELEN-10A detector is a modular and transportable moderated neutron counter with a nearly flat detection efficiency up to 8 MeV [1]. It is one of the detection systems available for the MANY collaboration (Measurement of Alpha Neutron Yields and Spectra), a Spanish project designed to conduct measurements of (alpha,n) production yields, reaction cross-sections, and neutron energy spectra. miniBELEN-10A has recently undergone commissioning by measuring  $^{27}\text{Al}(\alpha,n)^{30}\text{P}$  thick target production yields at various alpha energies. This work presents preliminary results from the first physics experiment using miniBELEN-10A. The cross-section of  $^{27}\text{Al}(\alpha,n)^{30}\text{P}$  is derived from thick target measurements for alpha energies near the reaction threshold up to 8 MeV. The experiment is introduced, and the status of the data analysis is discussed.

[1] Mont-Geli et al. EPJ Web of Conferences 284 (2020)

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