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Measurement of the ^{3}He$(\alpha,\gamma)^7$Be γ-ray angular distribution

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The ^{3}He$(\alpha,\gamma)^7$Be reaction plays a significant role in Big Bang nucleosynthesis, as well as in stellar hydrogen burning. It affects the nucleosynthesis of primordial ^{7}Li, as well as the theoretical prediction of solar ^{7}Be and ^{8}B neutrino fluxes.
A measurement of its γ-ray angular distribution was performed using the 5 MV Pelletron accelerator at the Felsenkeller shallow-underground laboratory in Dresden. A ^{4}He beam was used to irradiate solid ^{3}He implanted targets. The prompt γ-rays were detected using more than 20 HPGe crystals surrounding the setup. This contribution will report on experimental data in the energy range of $E_{cm} = 450 - 1220$ keV, as well as its impact on S(0). Furthermore the results will be put into context of already existing data sets.

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