



A study on high energy gamma intensities in ^{208}Tl decay from a ThO_2 powder sample

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The gamma decay intensities for $E > 3$ MeV from the ^{208}Tl decay have 100% uncertainties in the NNDC database. New measurements with smaller uncertainties are desirable for understanding nuclear decay properties of the nucleus and high energy gamma background in rare decay experiments. A ThO_2 powder sample was measured with a 100% High Purity Germanium (HPGe) in the Yangyang underground laboratory (Y2L) at the Center for Underground Physics (CUP) to obtain more accurate numbers of the high energy gamma intensities from the ^{208}Tl . The experimental set-up, Monte Carlo simulation studies for detection efficiencies, and a preliminary result will be presented in this poster.

Primary authors: LEE, Eunkyung (Institute for Basic Science); KIM, Gowoon (IBS); Prof. HAHN, Kevin Insik (Ewha Womans University); Dr LEE, Moohyun (CUP, IBS); Dr LEONARD, S. Douglas (CUP, IBS); Dr KANG, Woongu (CUP, IBS);  

Presenter: KIM, Gowoon (IBS)

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