## 6th International Conference on Collective Motion in Nuclei under Extreme Conditions (COMEX6)



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## Gamma-gamma coincidence measurements of natually occuring radioactive materials

Measurements of activity concentration using gamma - gamma coincidence is better than single measurement in terms of minimizing spectrum background, summing effects and pulse pile-up \cite{metwally}. Detection limits can be improved by eliminating the internal activity in  $LaBr_3$ :Ce scintillator through gamma - gamma coincidence condition \cite{Drescher}. An array of  $LaBr_3$ :Ce (2" by 2") detectors connected to a Digital Signal Processing system were used for measurement of natural occuring radioactive materials (NORM) in 1L Marinelli beakers for particular measurements with U ore and Th ore. Gamma - gamma coincident spectra were generated by setting software gates on  $\gamma - \gamma$  matrices associated with the U and Th ore samples respectively. The results of these measurements will be presented and discussed.

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