

Nuclear Structure Studies Using the In-Beam Fast Timing Technique

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The "in-beam fast timing" techniques using $\text{LaBr}_3(\text{Ce})$ detectors started to be developed and successfully employed during the last five years. This technique is suitable for the measurement of lifetimes of excited nuclear levels in the tens of picoseconds to nanoseconds range. The main advantage of the technique is that it can be used to study short-living excited states populated in fusion-evaporation reactions, and therefore started to be employed at several accelerator facilities. This contribution will be focused on the mixed HPGe - $\text{LaBr}_3(\text{Ce})$ recently constructed at the TANDEM Laboratory of IFIN-HH Bucharest and several physics results obtained using this array.