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The GDR gamma-decay gated by isomers in ^{188}Pt : preliminary results from the PARIS + nuBall experiment

A study of the γ -decay of GDR formed in a hot compound nucleus will be held in June 2018 at IPN Orsay with the use of the PARIS + nuBall set-up with ^{18}O on ^{174}Yb reaction. It is a very first experiment in which PARIS detectors will be used for this type of measurement and to fully take advantage of these detectors, they will be placed in a non-standard, wall geometry.

The main goal of the experiment is to study a link between characteristics of the compound and residual nuclei by investigating the case of the ^{192}Pt compound nucleus and its $4n$ decay channel leading to the ^{188}Pt residue. ^{188}Pt is a nucleus known for its ground state prolate shape and high-spin triaxial band, and a simultaneous detection of high- and low-energy γ rays will facilitate measurement of the feeding to both of these deformations. 36 PARIS detectors will be employed to measure high-energy γ rays from the GDR decay, while low-spin discrete transitions measured by 24 clover HPGe and 10 coaxial Ge detectors of nuBall will be used for gating on the decay paths of choice.

During the talk, the setup will be presented in detail along with the method of analysis. A special emphasis will be put on the analysis of the PARIS part of the data. Very preliminary results will be shown as well.

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