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Study of the Order-to-Chaos transition in ^{174}W with the AGATA-Demonstrator

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The transition between order and chaos is studied in the warm rotating nucleus ^{174}W by gamma-spectroscopy, focusing on the conservation of selection rules of the K quantum number with the excitation energy. The ^{174}W nucleus was populated at high spins by the fusion-evaporation reaction of ^{50}Ti (at 217 MeV) on a ^{128}Te backed target. The measurement was performed in July 2010 at Legnaro National Laboratory of INFN using the AGATA Demonstrator HPGe-array coupled with an array of 27 BaF₂ scintillator detectors.

Preliminary results of the data analysis will be presented. In particular, we will concentrate on double gamma-coincidence matrices selecting the gamma-decay flow populating low-K and high-K structures of ^{174}W .

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