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INVESTIGATION OF E1 STRENGTH IN 64,62Fe

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The structure and nature of the E1 strength and pygmy dipole resonance (PDR) states below and around the neutron threshold is still an open problem, particularly in exotic, neutron rich nuclei. Present experimental observations give only limited information on this subject. New experiments using different methods are needed. After a pioneering experiment on the exotic nucleus 68Ni [1,2] in 2005 at GSI laboratories two recent measurements at GSI laboratories on 64,62Fe with the AGATA Prespec [3,4] setup contribute to solve the open questions.
The experiments were based on relativistic Coulomb excitation together with the detection of the incoming and outgoing particles event by event. The detection of the produced gamma-rays in the reaction, provides insight into the problem of the electric dipole response and E1 strength distribution around particle separation threshold.

REFERENCES
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