Abstract Submitted
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Dynamical Coupling of Pygmy and Giant Resonances in Relativistic Coulomb Excitation[1] NATHAN BRADY, Texas A&M University - Commerce, THOMAS AUMANN[2], Institut für Kernphysik, Technische Universität Darmstadt, CARLOS BERTULANI[3], JAMES THOMAS, Texas A&M University - Commerce — We study the Coulomb excitation of pygmy dipole resonances (PDR) in heavy ion reactions at 100 MeV/nucleon and above. The reactions ^{68}Ni + ^{197}Au and ^{68}Ni + ^{208}Pb are taken as practical examples. Our goal is to address the question of the influence of giant resonances on the PDR as the dynamics of the collision evolve. We show that the coupling to the giant resonances affects considerably the excitation probabilities of the PDR, a result that indicates the need of an improved theoretical treatment of the reaction dynamics at these bombarding energies.

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