

Abstract Submitted  
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**Microscopic dynamic study of giant resonance excitation and fusion in  $^{132}\text{Sn}+^{48}\text{Ca}$** <sup>1</sup> VOLKER OBERACKER, A.S. UMAR, Vanderbilt University — In connection with experiments at Radioactive Ion Beam Facilities, we study pre-compound giant resonance excitation and fusion in heavy-ion reactions within a microscopic dynamic theory. Calculations are carried out on a 3-D lattice using the density-constrained Time-Dependent Hartree-Fock (DC-TDHF) method [1,2]. For  $^{132}\text{Sn}+^{48}\text{Ca}$ , we calculate the time-evolution of giant resonance excitation and associated gamma-ray yield. Also, we calculate the heavy-ion interaction potential and total fusion cross section and compare the results to  $^{124}\text{Sn}+^{40}\text{Ca}$ . A comparison with recently measured fusion cross sections will be given.

[1] Umar and Oberacker, Phys. Rev. C 74, 021601(R) (2006)

[2] Oberacker, Umar, Maruhn and Reinhard, PRC 82, 034603 (2010)

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