

Abstract Submitted
for the APR08 Meeting of
The American Physical Society

Isospin effects in two-particle correlation functions VLADIMIR HENZL, NSCL MSU, D. HENZLOVA*, M. FAMIANO*, M. KILBURN*, W. LYNCH*, D. COUPLAND*, J. ELSON*, C. HERLITZIUS*, S. HUDAN*, J. LEE*, S. LUKYANOV*, A. ROGERS*, A. SANETULLAEV*, R. DE SOUZA*, L. SOBOTKA*, Z. SUN*, B. TSANG*, A. VANDER MOLEN**, G. VERDE*, M. WALLACE*, M. YOUNGS*, *4PI+HIRA COLLABORATION — Dynamical and thermal properties of excited nuclear system produced during heavy ion collisions at intermediate incident energies can be studied by means of the intensity interferometry, which when applied to both charged particles (light charged particles and intermediate mass fragments) provide information about space-time properties of nuclear reactions. The shape of 2-particle correlation functions reflects the nature of the final state interaction and possible presence of a collective motion driven by the nuclear EoS. BUU simulations predict that the symmetry term of the EoS will affect the 2-proton correlation function, reflecting a more pronounced pre-equilibrium emission and shorter emission times when stiffer density dependence of the symmetry term is assumed. We will present preliminary results on the isospin effect on the 2-proton correlations measured in reactions $^{40,48}\text{Ca}+^{40,48}\text{Ca}$ at 80A MeV. The experiment was performed at the NSCL/MSU using High Resolution Array (HiRA) in coincidence with the 4pi array. This work is supported by the National Science Foundation under Grant Nos. PHY-0606007 and PHY-9977707.

Vladimir Henzl
NSCL MSU

Date submitted: 11 Jan 2008

Electronic form version 1.4