

Abstract Submitted  
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**Correlated momentum distribution in asymmetric nuclear matter**<sup>1</sup> ARNAU RIOS HUGUET, NSCL and Physics & Astronomy Department, Michigan State University, East Lansing (MI) — The understanding of the variation of microscopic nuclear properties with isospin asymmetry is an important issue for both nuclear experiments and theory. The recent results on nucleon knock-out reactions seem to indicate that there is a strong dependence of spectroscopic factor on isospin [1]. This could indicate that the occupation numbers of low-lying nuclear states are changing with asymmetry [2]. We perform realistic many-body calculations of asymmetric nuclear matter within the Self-Consistent Green's Functions method to study the impact of isospin asymmetry on the correlated momentum distributions of asymmetric nuclear matter [2,3]. Using different internucleon potentials, we assess the model dependence of these calculations and conclude that the change of  $n(k)$  with isospin is well constrained from realistic calculations.

[1] A. Gade et al., Phys. Rev. C 77, 044306 (2008).

[2] T. Frick et al., Phys. Rev. C 71, 014313 (2005).

[3] W. Dickhoff and C. Barbieri, Prog. Part. Nucl. Phys 52, 377 (2004).

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Arnau Rios Huguet  
NSCL and Physics & Astronomy Department,  
Michigan State University, East Lansing (MI)

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