Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Study of Short-Range Correlations in exotic nuclei at R^3B MEYTAL DUER[1], Technische Universitat Darmstadt — Most of the knowledge we have about Short-Range Correlated (SRC) pairs comes from electron-induced quasi-free scattering (QFS) experiments, which cannot be performed with short-lived nuclei today. To overcome this limitation, proton-induced QFS in inverse kinematics was proposed. This method has been successfully applied in the recent years to probe the structure of very isospin-asymmetric nuclei. Our recent experiment at JINR (Russia) showed for the first time that SRC pairs are accessible in inverse kinematics using ^{12}C beam at high energy and a liquid hydrogen target. This showcases a new ability to study SRC in short-lived exotic nuclei at the setup for Reactions with Relativistic Radioactive Beams (R^3B) at GSI and in the future at FAIR (Germany). We plan a first experiment with a neutron-rich nucleus at R^3B, scattering a ^{16}C beam off a liquid hydrogen target in inverse kinematics at energies up to 1.25 GeV/u, and perform a fully exclusive kinematical measurement. A successful experiment will be the first step into a new era of SRC measurements with hadronic probes along isotopic chains. Studying SRC in such exotic nuclear environment will open the possibility to get insight into the interaction of cold dense nuclear matter as neutron-stars.

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Date submitted: 24 Jun 2020 Electronic form version 1.4