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SHORT-RANGE CORRELATION INVESTIGATION IN DEUTERON INDUCED REACTIONS

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One of the approaches to investigate the equation-of-state of dense nuclear matter is the study of the short-range correlations of nucleons in nuclei. Short-range correlations have densities comparable to the density in the center of a nucleon and they can be considered as the drops of cold dense nuclear matter. Dp elastic and dp breakup processes are investigated at Internal Target Station of Nuclotron; dp elastic process in angular range from 60 –135 degree in c.m. in the energy range from 400 - 2000 MeV; dp breakup reaction in angular the range from 19 – 56 degree from 300 - 500 MeV. Results which comes from analyzing powers of dp elastic scattering show strong sensitivity to the short range spin structure of the isoscalar nucleon-nucleon correlations. Description based on relativistic multi-scattering model provides reasonable agreement at small and large angles but the problem is related to angles between them.

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