STUDY OF d + d → ^{2}He + ^{2}n REACTION AT DEUTRON ENERGY OF 15 MeV

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In this work the experimental setup and preliminary results of d+d→^{2}He+^{2}n reaction study at deuteron energy of 15 MeV are presented. The goal of the experiment is a simultaneous determination of quasibound singlet states energies of two nucleons (nn and pp) being very important characteristics of *NN*-interactions. The investigation is performed using deuteron beam of U-120 cyclotron at Skobel'tsyn Institute of Nuclear Physics. In the experiment we detect the two protons and the neutron from the decay of "diproton" and "dineutron" systems, respectively. Performed simulation and preliminary measurements of the reaction show a possibility to determine the energies of pp and nn quasibound singlet states with a good accuracy.