

## **Study of the ABC effect in the $pd \rightarrow pd\pi\pi$ reaction with $d^*(2380)$ resonance excitation.**

Recently, after the discovery of the resonance  $d^*(2380)$  (D03), considered as a candidate for true dibaryons, the ABC-effect was found to be associated with its excitation. The ABC effect-the peak in the mass spectrum of pion pairs near the birth threshold-has no generally accepted theoretical explanation, so this connection attracted a special interest of the scientific community.

The reaction  $p + d \rightarrow p + d + X$  was studied in proton beam energies of 0.8-2.0 GeV on ANKE/COSY magnetic spectrometer. Proton-deuteron pairs with high momenta 0.6-1.8 GeV/c were recorded at small angles relative to the proton beam. The distribution of the missing mass of the born pion pairs reveals a local excess near the threshold, characteristic of the ABC effect. The report presents the results of studying the ABC effect and excitation of the D03 resonance in the  $pd \rightarrow pd\pi\pi$  reaction by means of meson exchange in coherent kinematics.

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