

Abstract Submitted
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Spin correlation parameter C_{yy} of $p^3\text{He}$ backward elastic scattering at intermediate energy KICHIJI HATANAKA, YOHEI SHIMIZU, ALEXANDER KOBUSHKIN, TATSUYA ADACHI, KUNIHIRO FUJITA, HIROAKI MATSUBARA, YASUHIRO SAKEMI, YOSHIHIRO SHIMBARA, YUJI TAMESHIGE, ATSUSHI TAMII, MAKOTO UCHIDA, RCNP, Osaka University, KEISUKE ITHO, Saitama University, TAKAHIRO KAWABATA, YOSHIKO SASAMOTO, KEIJI SUDA, TOMOHIRO UESAKA, TAKASHI WAKUI, CNS, University of Tokyo, TAKASHI KUDOH, HITOMI OHIRA, KENSHI SAGARA, HIDETOMO YOSHIDA, MIZUHO TOMIYAMA, TOMOTSUGU WAKASA, Kyushu University, HIROYUKI OKAMURA, CYRIC, Tohoku University — For several decades considerable efforts have been performed to investigate the structure of the lightest nuclei at short distances between constituent nucleons. Large part of these investigations consists of studies of elastic backward proton-nucleus scattering (EBS). At present there is no theoretical model which quantitatively describes the existing data, even for the simplest reaction, pd EBS. Recently there have been several theoretical attempts to understand the $p^3\text{He}$ EBS which is studied in much less detail than pd EBS. We have measured the cross section and spin correlation parameter C_{yy} of $p^3\text{He}$ EBS at 200,300 and 400 MeV. Experimental results are compared to theoretical predictions with two-nucleon pair exchange in the triplet and singlet spin states, pion-exchange and direct mechanism.

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