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Study of medium effect in NN interaction by using (p,pn) reactions YUKIKO YAMADA, TETSUO NORO, TAKUMI IMAMURA, TOMOTSUGU WAKASA, MASANORI DOZONO, YOSHIHIDE MATSUDA, MIDORI OKAMOTO, SHO KUROITA, YUICHIRO EGUCHI, KEISUKE YASHIMA, TATSUYA YABE, Kyushu University, HARUTAKA SAKAGUCHI, KICHIJI HATANAKA, HIROYUKI OKAMURA, ATSUSHI TAMII, YUSUKE YASUDA, JUZO ZENIHIRO, HIROAKI MATSUBARA, DAIKI ISHIKAWA, RCNP Osaka University, YUKIE MAEDA, ATSUSI NONAKA, NORIYUKI FUJITA, TORU SAITO, Miyazaki University, YASUHIRO SAKEMI, HIDETOMO P. YOSHIDA, CYRIC Tohoku University — Exclusive measurement of nucleon quasifree scattering is a direct tool to investigate how nucleon-nucleon (NN) interaction changes in the nuclear medium. We measured analyzing powers (A_y) for $1s_{1/2}$-knockout (p,pn) reactions on light nuclei aiming at studying such modification. The experiment was performed at RCNP with a 392 MeV proton beam. It is found that the ^{12}C(p,pn) exclusive A_y data are mostly consistent with impulse calculations based on the p-n interaction in free space, in contrast to the (p,2p) case, where a strong suppression of A_y is observed. This large imbalance between the (p,pn) and (p,2p) results is difficult to explain in conventional models.

Yukiko Yamada
Kyushu University

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