

Abstract Submitted
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The structure of ${}^6\text{He}$ studied by the proton inelastic scattering at 70 A MeV YOSHIKO HASHIMOTO, TAKASHI NAKAMURA, YOSHITERO SATOU, YOSUKE KONDO, TAKASHI SUGIMOTO, NOBUYUKI MATSUI, TOSHIFUMI OKUMURA, TAKUMI NAKABAYASHI, MAYUKO SHINOHARA, Tokyo Institute of Technology, TOSHIO KOBAYASHI, HIDEAKI OTSU, YOHEI MATSUDA, NATSUMI ENDO, MITSUHISA KITAYAMA, Tohoku University, TAKEO ONISHI, HOOLJIN ONG, Univ. of Tokyo, SUSUMU SHIMOURA, MITSURU TAMAKI, Center for Nuclear Study, University of Tokyo, YASUHIRO TOGANO, SYOKO KAWAI, Rikkyo Univ., RIPS COLLABORATION — Inelastic proton scattering of the neutron-rich helium isotope ${}^6\text{He}$ has been studied in inverse kinematics at 70 MeV/nucleon. ${}^6\text{He}$ is a loosely bound Borromean nucleus. It is thus interesting to study its nuclear response, such as the three-body related discrete resonance and the continuum. The experiment was performed at the RIKEN Accelerator Research Facility. Secondary beam of ${}^6\text{He}$ was produced and separated by the RIKEN Projectile Fragment Separator (RIPS). ${}^6\text{He}$ bombarded a liquid hydrogen target. The momentum vectors of all the outgoing particles, ${}^4\text{He}$ and two neutrons, were determined event by event. ${}^4\text{He}$ was bent by a dipole magnet and was detected with a plastic scintillator hodoscope and drift chambers. The neutrons were detected by two walls of scintillator hodoscope. In this talk, we present the invariant mass spectrum of ${}^6\text{He}$ and discuss its structure.

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