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Development of MAIKo: The active target with μ-PIC for RI beam experiments TATSUYA FURUNO, TAKAHIRO KAWABATA, SATOSHI ADACHI, TATSUO BABA, YUKI ISHII, HIDETOSHI KUBO, YOSHIHIRO MATSUOKA, TETSUYA MIZUMOTO, MOTOKI MURATA, TATSUYA SAWANO, ATSUSHI TAKADA, TORU TANIMORI, MIHO TSUMURA, HIDETOMO D. WATANABE, Department of Physics, Kyoto University, YASSID AYYAD, TAKASHI HASHIMOTO, YOHEI MATSUDA, HOOI JIN ONG, JUNKI TANAKA, ISAO TANIHATA, Research Center for Nuclear Physics, Osaka University — The active target system MAIKo (μ-PIC based Active target for Inverse Kinematics.) is under development at RCNP to perform missing mass spectroscopy at forward angles in RI beam experiments. This method will be promising to study excited states above particle-decay thresholds. MAIKo works as TPC where detection gas plays a role of the target gas. Since the scattering occurs inside the TPC, the active target can detect even low-energy recoil particles. To achieve high position resolution by the TPC, micro-pixel chamber (μ-PIC) is introduced to multiply and detect the drifted electrons. In November 2013, a test experiment was performed using a ^{4}He beam to study the detector performance under high counting rate. Scattering events were also acquired to develop tracking algorithm which can extract scattering angle and excitation energy from the track information. Results of the experiment will be discussed in the present talk.

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