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Neutron lifetime measurement with pulsed beam at J-PARC:Incident Beam Flux RISA SAKAKIBARA, HIROHIKO M. SHIMIZU, MASAAKI KITAGUCHI, KATSUYA HIROTA, TOMOAKI SUGINO, Nagoya University, SATORU YAMASHITA, RYO KATAYAMA, TAKAHITO YAMADA, NAO HIGASHI, HARUMICHI YOKOYAMA, HIROCHIKA SUMINO, The University of Tokyo, TAMAKI YOSHIOKA, HIDETOSHI OTONO, GENKI TANAKA, NAOYUKI SUMI, Kyushu University, YOSHIHISA IWASHITA, RYUNOSUKE KITAHARA, Kyoto University, HIDEYUKI OIDE, CERN, TATSUSHI SHIMA, Osaka University, TAKASHI INO, KENJI MISHIMA, KAORU TAKETANI, KEK, YOSHICHIKA SEKI, RIKEN, NOP COLLABORATION — The neutron lifetime is one of the important parameters in the estimation of the abundance of the light elements in the early universe through the Big Bang Nucleosynthesis (BBN). The accuracy of 0.1% is desired in the neutron lifetime to quantitatively discuss the BBN in combination with the observation of the anisotropy of the cosmic microwave. We have started a lifetime measurement with pulsed neutrons at J-PARC/BL05. To measure the lifetime, we detect the decay electrons from the bunched neutrons and the incident neutron flux in the TPC at the same time. By diluting a small amount of ^{3}He gas into the TPC, the incident flux is estimated by counting protons via ^{3}He(n,p)^{3}H reactions. The accuracy of the selection of ^{3}He(n,p)^{3}H events and the influence of the contamination of nitrogen gas are the major systematic errors. In this paper, the estimation of the systematic error in the incident flux is reported.

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