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Effect of tensor interactions in 16O studied via (p,d) reaction¹ HOOI JIN ONG, ISAO TANIHATA, ATSUSHI TAMII, RCNP, Osaka University, TAKAYUKI MYO, Osaka Institute of Technology, KAZUYUKI OGATA, RCNP, Osaka University, MITSUNORI FUKUDA, Osaka University, KIYOMI IKEDA, RIKEN, DAIKI ISHIKAWA, RCNP, TAKAHIRO KAWABATA, Kyoto University, HIROAKI MATSUBARA, RCNP, Osaka University, KENSAKU MATSUTA, MO-TOTSUGU MIHARA, Osaka University, TAKUMA NAITO, RCNP, Osaka University, DAIKI NISHIMURA, Tokyo University of Science, YOKO OGAWA, RCNP, Osaka University, AKIRA OZAWA, Tsukuba University, DANYANG PANG, Beihang University, HARUTAKA SAKAGUCHI, RCNP, Osaka University, KIMIKO SEKIGUCHI, Tohoku University, TOMOKAZU SUZUKI, RCNP, Osaka University, MANAMI TANIGUCHI, Nara Women's University, HIROSHI TOKI, YUSUKE YASUDA, MASARU YOSOI, RCNP, Osaka University, JUZO ZENIHIRO, RIKEN, RCNP-E314 COLLABORATION — We report a possible evidence of tensor interactions in ¹⁶O observed via high-momentum (p,d) reaction. We measured the differential cross sections populating the ground states and several low-lying excited states in ¹⁵O. Comparing the ratios of the cross sections for the $5/2^+$ and the $3/2^$ excited states to the one for the ground state over a wide range of momentum transfer, we found a marked enhancement of the ratio for the $5/2^+$ state as compared to that for the $3/2^{-}$ state. The observation is consistent with large components of high-momentum neutrons in the initial ground-state configurations explainable by the tensor interactions.

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