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Performance of a thick windowless He gas target at KUTL R. IWABUCHI, K. SAGARA, K. FUJITA, T. TERANISHI, M. TANIGUCHI, T. GOTOH, K. NAKANO, N. OBA, S. MATSUDA, H. YAMAGUCHI, Kyushu University, KUTL ASTRO TEAM — A blow-in type windowless He gas target (BIGT) has been developed at Kyushu University tandem laboratory (KUTL). To increase He target thickness, various trials and efforts have been made for many years. Recently we have achieved 24 Torr of He gas pressure in the central region of the target. This capacity is sufficient for our ^{4}He(^{12}C, ^{16}O)γ experiment near the stellar energies, from E_{cm} = 2.4 MeV down to 0.7 MeV. The He target thickness integrated along the beam axis was measured using p + ^{4}He scattering. Due to the sufficient thickness, a post stripper is not necessarily put downstream the target to make the charge distribution of ^{16}O equibrium. Performance of this windowless ^{4}He target is presented.

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