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**Measurement of charge distribution of $^{16}$O through a C-foil for $^{4}$He($^{12}$C,$^{16}$O)$\gamma$ experiment at stellar energy** HISATO TANIMOTO, Department of Physics, Kyushu University, K. SAGARA, T. TERANISHI, H. OBA, K. NISHIDA, M. KOUZUMA, S. KAMIBEPPU, T. KAWADA, A. MATSUMOTO COLLABORATION, K. TAMURA, H. ISHIKAWA AND N. IKEDA COLLABORATION[1] — Measurement of charge distribution of $^{16}$O passed through a C-foil is in progress at Kyushu University tandem laboratory so as to measure $^{4}$He($^{12}$C,$^{16}$O)$\gamma$ cross section at stellar energy by detecting $^{16}$O particles in a charge state. Downstream the helium windowless gas target, we put a thin C-foil to make the charge distribution of $^{16}$O equilibrium. Energy of $^{16}$O is 2-8 MeV, and existing data for the charge distribution of $^{16}$O in the energy range are different to each other by 15 % at most. We measure simultaneously (1) the intensity of a $^{16}$O beam which is incident on a C-foil by counting $^{12}$C recoils by a Si-detector, and (2) the intensity of the $^{16}$O beam in each charge state by a Faraday cup downstream the C-foil. An electric deflector and a magnetic deflector are used to separate a $^{16}$O beam in a charge state from otherbeams in different charge states.

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