The performance of the Forward Drift Chamber in the BGOegg experiment

TOSHIKAZU HASHIMOTO, Department of Physics, Kyoto University, MASARU YOSOI, Research Center for Nuclear Physics, Osaka University, MASAYUKI NIYAMA, Department of Physics, Kyoto University, JIA-YE CHEN, National Synchrotron Radiation Research Center, YUKI NOZAWA, KEIGO MIZUTANI, Department of Physics, Kyoto University, HIROTOMO HAMANO, Research Center for Nuclear Physics, Osaka University, LEPS2/BGOEGG COLLABORATION

— To study the hadron properties via meson photoproduction, the BGOegg experiment has started in December 2013 at the LEPS2 beamline at SPring-8. The energy of the photon beam is from 1.4 to 2.4 GeV and the present intensity is about 2.0 Mcps. The energy of the photon beam is measured by the tagging counter. Using the photon beam and a nuclear target, mesons are generated. The particles from meson decays and the recoiled particles are measured. The $\gamma$s from meson decays are measured by the BGOegg calorimeter and the charged particles are measured by the tracking counters and TOF counters. The forward drift chamber is located at 1.6 m downstream from the target to detect the charged particles in the forward direction. The effective area is 1280 mm in diameter and covers from 0 to 22 degrees in polar angle. The forward drift chamber consists of 6 planes. The orientations of wires are 0, and $\pm 60$ degrees with respect to the vertical plane. The drift cell is in the shape of a square. The wire spacing is 8mm for all planes. The drift chamber has 480 readout channels. We will present the performance of the forward drift chamber in detail.

1 All members of the collaborator are listed on http://www.lns.tohoku.ac.jp/~bgoegg/collaboration.html

Toshikazu Hashimoto
Department of Physics, Kyoto University

Date submitted: 01 Jul 2014 Electronic form version 1.4