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Performance of the Cylindrical Drift Chamber and the Inner Plastic Scintillator in the BGOegg experiment[1] TAKUYA SHIBUKAWA, SHINICHI MASUMOTO, University of Tokyo, KYOICHIRO OZAWA, KEK, HIROAKI OHNISHI, RIKEN, NORIHITO MURAMATSU, TAKATSUGU ISHIKAWA, MANABU MIYABE, YUSUKE TSUCHIKAWA, RYUJI YAMAZAKI, YUJI MATSUMURA, Research Center for Electron Photon Science, Tohoku University, KEIGO MIZUTANI, TOSHIKAZU HASHIMOTO, Kyoto University, HIROTOMO HAMANO, RCNP, LEPS2/BGOEGG COLLABORATION — Properties of vector mesons, such as ω mesons, in nucleus are intensively measured to study interactions between mesons and nuclear medium. To study ω meson properties in nuclei, we search for the nuclear ω bound states in the LEPS2/BGOegg experiment at SPring-8. If a strongly bounded ω state exists and binding energy is measured, it gives a phenomenological information about interactions between ω meson and nuclei. ω meson is produced using the GeV γ rays at SPring-8/LEPS2 beamline. The ω bound state is searched from the missing mass measurements of forward going protons. ω meson production is identified by detecting γ and proton from ωN $\rightarrow N^* \rightarrow \gamma$p or ωN $\rightarrow \gamma\Delta \rightarrow \gamma\pi$p reaction. In the BGOegg experiment, charged particles are detected by Cylindrical Drift Chamber(CDC) and Inner Plastic Scintillators(IPS) around the target. CDC has 4 layers of stereo wires and each layer has 72 sense wires. IPS consists of 30 plastic scintillators. In this talk, the performance of CDC and IPS are described in detail.

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

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