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Search for the η'-n bound state in the γ(d,p) reaction NORIHITO MURAMATSU[1], Research Center for Electron Photon Science, Tohoku University, THE LEPS COLLABORATION — A strong attractive force between a η' meson and a nucleon is theoretically suggested in the linear σ model, which explains the partial restoration of chiral symmetry. In the same framework as the calculation of $\Lambda(1405)$ which is treated as a quasibound state of $\bar{K}$N, a η'-N bound state is expected with a binding energy of 6–10 MeV. The LEPS experiments at SPring-8 utilizes a photon beam up to 2.9 GeV, so that a η' meson can be photoproduced with a small recoil momentum. We searched for the η'-n bound state by injecting the photon beam into a liquid deuterium target and detecting a proton at extremely forward angles with the LEPS spectrometer. The analysis status and results will be reported in this talk.

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