

Preface

This issue of Research Report of Laboratory of Nuclear Science reports research activities of the LNS performed in the 2007 academic/fiscal year (April 2007 – March 2008). Major research activities are based on the electron accelerator complex consisting of the 300-MeV LINAC and the 1.2-GeV STB ring. The accelerators have altogether provided a beam time of about 1,760 hours for various experiments through the year.

In the GeV- γ experimental hall, commissioning of the 4π spectrometer called FOREST, which is an electro-magnetic calorimeter for neutral meson detection, has essentially finished, and data acquisition of neutral mesons from the γp and γd reactions has started. The beam line which was developed to provide low-intensity electron/positron beams with a momentum range from 200 to 850 MeV has come to frequently use for developments of various detectors to be used in J-PARC, RIKEN, etc. In the experimental hall 2, the $D(\gamma, K^0)$ experiments for neutral Λ particle production has started by using the New NKS spectrometer. Various radioactive isotopes were produced by using high intensity beams below 50 MeV at the experimental hall 1. They were served for element analyses as well as for detailed study of decay properties of nuclei.

We hope that this Report will serve as a quick overview of the present LNS activities over a variety of nuclear research fields.

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