

Preface

This issue of Research Report of Laboratory of Nuclear Science reports research activities of the LNS performed in the 2004 academic/fiscal year (April 2004, March 2005). 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 3,300 hours for various experiments through the year.

In this year, (γ , K^0) measurements with the NKS spectrometer finished at the experimental hall 2, where a construction of a larger spectrometer called New NKS spectrometer has been planned. A series of (γ , η) experiments have been performed with SCISSORS at the GeV γ -ray experimental hall using a new tagging photon system. The measurements on (e, e'p) reactions have also been performed at the experimental hall 2 by using a 200-MeV stretched beam extracted from the STB ring. Experiments on coherent radiation were performed by using pulsed electron beams from the LINAC. 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.

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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Director

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