Contribution ID: **93** Type: **not specified**

Recent activities for nuclear data measurements in ANNRI　ANNRI における核データ測定研究の現状

Thursday, 18 November 2021 11:30 (30 minutes)

Accurate data of neutron-capture cross sections of minor actinides (MAs) and long-lived fission products (LLFPs) are important in detailed engineering designs and safety evaluations of innovative nuclear reactor systems. However, accurate measurements are very difficult due to high radioactivity of these samples.
To satisfy these demands, Accurate Neutron-Nucleus Reaction measurement Instrument (ANNRI) has been developed by the collaboration of Hokkaido University, Tokyo Institute of Technology and JAEA. ANNRI is located on the Beam Line No. 04 of the Materials and Life science experimental Facility (MLF) at the J-PARC. Measurements of neutron-capture cross sections of MAs and LLFPs with high intensity pulsed neutrons have been started from 2009. Neutron capture cross sections of Cm-244, Cm-246, Am-241, Np-237, Zr-93, Tc-99 and many stable isotopes were reported. These results will make significant contributions in the field of developing innovative nuclear systems.
In recent years, Li-glass detectors were installed in ANNRI and neutron total cross section measurements have been started. Furthermore, to expand neutron energy range of measurements to keV region, new high-speed DAQ system, and neutron filter system were also developed and installed. In this presentation, the current status, a brief view, measurement activities and results, and future plans are presented.

Primary author: Dr KIMURA, Atsushi (JAEA)

Presenter: Dr KIMURA, Atsushi (JAEA)

Session Classification: Studies at J-PARC and JAEA　J-PARC・JAEA 施設関連