THE REOPENUING OF THE RESEARCH ACTIVITIES OF THE HYPERNUCLEAR AND HADRON PHYSICS AT THE J-PARC HADRON HALL

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J-PARC (Japan Proton Accelerator Research Complex) is the most advanced accelerator facility in Japan and consists of three accelerators, i.e. 400MeV Linac, 3 GeV Rapid Cycle Synchrotron (RCS) and 50 GeV Main Ring (MR). The most important characteristic of J-PARC is its high design beam power over 1 MW.

Unfortunately, after the leakage incident of radioactive materials at the Hadron Experimental Facility (Hd) of MR, occurred on May 23rd in 2013, J-PARC was temporarily shut down in order to improve its safety performance for future stable and safe operation. As results of the improvements, RCS resumed its operation in February 2014 and Neutrino Experimental Facility of MR re-started the T2K long-baseline oscillation experiment in May 2014.

The recovery and renovation programs of Hd took long time and continued until the end of March 2015. Then the re-start of beam operation of Hd was on April 9, 2015. Experiments with slow extraction beam started on April 24, 2015. The beam intensity delivered to Hd gradually increased and reached 43kW by the end of 2015. Now reopened research activities at Hd are focusing to explore s=-2 world through $\Lambda\Lambda$ and/or Ξ^- hypernuclei via (K^-,K^+) reactions, which became realistic through high power primary proton beam. Construction of new high momentum beam line for the measurement of meson mass modification in nuclear matter and the charmed baryon spectroscopy is under progress.

At the coming INPC2016 conference, present status and future extension program of the hadron experimental facility, Hd, of J-PARC will be presented.