

Current Status of J-PARC MLF

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The facility has resumed since 17th February 2014 after reformation of safety system for operation of the facility required from a measure to the accident in the Hadron Facility happened in last May 2013. During eight-month shutdown various hardware components have been improved; such as installation of additional RFQ in Linac to increase its energy to achieve higher power, repairing and replacement of Hg cooling loops of the neutron target to accommodate helium gas injection to mitigate the pitting problem, improvement on the cryogenic system for easier maintenance etc. Now the power of the proton accelerator is 300 kW with a fairly good stability.

Sixteen instruments are operated for user program and four instruments are under either commissioning or construction. Now the experimental hall is almost full with instruments, leaving only 2 ports are available for instruments in the future. Operational time for user program in JFY2014 is 160 days, i.e. seven cycles. We foresee to receive more than 500 experimental proposals and 1000 users this year.

World-class scientific outputs have been already created in various scientific fields, ranging from Li-battery science to bio-molecular science. Since J-PARC is internationally open for users, we have got experimental proposals from abroad more than 10% of the whole proposals. More than 20% of proposals has come from industries and a half of them are proprietary use.

In the coming December we are planning to ramp up the accelerator power to more than 600kW, and achieve the goal power of 1MW next year. We are now improving and proofing tolerance to accept the power on hardware, safety and even user program system.