



Contribution ID: 28

Type: Talk

Effort for the Reliable Operation in J-PARC Rapid Cycling Synchrotron

Thursday, October 19, 2017 4:30 PM (30 minutes)

The beam commissioning of the J-PARC 3 GeV Rapid Cycling Synchrotron (RCS) has been started since 2007, and the proton beams were delivered to a neutron target and a main ring synchrotron on Dec. 2008. At the beginning of RCS operation, an availability of RCS was depressed by a discharge of a thyatron which used in a power supply system of the extraction kicker magnet. We investigated the operational statistics of the thyatron in order to improve availability, and found a better treatment which fits a characteristic of an individual thyatron. As a result, the discharge rate was improved dramatically. After the improvement, a radiation leak accident was occurred in the Hadron Experimental hall. From this accident, we considered that it was necessary to monitor not only the status of the RCS components but the beam condition in order to improve the availability of the J-PARC facility. Therefore we developed new interlock system to prevent an extraction of unexpected beam which might affect the component of the downstream facilities. Due to these improvements, the availability of RCS is more than 90 % every year.

Primary author: Dr YAMAMOTO, Kazami (Japan Atomic Energy Agency / J-PARC Center)

Presenter: Dr YAMAMOTO, Kazami (Japan Atomic Energy Agency / J-PARC Center)

Session Classification: 15- Strategy for Continuous Reliable Operations

Track Classification: Strategies for Continuous Reliable Operations