



Contribution ID: 530

Type: **Poster presentation**

## A Control System of New Magnet Power Converter for J-PARC Main Ring upgrade

*Tuesday, 12 June 2018 15:55 (15 minutes)*

Japan Proton Accelerator Research Complex (J-PARC) aims at achieving a MW- class proton accelerator facility. One of the promising solutions for increasing the beam power in Main Ring (MR) is to shorten the repetition period from current rating of 2.48 second to 1.3 second in the future. We have a plan to replace and develop the power converters of main magnets for this upgrade. According to develop the new power converter, we develop the new control system. This control system consists combination of units for each functions, which are Programmable Logic Controller (PLC), a main control board for the feedback system, a reference signal generator and gate pulse generators. Considering a reproducibility in the mass-production and the facilitation of improving the control algorithm, the digital control system is adopted. We will report the design of this control system and some test result with a small power converter.

### Minioral

No

### Description

Control

### Speaker

Tetsushi Shimogawa

### Institute

JPARC

### Country

Japan

**Primary authors:** SHIMOGAWA, Tetsushi (High Energy Accelerator Research Organization); KURIMOTO, Yoshinori (High Energy Accelerator Research Organization); MORITA, Yuichi (High Energy Accelerator Research Organization); MIURA, Kazuki (High Energy Accelerator Research Organization); Dr NAITO, Daichi (High Energy Accelerator Research Organization)

**Presenter:** SHIMOGAWA, Tetsushi (High Energy Accelerator Research Organization)

**Session Classification:** Poster 1

**Track Classification:** Control, Monitoring, Test and Real Time Diagnostics Systems