

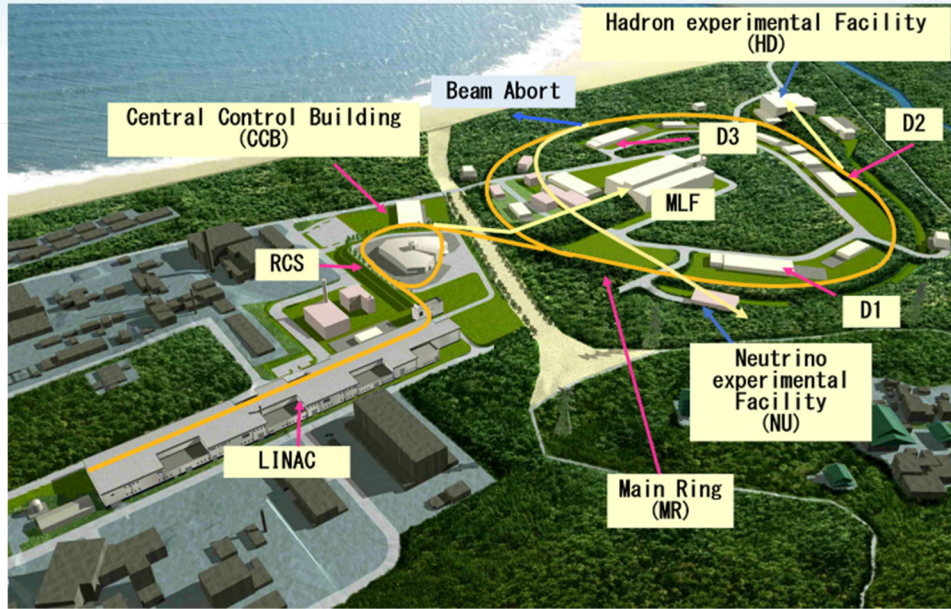


Operation Status of J-PARC MR Machine Protection System and Future Plan

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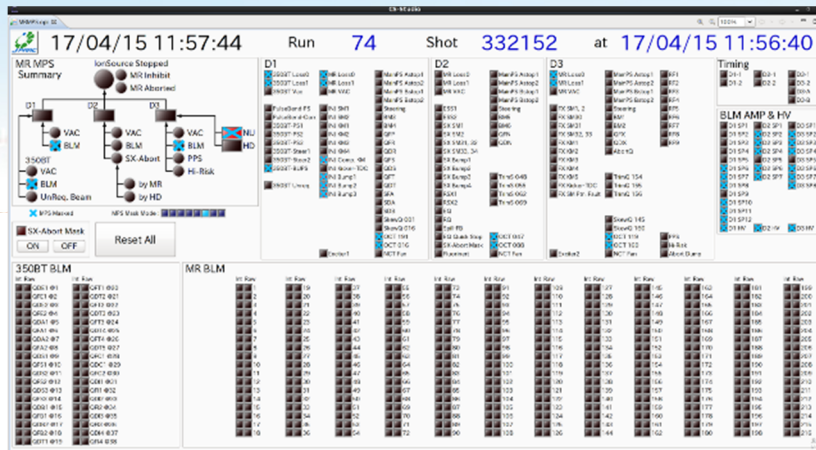
TUMPA04

J-PARC MR Overview



- The Main Ring synchrotron (MR) is located the furthest downstream in the J-PARC accelerator cascade
- The MR has two beam extraction systems
 - a fast extraction (FX) for beam delivery to the neutrino experimental facility (NU)
 - a slow extraction (SX) for beam delivery to the hadron experimental facility (HD)

What's MR-MPS



- The MR-MPS performs beam operation stop and beam abort processing when accelerator components alert or experimental facility components alert occur
- The MR-MPS monitors more than 100 components and more than 200 beam loss monitor signal(BLMs)
- MPS signal is processed at high speed by using FPGA

Future Plan

- The MR-MPS has contributed to the improvement of safety including stable operation of the accelerator and the experiment facilities
- The present MR-MPS needs to be reviewed from the aspects such as increase of monitored component, addition of power distribution building, flexible beam abort processing, service life etc...
- In the poster, we show the performance of MR-MPS and show future consideration of upgrade.

