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Updating and operating the Machine Protection System at J-PARC MR

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The Machine Protection System is a group of devices used to ensure the safety of the accelerator and experimental facility by automatically stopping beam operation and aborting the beam in the event of equipment failure. The Machine Protection System in the J-PARC Main Ring (MR) is called MR-MPS and has been in operation since 2008, when the MR started operation. Development of a new MR-MPS to replace the ageing MR-MPS started around 2020 and was completed in April 2022. New MR-MPS introduced to protect those equipment when the main magnet power supply is renewed and new RF power supply is introduced from autumn 2022. The good results obtained in its operation have led to the completion of mass production of the new MR-MPS, which is now progressively being replaced by the new MR-MPS. This presentation will report on the configuration of the MR-MPS, its EPICS-based operation and the timeline for its complete replacement to be completed in the future

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Footnotes

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