

Reproducing beams for therapy and research with replaced power supplies of Main Dipole Magnet in HIMAC synchrotron and HEBT systems

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At HIMAC (Heavy Ion Medical Accelerator in Chiba), major replacement of power supplies for bending magnets were carried out in the summer, 2014.

For the upper ring, a new power supply with IGBT was introduced while existing power supply with thyristor is retained and can be utilized by manual switching.

For the beam transport lines after extraction from rings, all power supplies for bending (switching) magnets are replaced by new ones.

To meet therapy needs it had been scheduled that supply of beam be resumed after about 1 week of retuning or adjustment period that follows the summer shutdown.

We were able to resume beam as scheduled.

Here we will report our key feature as well as lessons learned during the replacement retuning processes.

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