

Performance of Neutron Beam System for Accelerator-Based BNCT

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Neutron Beam System (NBS) based on electrostatic proton accelerator designed for accelerator-based Boron-Neutron Capture Therapy (BNCT) has been installed in Xiamen Humanity Hospital, China. The NBS is used for patient treatments since October 2023, after more than a year of preliminary studies. By the end of 2024, more than 50 treatments were served. NBS uptime during 2024 was above 96%. Repeatability of the beam parameters were well within 2%. In present configuration with only one treatment room operational, the overall machine usage including clinical use, physics and dosimetry measurements, and biological experiments, reached 27% of its capacity. The presentation also discusses other aspects of the achieved performance.

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