Simulations and measurements of the neutron equivalent doses for the proton therapy facility at the National Cancer Center

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A proton therapy facility, which uses the proton beam of 70-230 MeV, has been constructed at the National Cancer Center in Korea. The facility is now in the final phase of therapeutic beam validations to start the patient treatments this year. With the first use of the beams on Nov. 2005 the radiation levels around the facility have been measured. The neutron equivalent doses near the doors of the treatment rooms and the cyclotron area, where the radiation leakages are determined by the maze, are measured to be around 1microSv/hr at the nominal proton dose rate. We will present some results of the measurements and Monte Carlo simulations.