

Progress Report on the Construction of the Proton Therapy Equipment for MGH, M. ABS, J. BAILEY, W. BEECKMAN, J.-L. DELVAUX, Y. JONGEN, M. LADEUZE, S. LAYCOCK, A. VAN MEERBEECK D. VANDEPLASSCHE, , S. ZAREMBA, Ion Beam Applications (IBA), Louvain-la-Neuve, Belgium; M. SANO, T. SATOH, T. TACHIKAWA, Sumitomo Heavy Industries (SHI), Niihama-City, Japan - IBA and SHI have jointly developed a 235 MeV proton isochronous cyclotron as part of a proton therapy system specifically designed for in-hospital operation. Besides the cyclotron, the system includes an energy selection system, isocentric gantries with nozzles, horizontal beam lines, high precision robotic patient positioning systems, a global control system, a global safety management system. Two such systems are almost completely installed, one at the Massachusetts General Hospital (MGH) in Boston, MA, USA, the other at the National Cancer Center (NCC), Kashiwa, Chiba prefecture, Japan. Three more systems have been recently ordered to IBA for installation in USA, and are currently under construction. This paper will present a status report on the equipment construction and installation at MGH. Some interesting technical and beam dynamics problems were encountered and solved during the commissioning, and are explained in the paper.