Abstract Submitted for the DPP12 Meeting of The American Physical Society

Estimation of NBI Beam Pressure Including Orbit Effect RYOSUKE SEKI, KIYOMASA WATANABE, YASUHIRO SUZUKI, National Institute for Fusion Science, YOSHIMITSU ASAHI, Graduate University for Advanced Studies, YUTAKA MATSUMOTO, Hokkaido University, KIYOTAKA HAMA-MATSU, Japan Atomic Energy Agency — With a NBI heating, a volume averaged beta has been reached 5% in the low field. In the high beta plasma of the LHD, it has been pointed out that the beam pressure and/or the pressure anisotropy significantly would affect the properties of MHD equilibrium and stability. Therefore, it is one of the important issues to identify the beam-pressure in the total plasma pressure. In this study, the beam-pressures due to the NBs are calculated by the Monte Carlo method, and the pressure anisotropy and the 3-dimensional profile of the beam pressures are studied. In the LHD high-beta plasma, there is a lot of reentering fast ions which re-enter in the region of the closed flux surfaces after they have once passed out of the Last Closed Flux Surface (LCFS). They are regarded as the lost particles in the conventional analyses using the magnetic coordinates. To include the re-entering fast ions, the Monte-Carlo code, MORH, on the basis of the orbit following in the real coordinates are used.

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Date submitted: 12 Jul 2012

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