## Abstract Submitted for the DPP05 Meeting of The American Physical Society

Pellet injection on TPE-RX, reversed-field pinch device HARUHISA KOGUCHI, National Institute of AIST, DAVID TERRANOVA, PAOLO INNOCENTE, RITA LORENZINI, Consorzio RFX, HAJIME SAKAKITA, National Institute of AIST, TOMOHIKO ASAI, Nihon University, YASUYUKI YAGI, YOICHI HIRANO, KIYOYUKI YAMBE, National Institute of AIST — We have been operating a pellet injector to control the plasma density profile and to expand the operation region of TPE-RX (reversed field pinch device, minor radius, a=0.45 m, and major radius R=1.72 m). Density in the standard discharge of TPE-RX is restricted by recycling from the first wall. The first wall of TPE-RX is made by SUS and the limiter of TPE-RX is made by Molybdenum. The density operation region is relatively lower than other RFP devices that use graphite tiles. Gas puff experiment and magnetized plasma flow injection experiment also have been carried out in TPE-RX, and resulted in an extension of the density operation region. However, magnetic fluctuations increase due to these methods. Pellet injection also expands the density operation region, and a significant density increase is obtained both in standard and Pulsed Poloidal Current Drive discharges. The density increase in Pulsed Poloidal Current Drive is maintained for a long period, and this result predicts the good particle confinement.

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