

Abstract Submitted
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Present status of the GAMMA 10 and future plan in University of Tsukuba TSUYOSHI IMAI, MAKOTO ICHIMURA, YOUSUKE NAKASHIMA, MASAYUKI YOSHIKAWA, ISAO KATANUMA, TSUYOSHI KARIYA, HITOSHI HOJO, RYUTARO MINAMI, YOSHIAKI MIYATA, YUUSUKE YAMAGUCHI, HIROYUKI SHIDARA, Plasma Research Center, University of Tsukuba, GAMMA 10 TEAM — The studies of the formation of ion confining potential, the central electron heating, the suppression of drift type fluctuations by the ECH and various collaborative works have been carried out in the GAMMA 10 tandem mirror device. With high power plug ECH up to ~ 500 kW, the ion confining potential of more than 2 kV was achieved. The drift type low frequency fluctuations were suppressed by the potential produced with plug ECH. The best central EC heating was observed with 100% X-mode excitation. The development of a gyrotron, the key tool of these ECH experiments, has been made in collaboration with NIFS (National Institute for Fusion Science), JAEA (Japan Atomic Energy Agency) and TETD (Toshiba). The plan of the new mirror program with modification of GAMMA 10 is in progress. The new program includes the physics studies of the divertor plasma and SOL plasma relevant to torus plasmas like ITER. The high heat flux experiments using the open end mirror throat and the edge physics with introduction of the divertor coil are in consideration.

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