

Abstract Submitted
for the DPP06 Meeting of
The American Physical Society

RWM Analyses of JT-60SA and JT-60U Tokamak Plasmas GEN-ICHI KURITA, JAEA, JAMES BIALEK, Columbia University, TAKAAKI FUJITA, HIROSHI TAMAI, MAKOTO MATSUKAWA, GO MATSUNAGA, MANABU TAKECHI, TAKASHI TUDA, TAKAHISA OZEKI, JAEA, GERALD A. NAVRATIL, Columbia University, SHINICHI ISHIDA, JAEA, COLUMBIA UNIVERSITY COLLABORATION — JT-60SA is a tokamak device, being now designed at JAEA with collaboration of EU. One of the main purposes of JT-60SA is to realize the steady state plasma with high normalized beta values, 3.5~5.5. Our previous analyses have shown that the critical normalized beta value was 3.8 with the effect of the stabilizing structure with finite resistivity and the active feedback control. The critical beta value is low compared to the critical normalized beta of 5.5 in the case using ideal stabilizing structure, which results in very low C/β value of 0.37 and poor efficiency of feedback control. To overcome the poor efficiency of feedback control, we consider the new configuration of stabilizing structure and feedback control coil. The analyses are being carried out for new equilibrium including transport analyses of JT-60SA plasma. These critical beta analyses are carried out by VALEN code developed in Columbia University. We also present the results of analyses of experimental data of current driven and pressure driven RWM in JT-60U plasma. These analyses are carried out by AEOLUS-FT code developed in JAEA.

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Date submitted: 22 Jul 2006

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