Toroidal Rotation and ICRF Heating in NBI-Driven Discharges in JET *

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The addition of rf heating to an NBI-driven target discharge with toroidal rotation generally is observed to reduce the magnitude of the rotation ω_ϕ. Experiments on this effect have been performed on JET using (H)-D and (^{3}He)-D minority ICRH scenarios to vary the bulk electron to ion heating ratio. This variation was achieved to some extent, however, to lowest order, there is no clear difference in the rotation damping effect. We show examples of similar reduction of ω_ϕ with the two scenarios. In order to parameterize this effect, we test the recent model of Nishijima et al. [1]. This model is based upon the degradation of confinement with total auxiliary power, independent of the details of the heating, and was developed for a similar effect seen in ASDEX-U. We find that these JET data are also in reasonable agreement with this model, although it can be seen that some account should be taken of the "intrinsic" rotation level, that which is not driven by NBI toroidal torque.

[1] Nishijima, D., et al., Plasma Phys. Control. Fusion **47**, 89 (2005).

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