

Toroidal rotation in neutral beam heated discharges in DIII-D

J.S. deGrassie, D.R. Baker, K.H. Burrell, P. Gohil, C.M. Greenfield, R.J. Groebner,
and D.M. Thomas

General Atomics, P.O. Box 85608, San Diego, California 92186-5608 USA.

Abstract. It is known that the toroidal angular momentum and the ion thermal energy are correlated in tokamak discharges heated by neutral beam injection. Here, data from ten years of measurements on DIII-D are considered, for representative discharges from all types and all conditions. The ratio of simple replacement times for momentum and energy is found to order this correlation indicating that these times are approximately equal, across the minor radius. Representative discharges of several types are discussed in more detail, as well as transport analysis results for the momentum and thermal ion diffusivities.