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Sorting Category: 5.6.2 (Experimental)

A Particle Transport Model for DIII-D Density Profiles¹ D.R. BAKER, C.M. GREENFIELD, T.C. LUCE, C.C. PETTY, G.M. STAEBLER, General Atomics — An expression for the radial particle flux in a tokamak has been developed which includes the radial flows which are due to the turbulence induced stresses as well as the radial flows due to the fluctuating ExB drifts. The particle fluxes related to the stresses have pinch terms which in the simplest approximation are related to the gradients of the q profile. This expression for the particle flux will be used to model the measured DIII-D density profiles both for L-mode and H-mode plasmas. This modeling gives information about the relative magnitude of the stress related flux versus the ExB related flux.

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