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Radial Movement of Pellet Ablation Material in Tokamaks Due to the Grad-B Effect[1] P.B. PARKS, General Atomics, W. SESSIONS, C.A. VENTRICE, Tennessee Technological University, L.R. BAYLOR, Oak Ridge National Laboratory — The mass source from a pellet represents a significant disturbance to the plasma. Initially the ablated substance is a highly localized, high-beta (> 1) plasmoid, which will polarize and drift towards the low field side of the tokamak. Propagation of shear Alfvén waves brakes the outward motion,[2] much like its role as a restoring force in the ballooning mode. The grad-B drift drive will weaken because of pressure relaxation as the ablated substance spreads out along the field lines. The ablation blob will stop before it becomes assimilated into the plasma. An analytic model was developed to predict the stopping distance, *i.e.*, the outward large-R shift for radial, vertical, and inside launch locations. Comparison of the model with experiments on TFTR, JET, DIII–D, and a 3D MHD simulation[3] will be presented.

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[2]P.B. Parks, Nucl. Fusion **32**, 2137 (1992).
[3]H. Strauss, Int. Sherwood Fusion Theory Conf. 1998.

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P.B. Parks
parks@gav.gat.com
General Atomics

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