

Abstract Submitted  
for the DPP01 Meeting of  
The American Physical Society

Sorting Category: 5.6.3 (Experimental/Observational)

**Accurate Measurements of the Pitch-Angle Scattering of Beam Ions**<sup>1</sup> W.W. HEIDBRINK, University of California, Irvine, — The pitch-angle scattering rate of a dilute population of 75-keV deuterium ions is measured in a well-diagnosed, relatively quiet, magnetically-confined deuterium plasma. Neutral particle diagnostics detect the fast-ion density in velocity space following a short 10-ms pulse of injected beam ions. The data are compared to the classical theory of diffusion in velocity space caused by many, small-angle, Coulomb-scattering events. Within uncertainties of  $\lesssim 15\%$ , the data confirm the classical theory.

<sup>1</sup>This work was funded by General Atomics subcontract SC-G903402 under US DOE contract DE-AC03-99ER54463.

Prefer Oral Session  
 Prefer Poster Session

W.W. Heidbrink  
heidbrink@fusion.gat.com  
University of California, Irvine

Special instructions: Poster 36, Transport, Boundary Plasma

Date submitted: July 20, 2001

Electronic form version 1.4