

Abstract Submitted  
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Sorting Category: 5.1.1.2 (Experimental)

**High Harmonic Ion Cyclotron Heating in DIII-D: II.  
Sawtooth Stabilization<sup>1</sup>**

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tory, J.S. DEGRASSIE, C.C. PETTY, R.I. PINSKER, General Atom-  
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bined neutral beam injection and fast wave heating at the fourth cy-  
clotron harmonic can produce an energetic, perpendicular deuterium  
beam-ion population inside the  $q = 1$  surface. The beam-ion tail tran-  
siently stabilizes the sawtooth instability but destabilizes toroidicity-  
induced Alfvén eigenmodes (TAE). Saturation of the central heating  
correlates with the onset of the TAE. Continued expansion of the  $q = 1$   
radius eventually precipitates a sawtooth crash; complete magnetic  
reconnection is observed. In recent experiments, the effect of plasma  
shaping, harmonic number, and beam species on these findings are  
investigated.

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Prefer Oral Session  
Prefer Poster Session

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Special instructions: DIII-D Poster Session 2, immediately following RI Pinsker
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