

## **First Experimental Observations of Beam Ion Losses due to Energetic Particle Geodesic Acoustic Modes**

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**Abstract.** We report the first experimental observations of fast ion loss in a tokamak due to energetic particle driven geodesic acoustic modes (EGAMs). A new fast ion loss detector (FILD) installed on the DIII-D tokamak observes bursts of beam ion losses coherent with the EGAM frequency. The EGAM activity results in significant loss of beam ions, comparable to the first orbit losses. The pitch-angles and energies of the measured fast ion losses agree with predictions from a full orbit simulation code SPIRAL, which includes scattering and slowing-down.