

## Measurements and modeling of neutral beam ion loss during TAE avalanches in NSTX

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TAE avalanches in NSTX occur when several different n number TAEs are simultaneously destabilized. During these bursts, neutral beam ions are redistributed or lost, with drops in the neutron rate as large as 30 percent. A scintillator type fast ion loss diagnostic on NSTX measures a variety of lost ion pitch angle distributions during these bursts. These can range from no loss at all, to loss only of beam ions with predominantly perpendicular velocity, to loss of only those with predominantly parallel velocity to loss over the full pitch angle range of acceptance of the diagnostic. Here, we apply orbit computations that include the TAE mode structures and measured internal mode amplitudes to try to determine the parameters of the avalanche that result in these differing loss features.