Abstract Submitted
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Neutral Particle Analyzer Vertically Scanning Measurements of MHD-induced Fast Ion Redistribution or Loss in NSTX[1] S.S. MEDLEY, R. ANDRE, R.E. BELL, D. DARROW, Princeton University, C.W. DOMIER, UC Davis, E. FREDRICKSON, N. GORELENKOV, S. KAYE, B. LEBLANC, K.C. LEE, Princeton University, F. LEVINTON, Nova Photonics, N.C. LUHMANN, JR., UC Davis, D. LIU, UC Irvine, J. MENARD, H. PARK, D. STUTMAN, L. ROQUE-MORE, Princeton University, K. TRITZ, Johns Hopkins University, H. YUH, Nova Photonics — Observations of MHD-induced redistribution or loss of energetic ions measured using the vertically scanning capability of the Neutral Particle Analyzer diagnostic on the National Spherical Torus Experiment (NSTX) are presented along with TRANSP analysis. Although redistribution or loss of energetic ions due to low-f $\sim$ 10 kHz continuous kink-type MHD was reported previously [1,2], here the primary goal is to study redistribution or loss due to continuous Alfvénic (f $\sim$ 20 – 150 kHz) modes. Initial indications are that the former drive energetic ion loss whereas the continuous Alfvénic modes at most only cause redistribution and the energetic ions remain confined.

[1] S. S. Medley, *et al.*, Nucl. Fusion **44**, (2004) 1158
[2] J. E. Menard, *et al.*, Phys. Rev. Lett. **97**, (2006) 095022

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S.S. Medley
Princeton U

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