

Abstract Submitted
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Low frequency multiple harmonic oscillations in NSTX¹ KING-LAP WONG, PPPL, Princeton University, NSTX RESEARCH TEAM — Low frequency (100kHz) MHD activities are very common in NSTX. They can appear in many plasma conditions with neutral beam and/or high harmonic fast wave heating. Their presence is usually associated with a rotating magnetic island identified by a flat region in the toroidal plasma rotation profile, and their frequencies equal to the multiple harmonics of the island toroidal rotation frequency. They can produce stochastic magnetic field and enhance plasma transport. The island location may vary from the plasma core to the plasma edge. These oscillations are usually detected by Mirnov coils. Oscillations at the same frequencies can also appear in the high-k scattering signal if the scattering volume is at the right location. Data from various plasmas will be presented, and their effects on plasma transport will be discussed.

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