

Abstract Submitted
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Expanded Ion Energy Distribution Measurements on MST RFP Plasmas¹ JERRY CLARK, J.B. TITUS, E.D. MEZONLIN, Florida AM University, J.K. ANDERSON, A.F. ALMAGRI, University of Wisconsin - Madison — The Compact Neutral Particle Analyzer (CNPA) is a low energy (0.34 – 5.2 keV), high energy resolution (25 channels) neutral particle analyzer for ion energy distribution and temperature measurements on the Madison Symmetric Torus (MST). In MST plasmas during neutral beam injection, deuterium ions are known to have energies out to 40 keV. A retarding potential was built, installed, and calibrated to allow CNPA measurements to explore this region with high energy resolution, expanding ion energy distribution measurements, allowing us to better understand the dynamics of the bulk and fast ion populations during global magnetic reconnection events.

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