

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Recent Ion Energy Distribution Observations on MST RFP Plasmas¹ JERRY CLARK, J.B. TITUS, E.D. MEZONLIN, CePaST Florida A&M University, J.A JOHNSON III, Pyramid Plasmas, LLC, A.F. ALMAGRI, J.A. ANDESON, University of Wisconsin - Madison — Ion energy distribution and temperature measurements have been made on the Madison Symmetric Torus (MST) using the Florida A&M University compact neutral particle analyzer (CNPA). The CNPA is a low energy (0.34-5.2 keV), high energy resolution (25 channels) neutral particle analyzer, with a radial view on MST. Recently, a retarding potential system was built to allow CNPA measurements to ensemble a complete ion energy distribution with high-energy resolution, providing insight into the dynamics of the bulk and fast ion populations. Recent work has also been done to improve the analysis techniques used to infer the ion temperature measurements, allowing us to understand temperature dynamics better during global magnetic reconnection events.

¹Work supported in part by grants to FAMU and to UW from NSF and from Fusion Energy Sciences at DOE

Jerry Clark
CePaST Florida A&M University

Date submitted: 24 Jul 2015

Electronic form version 1.4