

Abstract Submitted  
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**The Spheromak Turbulence Experiment: The Next Phase in Spheromak Physics**<sup>1</sup> EPHREM MEZONLIN, Florida A&M University, KYRON WILLIAMS, C.A. WEATHERFORD, J.A. JOHNSON III<sup>2</sup>, FAMU, A.B. ALEXANDER, FAMU/CEPAST, EARL SCIME, A. KEESEE, G. LUSK, E. REYNOLDS, R. VANDERVORT, WVU, N.I. ARNOLD, K. GILMORE, E. THOMAS JR., Auburn University, SIMON WOODRUFF, Woodruff Scientific, Inc. — The spheromak turbulence experiment (STPX) is a collaboration between FAMU, WVU, Auburn University, and Woodruff Scientific, Inc. The fundamental purpose of STPX is to advance Spheromak physics toward producing a burning plasma and new insights on astrophysical systems with magnetic reconnection. FAMU will employ microwave pulses to manipulate the stable state. In addition, closely coupled NIMROD modeling and experimentation will take place using the FAMU computational cluster. Auburn University is providing a pair of movable probe arrays consisting of a triple probe and a series of four saturation current/floating potential probes for making instantaneous measurements of plasma parameters. West Virginia University is providing an array of (N), X-MHz, B-dot coils for making measurements of magnetic fluctuations. West Virginia University is also providing an array of 25, 2 MHz bandwidth, B-dot coils and differential amplifiers for making high time-resolution measurements of magnetic fluctuations at the edge of the plasma. Woodruff Scientific designed and constructed the STPX vessel.

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<sup>2</sup>Retired

Ephrem Mezonlin  
Florida A&M University

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