

Woodruff Scientific Inc. Testimonial

Woodruff Scientific Inc. constructed the Florida A&M University (FAMU)/Center for Plasma Science and Technology (CePaST) STPX (Spheromak Turbulent Plasma Experiment) under a subcontract funded by the U.S. Department of Energy.



Fig. 1: FAMU Spheromak (STPX). L to R: Baysha Bernales (Physics undergrad) and Brandon Alexander (lead technician).

The STPX is a plasma research device designed to study plasma dynamics of relevance to nuclear fusion devices. The STPX stands 3 meters high and is 1.5 meters wide at the vacuum vessel. The STPX achieves plasma temperatures of 300 electron volts (3.5 million degrees Kelvin) and electron currents of 600 kiloamps. The STPX does not achieve plasma confinement by external magnetic fields, but rather by a self-confining Taylor state which lasts for several microseconds. The STPX is also an ideal test-bed for studying certain astrophysical phenomena such as plasma jets. Disruptive plasma phenomena such as magnetic reconnections are also being studied on the STPX. The STPX achieved plasma during the first attempt and CePaST is very pleased with the work performed by Woodruff Scientific Inc.

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Director of the Florida A&M University
Center for Plasma Science and Technology

