## Abstract Submitted for the DPP15 Meeting of The American Physical Society

The STPX Spheromak System: A Topological Study ROSELYN WILLIAMS, RONALD WILLIAMS, Florida A&M University — We present results of studies that have recently started to further understand the topology of the STPX Spheromak system that is installed at the Florida A&M University. We investigate the use of algebraic topology to understand the properties of the magnetic helicity and to describe and analyze the magnetic field topology. We investigate the application of braid theory and knot theory. Furthermore we investigate the possibility of applying homotopy theory as a way to model and describe magnetic helicity as an algebraic system.

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