

Abstract Submitted  
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**Outline for a Spheromak Proof of Principle Experiment**<sup>1</sup> SIMON WOODRUFF, ANGUS MACNAB, Woodruff Scientific, LLC — A possible means for reducing reactor core complexity and size (and hence cost) could lie with research into the Spheromak concept: a plasma ring with no coils linking the plasma. Much progress has been made in the last 20 years, and now tokamak-like confinement is being reported, with work focusing on understanding beta-limits, transport and novel means of generating magnetic fields both in sustained and pulsed scenarios. Spheromak research is maturing, with many experiments integrated into a national program to resolve well defined critical physics issues. This poster summarizes the work from the last 20 years both as a historical overview and an outline of the present status. A natural consequence is to suggest the possibility of a Next-Step Spheromak, or advanced Proof of Principle device that will build on recent success and address many of the remaining critical issues in preparation for a Spheromak BPX.

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