

Abstract Submitted
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Wall Conditioning Enhancements to the HIT-SI Spheromak W.T. HAMP, T.R. JARBOE, B.A. NELSON, R.G. O'NEILL, A.J. REDD, P.E. SIECK, R.J. SMITH, G.L. SUTPHIN, J.S. WROBEL, University of Washington — HIT-SI was initially operated in a prototype laboratory to calibrate its magnetic probes, and develop its baseline operating parameters. The prototyping laboratory had a minimal vacuum system and no wall conditioning. As the experiment was transitioned to the main laboratory the HIT-SI team developed several wall conditioning techniques to help provide the best possible environment for spheromak formation and sustainment . These systems include pulse discharge cleaning (PDC), glow discharge cleaning (GDC), and a convection baking system to heat the vessel up to 200°C. The motivation for these systems and an analysis of their effectiveness are presented.

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