Abstract Submitted
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Progress on the Development of Langmuir Probes on the Helicon Plasma Experiment (HPX)*[1] T. ROBLEDO-THOMPSON, P. AZZARI, T. EMAMI, J. FRANK, A. GREEN, J. HOPSON, R. W. JAMES, J. KARAMA, R. N. PAOLINO, E. SANDRI, M. WICKE, E. WRIGHT, M. YEPEZ, J. TURK, United States Coast Guard Academy, New London, CT 06320 — CGAPL houses four major plasma experiments that span large temperature, density, energy and functionality regimes. Often automation and remote operation of intelligent devices are required in adverse operating environments for digital and analog systems. Plasma data collected by a multitude of diagnostics and sensors (to include Langmuir probes) over long timescales mandates CGAPLs 40-channel Data Acquisition (DAQ) system that collects and stores data plus controls CGAPL. We have been exploring the use of fully protected Langmuir probe electronics system to track the change in the Ion Saturation current for plasma edge measurements of density and temperature. Probe installation automation, optimization, and data collection obstacles, solutions, and procedures will be reported.

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T. Robledo-Thompson
United States Coast Guard Academy, New London, CT 06320

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