

Abstract Submitted  
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**Development of a Low Frequency Magnetic Field Sensor Array for the C-2W Experiment** IAN ALLFREY, THOMAS ROCHE, JESUS ROMERO, DAVID MADURA, GREG SNITCHLER, AND THE TAE TEAM, TAE Technologies, Inc., TAE TECHNOLOGIES, INC. TEAM — In TAE Technologies’ current experimental device, C-2W (also called “Norman”) [1], record breaking, advanced beam-driven field reversed configuration (FRC) plasmas are produced and sustained in steady state utilizing variable energy neutral beams, expander divertors, end bias electrodes, and an active plasma control system. Fast magnetic fields in C-2W are thoroughly diagnosed using B-dot probes and Rogowski coils. However, these sensors have limited low-frequency response and may introduce long-timescale errors in integrators and ancillary electronics. It is beneficial to have an independent and absolute validation of these fields, which are quasi-DC on the plasma timescales. As such, an array of high-precision Hall sensor-based low frequency probes, has been developed. Details of the diagnostic, as well as preliminary data will be presented. [1] H. Gota et al., Nucl. Fusion 59, 112009 (2019)

Ian Allfrey  
No Company Provided

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