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Magnetic Sense Coil Array for the FAMU Spheromak ROBERT VANDERVORT, AMY KEESEE, GREG LUSK, ERIC REYNOLDS, EARL SCIME, West Virginia University — First plasmas in the Florida A&M Spheromak are expected in 2012. Here we describe the design, construction, and calibration of a magnetic sense coil array that will provide measurements of the edge poloidal and toroidal magnetic field fluctuations in the spheromak. The electrostatically shielded coils are mounted flush with the inner edge of the vacuum chamber. Custom differential amplifiers, based on designs by the MST group at the University of Wisconsin-Madison, enable fluctuation measurements up to frequencies of 2 MHz.

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