## Abstract Submitted for the DPP05 Meeting of The American Physical Society

Broadband Calibration of Radio-Frequency Magnetic Probes<sup>1</sup> S. MESSER, W.E. AMATUCCI, D.D. BLACKWELL, D.N. WALKER, Plasma Physics Division, Naval Research Laboratory — We present a calibration method for radio-frequency magnetic probes operating between 30 kHz and 100 MHz. We examine the limits of basic formulas for estimating probe sensitivity, discuss improved models, and examine the frequency-dependence of the magnetic field source. The resulting calibration procedure gives both the phase and amplitude of the probe's response. We confirm the validity of the calibration by comparing theoretical and experimental models of probe behavior and by examining deconvolution of probe data showing sharp features in the raw signals.

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