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Feedback Systems to Correct Magnetic Field Errors in MST[1] D.J. HOLLY, A.F. ALMAGRI, K.J. MCCOLLAM, J.S. SARFF, T.D. THARP, University of Wisconsin - Madison — The MST device has a thick conducting shell with insulated gaps in both the poloidal and toroidal directions where localized magnetic field errors can occur. A feedback system to correct the magnetic field error at the poloidal gap has been in operation in preliminary form for about a year. The poloidal system uses 38 external drive coils and 32 in-vacuum sense coils coupled by a system that allows independent control of spatial Fourier harmonics. Design of a similar system to correct field errors at the toroidal gap is underway. We present the design of the poloidal gap correction system and measurements of its performance, as well as measurements of the field errors at the toroidal gap and initial design of the toroidal gap correction system.

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