Validation of EFIT++ MHD Equilibrium Reconstructions on DIII-D[1] B. CORNILLE, U. Wisc., M.J. LANCTOT, L.L. LAO, GA, L.C. APPEL, UKAEA, O. MENEGHINI, ORISE, C.T. HOLCOMB, LLNL — MHD force balance calculations play a key role in the optimization of transport and stability in tokamaks. In high confinement tokamak plasmas, reconstructions of the MHD plasma equilibrium are needed to resolve key profile features including the edge pressure pedestal and resulting bootstrap current. The EFIT code [1] is the standard tool for calculating MHD force balance in DIII-D and many tokamaks. This code has recently been rebuilt to be machine-independent in order to facilitate cross-machine comparisons [2]. This update, EFIT++, is in its late stages of development and requires validation for widespread use. Benchmarking of EFIT++ against the established EFIT cases including motional Stark effect measurements from DIII-D will be presented.

[1] L.L. Lao, et al., Fusion Sci. Technol. **48**, 968 (2005).
[2] L.C. Appel, et al., "Equilibrium Reconstructions on Multiple Tokamaks," to be submitted to Nucl. Fusion (2013).

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