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EMP Measurements on the Omega Laser System at LLE ZAHEER ALI, National Security Technologies, VLADIMIR GLEBOV, WADE BITTLE, CHRISTIAN STOECKL, GREG PIEN, THOMAS HINTERMANN, MARK LABUZETA, TIM DUFFY, CRAIG SANGSTER, University of Rochester, ALAN THROOP, DAVE EDER, JOE KINBROUGH, CHARLIE BROWN, LLNL, JOEL RAIMBOURG, CEA, France — We present the result of Electromagnetic Pulse measurements on the 30kJ, 60-beam, OMEGA laser system at the University of Rochester Laboratory for Laser Energetics. The suite of EMP probes includes free field electric and magnetic field sensors located internal and external to the OMEGA target chamber (1.5-2.3 m from target chamber center range). Measurements were taken under typical shot conditions for OMEGA and include variations in drive intensity, target size and mass and with neutron yields varying from zero to 1E13. Correlations of the EMP measurements with shot conditions will be presented. Such correlations are expected to form part of the basis for predictive EMP models on the National Ignition Facility. This work was supported by the U.S. DOE Office of Inertial Confinement Fusion cooperative agreement DE-FC52-92SF19460, NNSA Nevada Operations, contract DE-AC52-06NA25946 and by the University of California, LLNL, contract W-7405-Eng-48.

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