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Status of the OMEGA EP Laser System D.D. MEYERHOFER, S.-W. BAHK, J. BROMAGE, C. DORRER, J.H. KELLY, B.E. KRUSCHWITZ, S.J. LOUCKS, R.L. MCCRORY, S.F.B. MORSE, J. QIAO, C. STOECKL, L.J. WAXER, Laboratory for Laser Energetics, U. of Rochester — The performance and experimental capabilities of the OMEGA EP Laser System continue to improve. The system, with four NIF-like beamlines, was completed in April 2008. The beams can be operated at 351 nm, with each ultimately producing 6.5 kJ in a 10-ns pulse into the OMEGA EP target chamber. Two of the beams can be operated as high-energy petawatt (HEPW) lasers, each ultimately producing up to 2.6 kJ in a 1053-nm, 10-ps pulse. The HEPW beams can be directed into the OMEGA EP target chamber or into the 60-beam OMEGA target chamber for experiments that combine target compression with HEPW capability. The current and projected status of the laser system performance, laser and target diagnostics, and experimental capabilities will be presented. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-08NA28302.

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