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Status Update on the BLUE Linear Transformer Driver (LTD) System at the University of Michigan[1] BRENDAN SPORER, NICHOLAS M. JORDAN, RYAN MCBRIDE, University of Michigan - Ann Arbor, PLASMA, PULSED POWER, AND MICROWAVE LAB COLLABORATION — BLUE is a 4-cavity linear transformer driver (LTD) system currently being constructed in the University of Michigans Plasma, Pulsed Power, and Microwave Lab. The four 10-brick cavities were previously part of the Ursa Minor experiment at Sandia National Laboratories. When fully assembled, the BLUE system should be capable of delivering 8 kJ to a proper load in an 800-kV, 100-ns pulse. Dual 100-kV, 12-kW Spellman power supplies allow a theoretical rep-rate of ¿1 Hz for high-power microwave experiments. The first prototype cavity has been assembled and single-cavity testing has begun. Of special interest is the selection of a proper charging impedance to permit rep-rated operation while maintaining brick-to-brick isolation during pre-fires. A polycarbonate lid allows operation of the first BLUE cavity as an impedance-matched Marx generator (IMG). The construction status of the BLUE system will be presented in addition to experiments relevant to the advancement of the LTD concept.

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