

Thor: a pulsed-power driver optimized for material-physics experiments

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Key Topics: Thor 48 was recently completed and we've conducted a number of experiments as we work to measure the machine's performance.

- Thor 48 was completed on April 11th 2017.
- Since then we've conducted experiments at capacitor charge voltages as high as 80 kV which achieved pressures as high as 250 kbar in an 8 mm wide panel.
- We plan to build out to Thor 72 in FY-18.
- We plan to conduct experiments on a number of materials, including gallium over the next year.

Relevance of Work: Thor is able to drive tailored pressure pulses in material samples at the 100-500 kbar level in a 100-500 ns window. This ability will enable relevant experiments, and the machine itself serves as a prototype test for future designs.

