

Abstract Submitted
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Design considerations for diffraction measurements in the TPa regime J.R. RYGG, J. EGGERT, R. SMITH, A. JENEI, D. FRATANDUONO, D. BRAUN, J. MCNANEY, G. COLLINS, T. ARSENLIS, LLNL — Diffraction measurements from a variety of materials compressed above 1 TPa has been demonstrated on the OMEGA and NIF facilities. Thin samples of the material are sandwiched between diamond slabs and ramp-compressed using shaped laser pulses. X-ray diffraction is recorded by flashing an short (1 ns) x-ray source at the time of peak compression, and pressure is determined through concomitant VISAR measurements. A selection of considerations regarding the experimental design and data analysis are herein presented.

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