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Abstract for an Invited Paper
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Time-Resolved X-Ray Probing of Dense and Heated Material

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I will describe experiments that measure the response of material to rapid laser heating. We employ time-resolved x-ray scattering techniques, and utilize both synchrotron-based and linear-accelerator-based short pulse x-ray sources to probe dense and heated materials. I will also describe the opportunities offered by the Linac Coherent Light Source x-ray free electron laser for future shock physics studies.