

Abstract Submitted
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Structure of Fe and Carbon near 10 Mbar FEDERICA COPPARI, JON EGGERT, RYAN RYGG, JIM HAWRELIAK, DAMIEN HICKS, LLNL, TOM BOEHLY, University of Rochester, GILBERT COLLINS, LLNL — Recent advances combining shockless dynamic compression, x-ray diffraction, and wave profiles now provides information on the structure, texture, and equation of state for solids at pressures up to 10 Mbar. We report new data on ramp compressed Fe to 7 Mbar and carbon starting from the diamond phase to 6 Mbar. Diffraction data are compared to simulated diffraction profiles to show consistency with specific high pressure crystal structures and give estimates for the density. The wave profiles are used to determine the pressure that the diffraction data are collected.

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