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EXAFS measurements of compressed Fe at earth core conditions¹ YUAN PING, LLNL, DAMIEN HICKS, BARUKH YAAKOBI, TOM BOEHLY, DAYNE FRATANDUONO, SEBASTIEN HAMEL, RYAN RYGG, JON EGGERT, RAY SMITH, RIP COLLINS — Properties of iron at earth core conditions are of primary interest in geophysics, geochemistry and seismology. These off-Hugoniot states can be created by dynamic multi-shock compression. We have performed EX-AFS (extended x-ray absorption fine structure) measurements on Fe up to 3.5Mbar using OMEGA laser. Results of single-shock and multi-shock compression will be presented. Comparison between data and QMD simulations will be discussed.

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