

Abstract Submitted
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Shock Compression of Iron Foils Relevant to Earth Core Conditions with Intense Laser K. SHIGEMORI, Y. HIRONAKA, T. KADONO, K. OTANI, A. SHIROSHITA, ILE, Osaka Univ., T. IRIFUNE, N. OZAKI, K. MIYANISHI, T. ENDO, T. KIMURA, R. KODAMA, Grad. School of Eng., Osaka Univ., T. SAKAIYA, T. KONDO, Grad. School of Sci., Osaka Univ., K. SHIMIZU, Center for Quantum Science and Technology under Extreme Conditions, Osaka Univ., J. WARK, University of Oxford — Shock compression experiments were performed on GEKKO-XII/HIPER laser facility at ILE, Osaka University. Iron foils were irradiated to generate the pressure of Earth core (~ 350 GPa). We measured shock parameters with optical diagnostics, such as velocity interferometer system for any reflector (VISAR) and spectrally streaked optical pyrometer. We also measured with x-ray diffraction technique for determination of shock compressed crystal structure. Simultaneous measurements of optical diagnostics and x-ray diffraction were done for MgO and diamond crystal foils as well as iron foils.

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