Abstract Submitted
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**Laser-shock compression of silicon**[1] NORIMASA OZAKI, KOHEI MIYANISHI, TSUNG-HAN YANG, RYOSUKE KODAMA, Graduate School of Engineering, Osaka Univ., YOUICHI SAKAWA, TAKAYOSHI SANO, ILE, Osaka Univ., KAZUO A. TANAKA, ELI-NP, MAKINA YABASHI, RIKEN/SPring8 — We performed laser-shock compression experiments on silicon. We directly observed the shock front traveling into the Si sample using a infrared velocity interferometer coupled to a visible system, and measured the Hugoniot equation-of-state up to 500 GPa. We found a significant disagreement in the Hugoniot between the present and previous data in the solid-liquid regime. We will also discuss the recent results on X-ray diffraction observation of shock-compressed Si in the solid-solid phase transformation regime.

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