

CREATING & DIAGNOSING SOLID DENSITY PLASMAS WITH AN X-RAY FEL

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4th generation light sources provide the capability to irradiate solids with X-rays at intensities in the range of optical lasers. At high focused intensities and sub-100 fs pulse lengths, solid targets transform to plasmas at several millions of degrees Kelvin. Detailed X-Ray spectroscopy allows us to probe the physics of these dense plasmas, and initial results have challenged our understanding of such basic details as how many bound states exist, and the rate at which collisions occur. It appears that current understanding of dense plasmas is woefully inadequate.

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CFEL
SEMINAR ROOMS I-III

