

Abstract Submitted  
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**X-ray Thomson scattering on compressed Be plasmas**<sup>1</sup> HAE JA LEE, Physics Department, University of California, Berkeley, CA 94720-7300, PAUL NEUMAYER, OTTO LANDEN, Lawrence Livermore National Laboratory, 7000 East Avenue, Livermore, CA 94550, ROGER FALCONE, Physics Department, University of California, Berkeley, CA 94720-7300, SIEGFRIED GLENZER, Lawrence Livermore National Laboratory, 7000 East Avenue, Livermore, CA 94550 — X-ray Thomson scattering measurements have provided much insight into characterization of dense plasmas such as in determining electron temperature, density, and ionization state [1]. We performed spectrally resolved 6 keV x-ray scattering on laser shock compressed Be plasmas in both the non-collective and collective forward scattering regime at the Omega laser facility. From the forward scattering geometry, we have measured a plasmon peak whose frequency is sensitive to the electron density. We will present first data that indicate a density of  $n_e=8\times 10^{23}/\text{cc}$  can be reached for a pressure of 10-15 Mbar.

[1] S. H. Glenzer *et al.*, Phys. Rev. Lett. **98**, 065002 (2007); Phys. Rev. Lett. **90**, 175002 (2003). G. Gregori *et al.*, Phys. Plasmas **11**, 2754 (2004).

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