

Abstract Submitted  
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**Specular Reflection of Intense Laser Light Interacting with Solid Targets**<sup>1</sup> A. LINK, D. OFFERMANN, V. OVCHINNIKOV, D. SCHUMACHER, L. VAN WOERKOM, R. R. FREEMAN, The Ohio State University, H. CHEN, D. HEY, I. JOVANOVIĆ, S. LE PAPE, A. MACKINNON, A. MACPHEE, P. PATEL, Y. PING, Lawrence Livermore National Laboratory, C. CHEN, Massachusetts Institute of Technology, T. BARTEL, S. CHAWLA, J. KING, T. MA, F. BEG, University of California, San Diego, K. AKLI, R. STEPHENS, General Atomics, Y. TSUI, University of Alberta — The reflectivity of high intensity laser plasma interactions is a crucial parameter in understanding laser coupling efficiency and light guiding properties of reentrant cones in fast ignition experiments. Studies of the specular reflectivity have been conducted on the Titan laser system in the Jupiter Laser Facility at Lawrence Livermore National Laboratory with solid density metal targets. Results from absolutely calibrated scatter plates will be presented for intensities of  $10^{18}$  to  $10^{20}$   $\text{Wcm}^{-2}$ , pulse widths from .7 to 10 ps, *s* and *p* polarizations and a variety of target geometries. Specular reflectivity of *s* polarized light at  $10^{20}$   $\text{cm}^{-2}$  increases by 4000% as the incident angle is varied from  $28^\circ$  to  $75^\circ$ .

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