

Abstract Submitted  
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**Shock Ignition campaigns on OMEGA: comparison with experiments and future perspectives** M. LAFON, X RIBEYRE, G. SCHURTZ, Centre Lasers Intenses et Applications, University of Bordeaux, France, A. CASNER, CEA, DAM, DIF, Arpajon, France, O. KLIMO, Faculty of Nuclear Sciences and Physical Engineering, Prague, Czech Republic, W. THEOBALD, K.S. ANDERSON, R. BETTI, M. HOHENBERGER, D.D. MEYERHOFER, C. STOECKL, Fusion Science Center and Laboratory for Laser Energetics, Rochester, USA — Recently, Shock Ignition (SI) scheme has prompted both theoretical studies [1,2] and experimental campaigns [3]. SI experiments have been carried out at the OMEGA Laser Facility [4] in spherical geometry to study performances at intensities relevant to shock ignition. First restitutions from CHIC hydrodynamic calculations and PIC simulations allow a deeper understanding of critical parameters as implosion symmetry, shocks propagation, neutron production and light reflectivity. The analysis of results suggests several improvements of the pulse shape and target design for future experiments.

- [1] R. Betti et al., Phys. Rev. Lett. **98**, 155001 (2007)
- [2] M. Lafon et al., Phys. Plasmas **17**, 052704 (2010)
- [3] W. Theobald et al., Phys. Plasmas **15**, 056306 (2008)
- [4] W. Theobald, *Private communication* (2010)

Marion Lafon  
Centre Lasers Intenses et Applications, University of Bordeaux, France

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