

Abstract Submitted
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“Debussy” Orion campaign for assessing target shrapnel originating from laser experiments DIDIER RAFFESTIN, CEA/DAM/Cesta, JEAN-PAUL JADAUD, CEA/DAM/DIF, JIM ANDREW, MIKE RUBERY, AWE, LAURENT VIDEAU, PATRICK COMBIS, CEA/DAM/DIF, JEAN-MARC CHEVALIER, ALAIN GALTIE, JEAN-HUGUES QUESSADA, ALAIN GEILLE, CEA/DAM/Cesta, CEA/DAM TEAM, AWE TEAM — During plasma experiments on high energy laser facilities, debris and fragments originating from the target can result in significant damage to optics and/or equipment. In the scope of future experiments on the LMJ, it is thus necessary to develop an accurate predictive tool for assessing the speed, mass, state and direction of ejected material. In this context, a 28 shot campaign was performed in June 2014 on the Orion facility in collaboration with AWE. The first part was dedicated to the characterization of debris and shrapnel emitted from halfraum or cylinders using PDV laser velocimetry and passive collectors (aluminium and plastic sleeves, varagel and aerogel). The second part aimed at collecting basic data on fragmentation of samples (steel, Ta, Ti, Al, PMMA, SiO₂) irradiated by x-rays using PDV measurement. Some preliminary data and observations will be presented and compared to simulations (CEA Esther code).

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