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Analysis of laser-driven fragmentation experiments performed on Orion facility LAURENT VIDEAU, CEA,DAM,DIF, JIM ANDREW, AWE, JEAN-MARC CHEVALIER, CEA,DAM,CESTA, PATRICK COMBIS, CEA,DAM,DIF, ALAIN GALTIE, ALAIN GEILLE, CEA,DAM,CESTA, JEAN-PAUL JADAUD, CEA,DAM,DIF, JEAN-HUGUES QUESSADA, DIDIER RAFFESTIN, CEA,DAM,CESTA, MICHAEL RUBERY, AWE — We present laser-driven fragmentation experiments performed on the Orion laser facility at AWE. The experimental campaign was divided in two parts. The first one was dedicated in characterizing of the debris and shrapnels emission coming from gold and aluminum cylinders. The second one was devoted to spall experiments with x-ray irradiated samples such as steel, tantalum, aluminum or PMMA. We used passive collectors and PDV diagnostics to analyze the matter ejection in both configurations. We have developed a complete 2D numeric tool including laser-matter interaction, shock propagation and spallation which allows us to simulate experiments. A comparison with experimental results will be presented.

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