

Abstract Submitted
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Laser driven shock and shockless experiments in SG-II laser facility¹ HUA SHU, SIZU FU, XIUGUANG HUANG, Shanghai Institute of Laser Plasma — Laser driven shock wave can obtain ultra-high pressure($> 1\text{TPa}$) and it can be used to obtain high pressure Hugoniot data. But preheat is a crucial problem in laser-driven shock wave experiments which can infact on equation of state measurement results. The study of preheat in directly laser-driven condition is scare. In this paper we will present the experimental results of preheat in directly laser-driven condition. The free-surface expansion velocity(due to preheat) was measured using a double-channel line-imaging VISAR. The free-surface velocity of different heights Al sample was obtained. The maximum free-surface velocity is about 1.2 Km/s.

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