Abstract Submitted
for the SHOCK15 Meeting of
The American Physical Society

Molecular dynamics modeling of ejecta production on shocked Pb surface GUOWU REN, YONGTAO CHEN, TIEGANG TANG, Institute of Fluid Physics, CAEP, Mianyang, 621999 — Ejecta emitting from the shocked metal surface is of current focus to engineering application and experimental diagnostics. This work is mainly dedicated to ejecta production of Pb surface with multiple grooves subjected to a triangular wave profile loading using molecular dynamics simulation. The solid and melted states upon shock or release for metal Pb are included. The simulations provide the ejecta volume distribution, total amount of ejected particles and ejecta size distribution, being in qualitative agreement with the experimental data and photon radiography images. These results will greatly contribute to the further understanding of physical mechanism and analyzing the experimental findings of ejecta process.

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Date submitted: 29 Jan 2015 Electronic form version 1.4