Abstract Submitted
for the DPP13 Meeting of
The American Physical Society

Three dimensional hybrid simulations of the UCLA collisionless shock experiment[1] DAVID LARSON, LLNL, STEPHEN BRECHT, Bay Area Research Corporation — We present simulations of the UCLA laser-driven collisionless shock experiment. Past attempts at generating magnetized collisionless shocks in the laboratory have had limited success. A new effort is underway at UCLA utilizing the LAPD and a new kJ-class laser [1]. Recent simulation results using our three dimensional parallel hybrid plasma code will be presented and discussed, including the influence of debris charge state and debris cloud expansion geometry.

[1] C Niemann, *et al*, 2012 JINST **7** P03010

[1]This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344 and supported by DTRA10027-6759.

David Larson
LLNL

Date submitted: 09 Jul 2013 Electronic form version 1.4