Abstract Submitted
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on Shock Waves in Condensed Matter

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Suggested Session Title:
Hydrodynamics/Instabilities

March Sorting Category:

Richtmeyer-Meshkov Instabilities in Dense Fluids at High Shock Pressures * N. C. Holmes, P. E. Stry, C. S. Yoo, and E. F. See, Jr., Lawrence Livermore National Lab.—We report on novel experiments to characterize the hydrodynamic instabilities in dense fluids subject to intense shock loading at a perturbed interface. This leads to growth of the Richtmeyer-Meshkov instability, and subsequent mixing of fluids across a contact interface. In these systems, no interface between the interacting fluids is desirable, nor necessary. We use a two-stage light-gas gun to generate intense, steady, and planar multiple shocks. The growth rate of the instabilties in the non-linear growth regime is measured by imaging the motion of fluid tracers. Reports of recent experiments will be presented for a metal–water interface.

*Work performed under the auspices of the U.S. DOE by the LLNL under contract No. W–7405–ENG–48.

- [ ] Prefer Poster Session
- [x] Prefer Standard Session
- [ ] No Preference
- [ ] Special Facilities Requested

- [ ] Other Special Requests

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