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**Bubble cloud nucleation induced by the interaction between multiple laser-induced shocks and bubbles** PEDRO QUINTO-SU, Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México, KEITA ANDO, Department of Mechanical Engineering, Keio University — Multifocal laser-induced optical breakdown in water is used to nucleate microscopic bubble clouds. The liquid is ruptured via the interaction of multiple shocks and bubbles. We find that the liquid is fractured at localized regions defined by the planes bisecting each pair of foci on the array, where rarefaction waves (reflected from the laser bubbles) merge. For laser pulses focused at two spots we measure the probability for nucleation as a function of separation between the foci and the maximum tensions are calculated with Euler flow simulations.

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