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Very high ratio compression by liquid conical implosion JIANGUO CHEN, YIAN LEI, School of Physics, Peking University, Beijing, 100871, China — A conical implosion device is designed to achieve very high ratio compression, up to  $10^9$  or even higher. The compressing liquid has very low vapor pressure. A novel method is used to prepare the initial pure and thin gas. Some preliminary results proved the concept. The device can produce high energy density (HED) states in a near thermal equilibrium state, heat a gas continuously from very low (a few K) to very high temperature (~ 100,000 K), or do magnetized target fusion (MTF) with a proper external pulse current or magnetic field.

Jianguo Chen Peking Univ

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