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Conical imploding magnetized target fusion YIAN LEI, Peking Univ — Liquid conical implosion can achieve very high ratio compression of gas or plasma. By magnetizing the plasma at the end of the implosion with very high pulse current, the mechanic compression as well as the current (Z) or magnetic (theta) pinch would compress and heat the magnetized plasma to fusion temperature. The initial thin fusion fuel is prepared by expansion, as the driving liquid sinks from the top of the cone and leaves a large space ($\sim$ 1 m^3). The gas is preheated by microwave to about a few thousand Kelvin. As the implosion of the liquid goes on, the gas will be ionized. At the top of the cone, a current will produce a magnetic field matching plasma temperature to confine the energy. As the implosion is self-accelerating, the current will spike up near the end of the implosion, creating a magnetic pinch to further heat up the dense plasma.

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