

## Laser-induced shock compression for liquid hydrogen

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Equation of state for hydrogen under high pressure is a key to understand the interior structure of gas giant planets like Jupiter. Uncertainty in the hydrogen EOS makes it difficult to estimate the mass of a central core in Jupiter, which can be an important clue to determine the formation scenario of our solar system. To obtain a more accurate EOS model, we have started to investigate the primary Hugoniot of liquid hydrogen by using the GEKKO XII laser. We adopt alpha-quartz as a standard material. Shock velocities in quartz and a sample are measured by VISAR. In this paper, we show the current status of our experiment and future plan.