

Abstract Submitted  
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**Phase transition in liquid hydrogen at high pressure and temperature**<sup>1</sup> KATSUYA SHIMIZU, Osaka University, KENJI OHTA, Tokyo Institute of Technology, KOTA ICHIMARU, TAKAHIRO MATSUOKA, Osaka University, YASUO OHISHI, NAOHISA HIRAO, JASRI/SPring-8, KYOKUGEN TEAM, BL10XU TEAM — The heating rate measurements indicated the existence of a transition in the liquid phase of hydrogen. A gold thin foil was loaded into the sample chamber of DAC with liquid hydrogen and compressed up to 100 GPa. The gold foil was heated by IR laser and the temperature was measured by the radiation. The anomaly was found on the temperature curve as a function of the laser power which indicates a transition at the temperature. The absorptance change indicates the heat flow rate change from the gold foil to the diamond surface through the hydrogen. The condition of the pressure and temperature of the transition is good agreement with the previous theoretical and experimental reports.

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