Abstract Submitted
for the SHOCK11 Meeting of
The American Physical Society

Serpentine Hugoniot and wave profiles of DISAR CHUANMIN MENG, HONGLIANG HE, Laboratory of Shock Wave and Detonation Physics, Institute of Fluid Physics CAEP, TOSHIMORI SEKINE, Department of Earth & Planetary Systems Science, Hiroshima University — The previous Hugoniot measurements on serpentine have indicated two phase transitions at pressures of 40 GPa and 125 GPa. We investigated detailed wave profiles in order to see how the shock properties change with the phase transitions and to understand what phase appears after the transition. Our measured profiles of DISAR on natural antigorite have no two-wave structure, but single wave structures appear up to 130 GPa. However the onset slope of adiabatic release after the Hugoniot state changed with the Hugoniot pressure. This change will be discussed in terms of the phases present at the time of Hugoniot state.

Toshimori Sekine
Hiroshima University

Date submitted: 14 Feb 2011 Electronic form version 1.4