

Abstract Submitted  
for the SHOCK13 Meeting of  
The American Physical Society

**Imaging velocity interferometer system for any reflector based on Shen Guang-III prototype laser facility** WANG FENG, PENG XIAOSHI, ZHANG RUI, Research Center of Laser Fusion, CAEP, — The imaging velocity interferometer system for any reflector (VISAR) has been introduced in this report for shock-timing experiment in inertia confined fusion (ICF). Some important technique has been provided, including the probe laser with single mode and shaped capability, imaging technique with high resolution and calibration character. The new target design can be used widely after analyzing the interaction of laser and target. Then the blanking effect on the signal can be avoided. Without the quartz window effect, the new target concept with the reflected design can be provided to do the Deuterium-tritium (DT) material experiment. After using this concept, the fourth shock can be diagnosis easily in shock-timing experiment. Since the one dimension Fourier transform method (FTM) may occur the data loss, the new unwrap algorithm should be developed. The new flood algorithm with high confidence has been programmed. Although the fringe contrast of VISAR is very low, the unwrap phase map can be satisfied. The space resolution of imaging VISAR is  $5\mu\text{m}$ , and the time resolution is  $10\text{ps} \sim 30\text{ps}$ . The uncertainty is less than 2%, which has reached the international level.

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Date submitted: 31 Jan 2013

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