

Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

Interpretation of planar shock ignition experiments at LULI
STEPHANE LAFFITE, CEA, SOPHIE BATON, MICHEL KOENIG, ERIK
BRAMBRINK, HUBERT SCHLENVOIGT, LULI, GREGOIRE DEBRAS, PAS-
CAL LOISEAU, CHRISTOPHE ROUSSEAUX, FRANK PHILIPPE, CEA,
XAVIER RIBEYRE, GUY SCHURTZ, CELIA, CEA, DAM, DIF, F-91197, ARPA-
JON, FRANCE TEAM, LULI, ROUTE DE SACLAY, 91128 PALAISEAU,
FRANCE TEAM, CELIA, TALENCE, F-33405, FRANCE TEAM — The capacity
to launch a strong shock wave in a compressed target in presence of large pre-plasma
has been investigated in a planar geometry, at 2ω . Experiments were performed at
the LULI facility. The target is a three-material target: CH on the laser side, Ti-
tanium and Quartz on the opposite side. Two beams are involved. A low-intensity
beam launches a first shock and compresses the target. Then, an intensity spike
launches a strong shock in the pre-shocked plasma. Shock chronometry and velocity
in quartz are measured with a VISAR on the rear side of the target. Three events
are observed in both experiments and calculations. We observed a good agreement
on chronometry which, nevertheless, departs with time.

Stephane Laffite
CEA

Date submitted: 11 Jul 2011

Electronic form version 1.4