

Abstract Submitted  
for the SHOCK05 Meeting of  
The American Physical Society

**Pressure Measurements for Tungsten Wire Explosions in Water**

V.N. AFANAS'EV, I.V. GLAZYRIN, V.B. BYCHKOV, E.I. KARNAYKHOV, D.N. KAZAKOV, O.N. PAN'SHINA, A.N. GRIGORIEV, G.I. SHURANOVA, RFNC-VNIITF, Snezhinsk, Russia — Successful wire array implosion experiments carried out on PBFA-Z accelerator [1], in which a record-breaking soft x-ray yield of more than 1.5 MJ was observed, stimulated interest in research of electric explosion of thin metal wires. The results of pressure measurements micron's tungsten wire explosion, which carried out in deionized water. Thin tungsten wire explosion was investigated experimentally at current pulse 100 ns duration. The shock waves from the 70  $\mu\text{m}$  tungsten wire explosion were measured by the piezoceramic pressure gauge. The gauges were placed at a range from 3 to 15 mm of wire. The piezoceramic gauges were calibrated on the stable electron beams generator with nanoseconds duration. Experiments were carried out for verifying the tungsten plasma equation of state parameters under different values of the deposited energy. [1] R. B. Spielman, C. Deeney, G. A. Chandler *et al.*, Phys.Plasmas #5, . 2105, 1998. The work was supported by ISTC # 1826

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Date submitted: 03 Jun 2005

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