

SHOCK WAVES EXCITED BY FEMTOSECOND LASER PULSES IN METALS.

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Interaction of femtosecond laser pulses of moderate intensity with metal leads to formation of shock waves propagated inside of a target. Using time resolved imaging interferometry with the temporal resolution of 10^{-13} s the hydrodynamic processes in thin metallic films, heated by femtosecond laser pulses at a fluence of $1\div 10$ J/cm² were investigated. The results of measurement of the laser induced shock waves and the strength of the metal films at the strain rates of order $\sim 10^9$ s⁻¹ are presented.