

# Hydrodynamic effects in influence on sodium chloride ultrashort laser pulses

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The character of thermomechanical ablation of NaCl by laser pulses of the order of 40 fs was studied in [1]. In this experiment, according to our calculation, elapse the heating of NaCl to temperature order of magnitude 3 kK [2], which considerable greater boiling-point medium 1738 K [3]. Hydrodynamic phenomena in influence fs laser pulses on the surface of Ag and Au was studied in [4]. It was noted, that in this materials the crater dimension 100 nm has formed with register of the appearance chopping dome, which has begun to separate after the start of nucleation steam embryos into melt metal. This effects must take place for experiments [1] too. The melt of NaCl arise after end laser pulse, and crater dimension order of magnitude 1  $\mu\text{m}$  has formed [1]. Elastic unloading heat layer NaCl thickness 1  $\mu\text{m}$  has elapsed, according to our calculations (if take into account [3]), for 250 ps approximately. Melt NaCl must harden for 2–5 ns approximately. Melt phase NaCl observed with confidence in experiments with laser pulse 80 fs (and with surface density of energy  $\simeq 1 \text{ J/sm}^2$ ), later 0.5 ns after pulse [2]. Because take place difference of coefficients of heart conduction for NaCl [3], for Ag and Au, become more clearly, that the depth of crater for NaCl by far greater, than the depth of crater for metals.

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