B.P. Rybakin, V.B. Betelin, V.R. Dushin, E.V. Mikhalchenko, S.G. Moiseenko, L.I. Stamov, V.V. Tyurenkova Model of turbulent destruction of molecular clouds Acta Astronautica 2016 119 131-136; 10.1016/j.actaastro.2015.11.013 FEB-MAR 2016

We represent numerical simulation results of interaction process of supernova strong shock with interstellar molecular cloud in 3D. In the paper we neglect gravitation, heat conductivity and radiative losses. We analyze in detail processes of deformation and fragmentation of molecular cloud (MC). Formation of passed by and reflected shocks system, contraction and ablation of the matter is investigated in detail. The post-processor treatment and the results of calculations made it possible to find the following features of the molecular cloud matter – the vortexes formation, erosion and ablation.