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Simulation of Laser Interaction with Ablative Plasma and ydrodynamic of Laser Supported Plasma(LSP) TONG HUIFENG, TANG ZHIP-ING — A general Godunov finite difference schemes-WENO(Weighted Essentially Non-Oscillatory) Schemes which have fifth-order accuracy was used to make a numerical calculation for 2-dimensional axis symmetrical laser-supported plasma flow field under laser ablated solid target. The models of the calculation of ionization degree of plasma and the interaction between laser beam and plasma and the simplified eos(equation of state) of plasma were considered in the simulation. The plasma field parameters during and after laser duration variation with time are also obtained. The simulation results show that the laser beam power was strong absorbed by plasma of target surface, and the velocity of LSD(Laser Supported Detonation) wave is half of ideal LSD value which derived from C-J detonation theory.

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