Numerical simulation of shock wave propagation in water droplet impact on a rough surface KEI FUJISAWA, Niigata University — In this work shock wave propagation in water droplet impact on a rough surface is numerically studied. The numerical simulation is carried out utilizing two phase full Eulerian approach based on high resolution finite volume method, which allows for shock wave propagation in multiphase flow. To study the shock wave propagation in water droplet impact on a rough surface, an immersed boundary method is used as wall boundary treatment. The maximum impact pressure is computed as a function of surface roughness, and show that the maximum impact pressure increases with increasing relative roughness.

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