

Simulation of Giant Impacts by Smoothed Particle Hydrodynamics

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The present most popular model for formation of the Moon is giant impact model, and it have been simulated by Benz, Cameron and coworkers. However, they do not presented enough data on the formed disk which are needed to predict the moon mass accreting from the disk; Ida et al(1997). showed that the total mass and angular momentum of the formed disk determine the moon mass. Therefore, systematic impact simulations are needed to establish the relationship between the impact parameters and the formed moon.

As first step, we have perform the SPH simulations with relatively low resolution and simple equation of state. Our results suggests that likely impact can form present-sized moon.