

Effect of Planetary Spin on Giant Impacts

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In planetary science, impact phenomena between two objects play an important role, e.g., the Moon-forming impact.

Thus, to date, a lot of numerical simulations of giant impacts are carried out.

A potentially important effect on giant impacts is the spin of colliding bodies.

However, most previous works neglected the spin.

It is more natural that the bodies have pre-impact rotations.

In this work, we systematically investigate the effect of the spin on giant impacts.

We employ the Density Independent SPH, which is an improved version of the standard SPH method.

We show the dependence of the collisional outcome on the spin period.