

Disproving the Myths of Giant Impact Formation, Collision Tilting, and Expansion of the Earth.

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A collision between two Solar System bodies explicitly assumes changes of one or all of the bodies' physical and chemical properties. It also implicitly assumes the collision in no way affects the other planets or satellites as regards their final physical properties. But (as will be shown) the general equation $A = B \times C^n$, where C is usually 1.23, 1.19 or 0.724, relates present Solar System bodies' values within a number of physical and chemical fields, including the masses, radii, and uncompressed densities of the terrestrial planets and/or larger satellites. A simple formula (to be presented) also equates the tilts of certain body couples.

From the above, and using mass as an example, it is possible to list the following syllogistic logic points: For all planets and the seven major satellites, (i) all bodies which collide with another body and suffer mass change; (ii) all bodies whose masses are mathematically related to other bodies; (iii) all bodies Earth; and from them to arrive at the syllogistic double conclusion (given in diagrammatic form) "Earth has NOT collided with another body and changed mass AND no colliding body which has changed mass can be Earth". Identical statements apply to radii, density, and tilt; and are equally applicable to the Moon. A similar syllogistic logic attack rules out expansion.

CONCLUSIONS. Neither Earth nor Moon originated by, nor became tilted by, collision thus ruling out collision formation of the couple. Nor can Earth have suffered more than minor expansion during its life.