

Earth once had 2 moons: Study

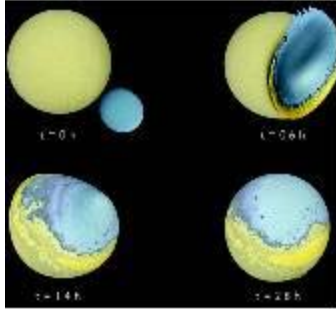
Moons Smaller Companion Perished In A Collision With Big Sister

London: Earth may once have had two moons the one which shines at night now and a smaller companion which perished in a slow motion collision with its big sister, a new research has suggested.

Astronomers said the collision may explain why the two sides of the surviving moon are so different from each other. The near side of the moon is relatively low and flat, while the far side is high and mountainous with a much thicker crust.

Scientists have proposed different theories to explain this lack of symmetry. One leading idea is that gravitational tidal forces reshaped the moons crust and made it lopsided. But the new theory builds on the giant impact model that explains the moons creation, the Daily Mail reported. Many experts believe a Mars sized object collided with the Earth early in the solar systems history, ejecting debris that was later drawn together by gravity to form the moon. The second moon is also thought to have been generated by the giant impact, remaining in orbit for tens of millions of years. The two moons collided relatively slowly, according to the theory described in the journal Nature. Such low velocity impacts do not produce craters or cause much melting. Instead, most of the colliding material is piled onto the impacted hemisphere as a thick new layer of solid crust. This could have formed the mountainous region now seen on the far side of the moon.

Our model works well with models of moon-forming giant impact, which predict there should be massive debris left in orbit about the Earth, besides the moon itself, said lead researcher from the University of California.PTI



LOONY TALES: This diagram shows a simulation of 4 stages of a collision between the Moon and its smaller companion about 4 billion years ago

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