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EARTH: Moon Could Have Formed From Earth After All Revising and Revisiting the Giant Impact Theory

Alexandria, VA –Scientists are revisiting the age-old question of how Earth’s moon formed with the development of two new models that work out the complicated physics of planetary collisions. The idea of a moon-forming collision is not new: The Giant Impact Theory put forth in the 1970s suggested that the moon resulted from a collision with a protoplanet approximately half the size of ancient Earth. But the physics underlying such a collision implied that the moon should be made up of debris mostly from the protoplanet. Since then we’ve discovered the moon is instead very chemically similar to Earth. Now, scientists have come up with two new models that explain how an impact could have resulted in a moon formed from Earth material.

In one model, Robin Canup, an astrophysicist at the Southwest Research Institute in Boulder, Colo., suggests a much larger impactor than previously considered possible. However, in another model, astrophysicists Matija Čuk and Sarah Stewart of Harvard University postulate that that a smaller impactor could still create the same effect if Earth was rotating much faster billions of years ago. Will these models help unlock the secret of how our moon formed? Read the story and find out at <http://bit.ly/WjE8Po>.

Check out this story and more all in the February issue of EARTH Magazine. Discover a hot new “Earth” circling the nearest star system; see how landslides revealed the reach of Virginia’s recent earthquake; and learn if a deep-ocean impact kick-started the Pleistocene Ice Ages all in this month’s issue of Earth!

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