Naturalistic origin of the moon comes under hard times

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Science built on naturalism has always struggled with the origin of our nearest neighbour, the moon. Three competing ideas have previously been suggested, only to be all be shown to be highly improbable.[1] These comprise the fission theory, in which the moon separated from the earth; the capture theory, in which the earth captured a wandering moon; and the condensation theory, in which the earth and moon formed from the condensation of the same dust cloud. Researchers rarely leave a theoretical vacuum. After these ideas were disproved, planetary scientists invented the idea that the moon formed after a collision between the earth and a Mars-sized object. It is called the 'giant impact hypothesis' and has been the reigning model for the past 30 years. Some have come to believe this hypothesis as a fact.

Moon too similar to Earth to be caused by a giant impact

Computer models have been in voked to simulate the giant impact, but they have always had difficulty in correctly simulating the impact origin of the moon, although there has been a little success in 'modelling' physical parameters that must be explained.[2,3] However, the identical isotopes of various elements between the earth and the moon indicate that the giant impact hypothesis has serious problems.[4,5] In September of 2013, researchers gathered at the Royal Society to do an in-depth review of the origin of the moon and concluded that the giant impact hypothesis is highly unlikely based on the geochemical and other problems:

> "Following almost three decades of some certainty over how the Moon formed, new geochemical measurements have thrown the planetary science community back into doubt. We are either modelling the wrong process, or modelling the process wrong."[6]

Astronomers are discovering more and more that the geochemistry of the moon is almost exactly that of the earth:

> "A crisis in the field has been created by the growing realization that the Moon and Earth are exceptionally similar in composition—so similar, in fact, that the emerging constraints are difficult for the giant impact hypothesis to meet. … The Earth and Moon seem to share identical isotopic signatures in oxygen, iron, hydrogen, silica, magnesium, titanium, potassium, tungsten and chromium. … That all these isotopic compositions are the same on the Earth and Moon, to high precision, places stringent constraints on physical scenarios for making the satellite."[7]

Such exactness defies the giant impact hypothesis because models have concluded that most of the moon should have been created from the debris of the impactor, and therefore the geochemistry would be significantly different.[7]

Many models … no solution

Many models have attempted to form the moon from a giant impact by varying the parameters, such as size, velocity, and impact angle, of the impactors.[8–10] After many model runs, an acceptable isotopic similarity between the moon and Earth has been simulated. The models had to rely on a special Earth–moon–sun resonance to decrease substantially the very high angular momentum of the early Earth. However, these moon origin simulations are simple models, and adding more complexity to the

models will be a major challenge.[3] For instance, after the collision a homogenous vapour is supposed to have evolved with the same isotopic ratios of many elements. However, some elements, such as titanium, would condense out too quickly to produce the same isotopic ratio between the earth and moon.[3,7] The decrease in angular momentum of the Earth–moon system by resonance with the sun depends upon the 'thermal state' of the system, which can only be guessed at.[3] Moreover, there are other problems with the simple idea of resonance: "The tidal heating and flexing of the hot young moon so near the earth may, however, prevent capture into these orbital resonances".[7]

Where does that leave naturalistic theories on the origin of the moon? Apparently, there is no credible alternative at the moment, and extreme, untested physics seems to be required:

> "The simulations of a Moon-forming impact have yet to produce a moon that fits all the puzzle pieces, geochemical and otherwise. … We are attempting to model processes of physics that are extreme as compared to current Earth conditions. We have never observed these processes in nature or in the laboratory."[7]

Older theories are still seen as implausible:

> "Competing hypotheses, such as fission of the moon from a de-spinning earth or capture of an unrelated Moon into orbit around earth, do not fit as many of the required constraints, and require special pleading on several fronts."[11]

It seems that the main reason scientists have been unable to explain even the closest body to the earth, the moon, is their naturalistic worldview: "we want to explain our Moon and earth as the outcome of a common and reasonable process".[7] The failure of naturalistic models is implicit support for the Genesis record of creation of the moon by God on the 4th day of creation, an idea unfortunately unthinkable to naturalists.

Figure 1. The near side of the moon

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