Billiard Balls Phenomenon

A Hypothesis to Explain the "Twinning" of Uranus and Neptune and the Extreme Tilt of Uranus.

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Uranus and Neptune are known as "The Twin Planets of Solar System" because the 2 planets have almost the same mass, size, density, atmospheric composition and geological structure although they are very far apart and each tilted at very different angles. There are few theories providing explanations. "Billiard Balls Phenomenon" is a new hypothesis providing an explanation: - Uranus and Neptune were **binary planets** of the same size and mass circulating a center of gravity between them while orbiting the Sun, or Uranus and Neptune were **co-orbital planets** of the same mass and size at a significant distance from each other but sharing an orbit around the Sun. The planets were similar because they were created the same time at the same distance from the Sun. As the Solar System stabilizes, they migrated away from the Sun. However, each received a slightly different momentum resulting in Neptune moving away farther. Compensating the farther migration of Neptune, Uranus tilted to an extreme angle of 98 degrees, while Neptune is tilted at a normal 28 degrees. Later, Uranus and Neptune evolved separately, causing them to slightly differ from each other today. This hypothesis explains the unique similarities of Uranus and Neptune and the extreme tilt of Uranus. It is called "Billiard Balls Phenomenon" because all billiard balls have the same mass and size, and if 2 balls very close to each other receive an impact from a cue ball, one ball will travel farther, while the other one will become more tilted. *BILLIARD BALLS PHENOMENON was registered with MyIPO on 18 November 2024 (CRLY2024W08777).*