Mercury’s Iron Heart

- A study by researchers from the University of Maryland disputes the prevailing hypothesis on why Mercury has a big-sized core relative to its mantle (the layer between its core and crust).
- Scientists had argued that hit-and-run collisions with other bodies during the formation of our solar system resulted in much of Mercury’s rocky mantle being removed, leaving behind the big, dense, metal core inside. But **new research reveals that Sun’s magnetism is the reason for this and not the collisions.**
- According to researchers the density, mass and iron content of a rocky planet’s core are influenced by its distance from the Sun’s magnetic field. There is a gradient in which the metal content in the core drops off as the four inner planets of our solar system get further from the Sun. **The current reasearch explains that the distribution of raw materials in the early forming solar system was controlled by the Sun’s magnetic field.**
- The new model developed by researchers shows that **during the early formation of our solar system, when the young Sun was surrounded by a swirling cloud of dust and gas, grains of iron were drawn toward the centre by the Sun’s magnetic field.** When the planets began to form from clumps of that dust and gas planets closer to the sun incorporated more iron into their cores than those further away.

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