

Moon's Aitken Crater

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Why in news?

Scientists have observed an unusual anomaly in the south pole of the moon-Aitken basin.

What is the Aitken Basin?

- Aitken Basin is the largest preserved impact crater of the solar system.
- The massive subsurface has a deposit of a dense material which is assumed to be a metal.
- The metal supposedly came from the crashed asteroid and it sank to the mantle of the moon and now sinks to the core
- It is also assumed to be a concentration of dense oxides which is related to the last stage of lunar magma ocean solidification.

How did the scientists find this out?

- It was done by scientists at NASA through their GRAIL (Gravity Recovery and interior laboratory) and LRO (Lunar Reconnaissance Orbiter)

What is GRAIL?

- GRAIL, initiated by NASA's Discovery Program in 2011, is concerned with the visualization of the internal structure of the moon using high-quality gravitational field studies.
- GRAIL mission has placed two identical spacecraft namely, Ebb and Flow around the moon in respective orbits.

What is LRO?

- NASA's moon mission in operation since 2009.
- It is concerned with the quest for ice and water on the poles of the moon that could dominantly reside in shadowed craters.