



IceCube: Exploring Neutrinos from Earth's South Pole

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The IceCube neutrino observatory at the **Earth's South Pole** detected subatomic particles called **neutrinos**.

- Neutrinos are **electrically neutral, undisturbed by even the strongest magnetic field**, and rarely interact with matter, earning the nickname "**ghost particle**." As neutrinos travel through space, they pass unimpeded through matter - stars, planets and, for that matter, people.
- A neutrino is a **fermion** (an elementary particle with spin of $\frac{1}{2}$) that **interacts only via weak interaction and gravity**.
- They are created in nuclear processes and also created when protons (subatomic particles) and (atomic) nuclei interact at very high energies.
- The ability **to use particles like neutrinos in astronomy** enables a more robust examination of the universe as many aspects of the universe are indecipherable using light alone.
- **India-based Neutrino Observatory (INO)**: The INO Project is aimed at building a world-class underground laboratory with a rock cover to conduct basic research on neutrinos.
 - The observatory will be located underground to provide adequate shielding to the neutrino detector from cosmic background radiation.

Read More- [Pillars of Creation](#), [James Webb telescope](#), [Indian Neutrino Observatory](#)

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