# NASA's PREFIRE Mission

**Source: IE**

**National Aeronautics and Space Administration (NASA)** has recently launched a pair of miniature satellites, called CubeSats **(6U)** to measure the **heat lost from the Earth's poles.**

- The **PREFIRE (Polar Radiant Energy in the Far-InfraRed Experiment)** mission aims to fill a critical gap in understanding the planet's energy budget by studying the **heat emissions from the Earth's poles.**
    - The mission involves **two CubeSats** equipped with thermal infrared spectrometers to measure the amount of **infrared and far-infrared radiation emitted from the Arctic and Antarctica.**
- This data will help scientists better understand the balance between incoming and outgoing heat, which is crucial for **predicting changes in the Earth's ice, seas, and weather patterns.**
- A **cube satellite (cubesat) is a standardized, low cost, small satellite** design typically used for technological demonstration and research. It is a **Nanosatellite** - weighs less than 10 kgs.
    - These are relatively inexpensive and can be launched in larger numbers, making them a valuable tool for scientific research and technology demonstrations.

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