

PACE Satellite

April 11, 2026 • vajiramandravi.com



VAJIRAM & RAVI
Institute for IAS Examination



PACE SATELLITE

PACE Satellite Latest News

Researchers recently found that NASA's PACE satellite can now detect nitrogen dioxide pollution at a fine enough scale to isolate emissions from individual factories and highway corridors.

About PACE Satellite

- The **Plankton, Aerosol, Cloud, and ocean Ecosystem (PACE)** is a **NASA satellite mission** that studies **global ocean biology, aerosols, and clouds**.
- It was **launched** in February **2024** into a **Sun-synchronous orbit**.
- It provides the **world's first and only hyperspectral coverage of the globe every 1-2 days**.
- PACE's **primary instrument** is the **Ocean Color Instrument (OCI)**, a highly advanced **optical spectrometer** to **measure the ocean's colour across a spectrum** from ultraviolet to shortwave infrared.
 - It enables continuous measurement of light at finer wavelength resolution than previous NASA satellite instruments, extending key system **ocean color data records for climate studies**.

- It also features **two polarimeters** – the **Spectro-polarimeter for Planetary Exploration (SPEXone)** and the **Hyper Angular Research Polarimeter (HARP2)**.
 - These are used to **measure how the oscillation of sunlight** within a geometric plane – known as its **polarization** – **is changed by passing through clouds, aerosols, and the ocean**.
- The data from PACE allows researchers to **study microscopic life in the ocean** and **particles in the air**, advancing the understanding of issues including **fisheries health, harmful algal blooms, air pollution**, and wildfire smoke.
- With PACE, scientists also can **investigate how the ocean and atmosphere interact** with each other and are affected by a changing climate.

Source: EARTH

Source: <https://vajiramandravi.com/current-affairs/pace-satellite/>

© Vajiram & Ravi. For personal use only.