

2025 Workshop: Equatorial Aeronomy in Data Sparse Regions

Long title

Equatorial Aeronomy in Data Sparse Regions

CEDAR Regular Workshop

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Description

The equatorial ionosphere is home to a variety of unique phenomena, such as the Equatorial Ionization Anomaly (EIA) and Equatorial Plasma Bubbles (EPBs). Recent studies have highlighted the significant longitudinal variability of these phenomena, prompting a need for further research in regions with limited data. This workshop focuses on the equatorial ionosphere in data-sparse areas, including regions around islands, over oceans, or other locations with sparse measurement coverage. We are particularly interested in ionospheric research over the Pacific Ocean. In addition to studies conducted in these data-deficient regions, we also welcome any presentations on the longitudinal variability of equatorial ionospheric processes.

Justification

While the equatorial ionosphere and its associated processes have been extensively studied, many questions remain unanswered. The longitudinal differences in the equatorial ionosphere are not yet fully understood, largely due to the lack of dense measurements in many regions across the globe. This workshop aims to bring together datasets from these data-sparse areas to improve our understanding of this critical region. Additionally, equatorial plasma bubbles are known to disrupt communication and navigation signals, so gaining a deeper understanding of this phenomenon could help mitigate these impacts.

Related to CEDAR Science Thrusts:

Encourage and undertake a systems perspective of geospace

Explore processes related to geospace evolution

Develop observational and instrumentation strategies for geospace system studies

Workshop format

Short Presentations

Include a virtual component?

No

Keywords

Equatorial, EIA, EPB, Ionosphere

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