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Poster

Ground-based ionosondes are an essential tool for investigating ionospheric variability and space weather phenomena. The upper atmosphere over the Central Pacific region is critically under-sampled, limiting our ability to fully characterize regional ionospheric conditions. To address this gap, we deployed a low-cost ionosonde on O'ahu, Hawai'i. Our station is continuously collecting data, regularly detecting signals and generating ionograms from over-the-horizon radars including, the Relocatable Over-the-Horizon Radar (ROTHR) in the continental United States and the Jindalee Operational Radar Network (JORN) in Australia. These observations offer unique insights into ionospheric dynamics and structure, particularly during space weather disturbances. Looking ahead, we intend to enhance our observational platform, including for example, a chirp transmitter, a high-frequency magnetometer to observe the extreme low-frequency (ELF) range, and a meteor radar. Our long-term goal is to build a comprehensive observatory for remote sensing of the upper-atmosphere at the University of Hawai'i.

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