

PACE's Ocean Color Instrument opens new territories of understanding by imaging vegetation across the full spectrum of visible and near-infrared light. This hyperspectral capability maps the diverse landscape of plant pigments, including chlorophyll and carotenoids, revealing hidden details about terrestrial ecosystems. By exploring subtle spectral signatures across different landscapes, the instrument charts plant health patterns and monitors land cover changes with unprecedented precision. This detailed mapping supports discovery of vegetation stress, seasonal transformations, and shifts in agricultural and forest territories. These enhanced exploration capabilities navigate conservation strategies, agricultural management, and ecological research while charting new frontiers in our understanding of global plant health and land cover dynamics.

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