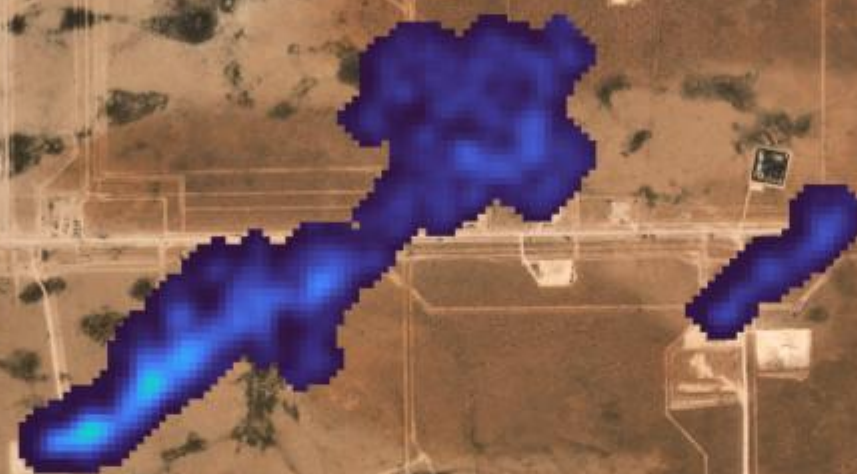
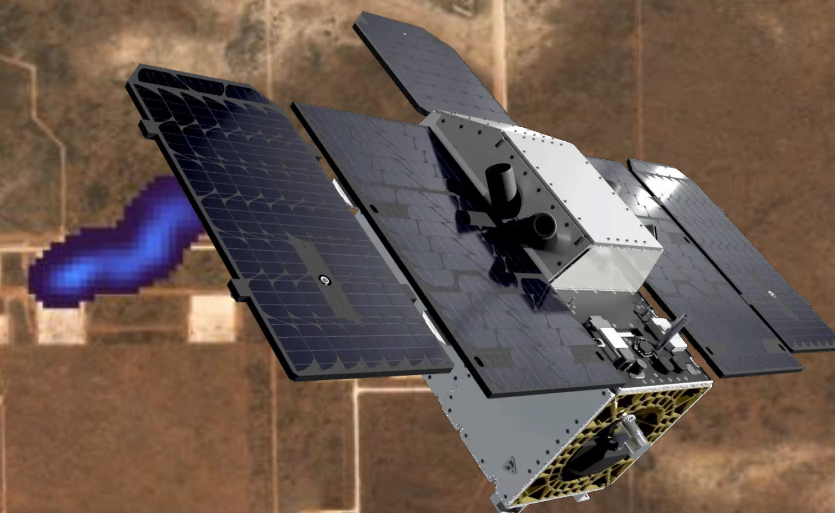




Methane Emission Detection and Mitigation with Planet, Carbon Mapper, JPL



Amanda O'Connor, Director of Hyperspectral Programs

Methane Plumes over the Permian Basin, USA • September 11, 2024



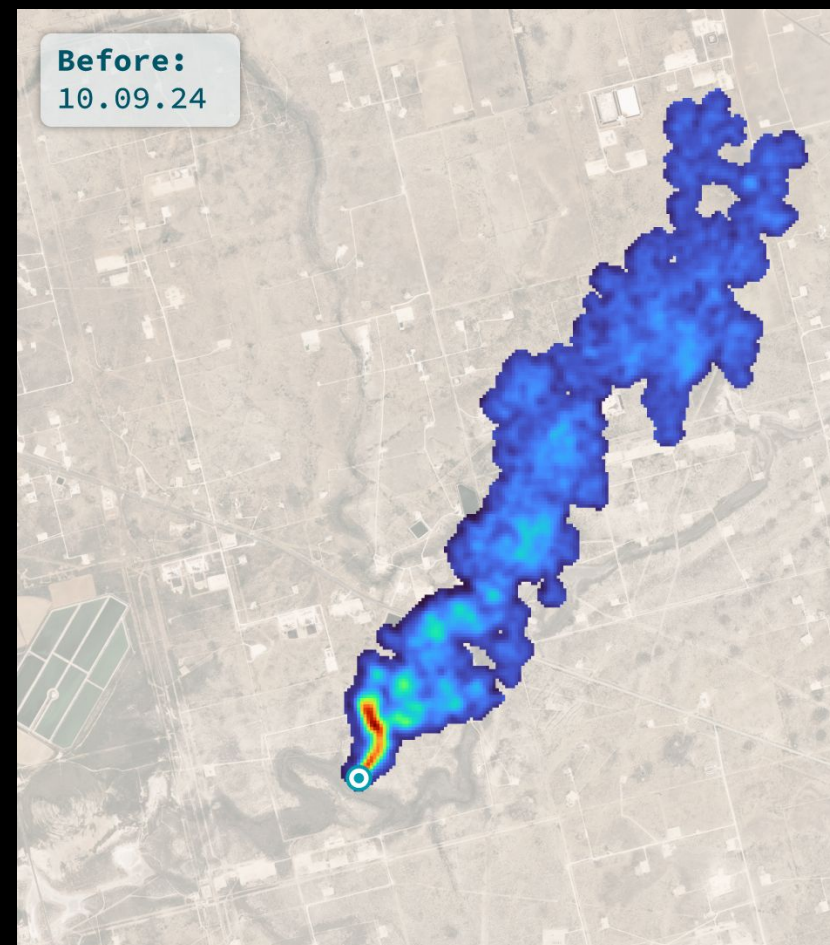
The Beginning

A need to monitor
Methane

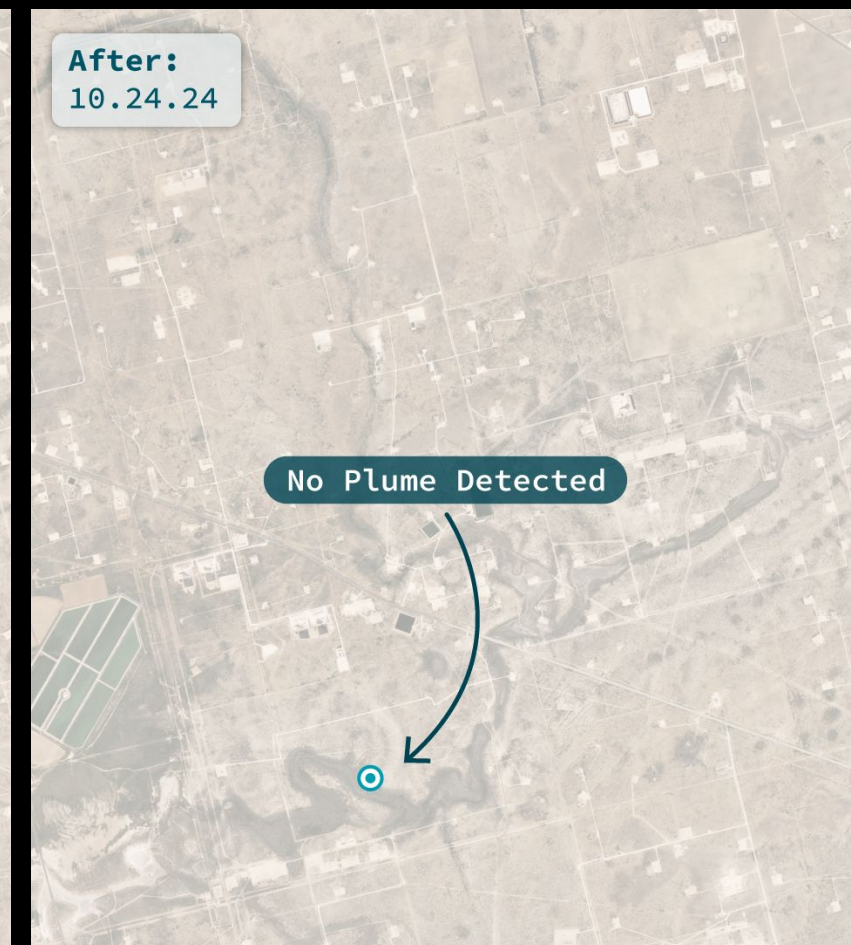
Form a public,
non-profit, private
partnership

This partnership has launched Tanager-1, the critical first satellite to creating a observing platform that detects and quantifies methane point source emissions

With the goal of turning this...



... into this





A world class Public-Private Partnership

Formed in 2020



Planet Labs PBC

Spacecraft
development,
operation, and data
handling



Carbon Mapper

Non-profit emissions
monitoring system
integrator, data
processing, and public
portal



NASA JPL

Imaging spectrometer
design and technology
transfer





How this Partnership Manifests

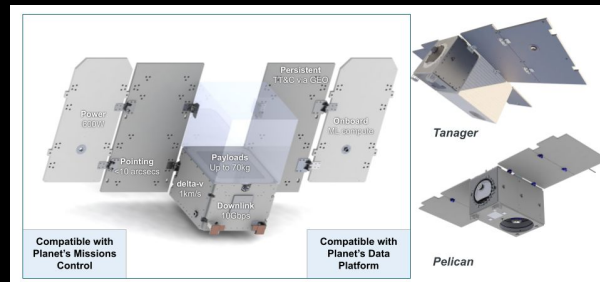
- Carbon Mapper provides capacity building
 - Engagement with regulatory, NGOs/IGOs, and others interested in controlling methane escapes
- JPL provides technical guidance and collaboration
 - Ongoing hyperspectral development
- Planet Labs is a Public Benefit Corporation
 - While a publicly traded company, a commitment to doing good



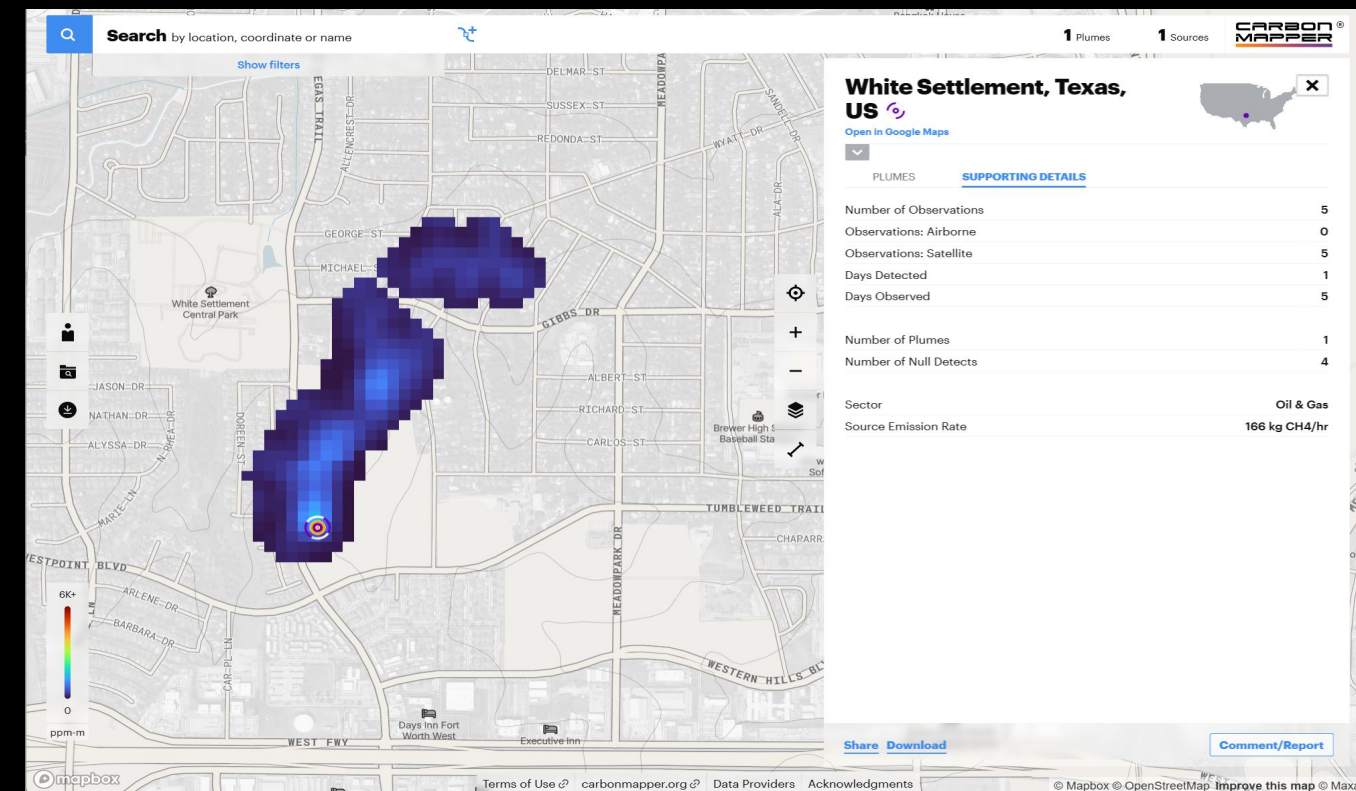
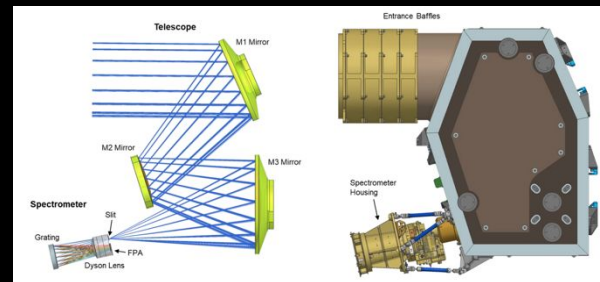


The Tanager Small Satellite Platform

Planet Smallsat Bus



Dyson Imaging Spectrometer (JPL)

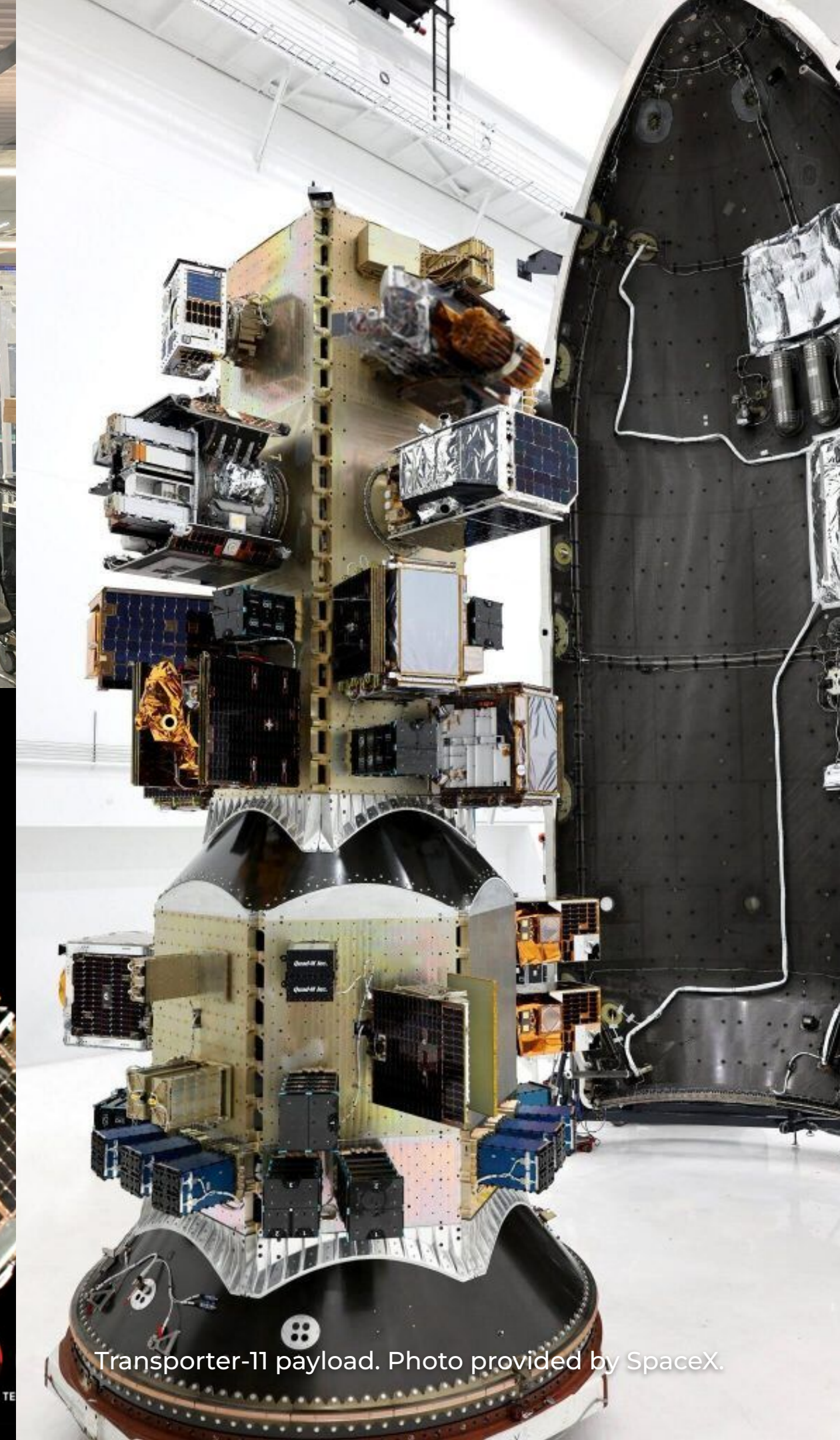
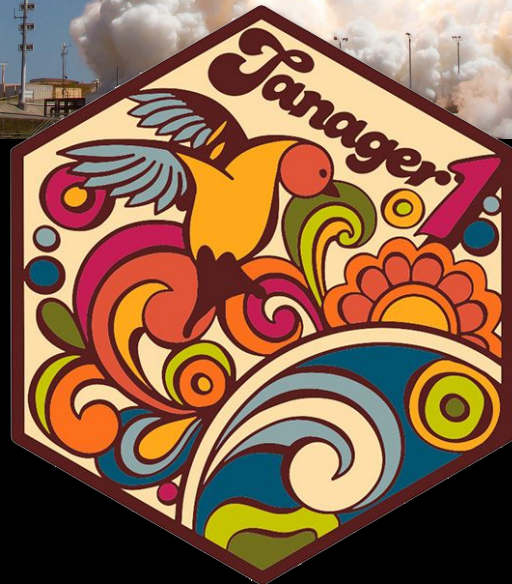


- **High-fidelity imaging spectrometer (JPL):** Dyson-type, F/1.8
- **Planet Smallsat Bus:**
 - Modular, flexible, high agility
 - Storage and communications package designed for high capacity and throughput
 - Enables Ground Motion Compensation for enhanced SNR
- **Planet Ground Segment:**
 - Global network of Ka-band ground stations
 - Autonomous operations for rapid data delivery and constellation management
- **Carbon Mapper Data Pipeline & Portal:**
 - Processes Planet's Level 1 data to derive methane/CO₂ enhancements, plume detection, geolocation, and emission estimation; public data portal.





Tanager-2 Launch Early Oct 2026!!



Transporter-11 payload. Photo provided by SpaceX.

