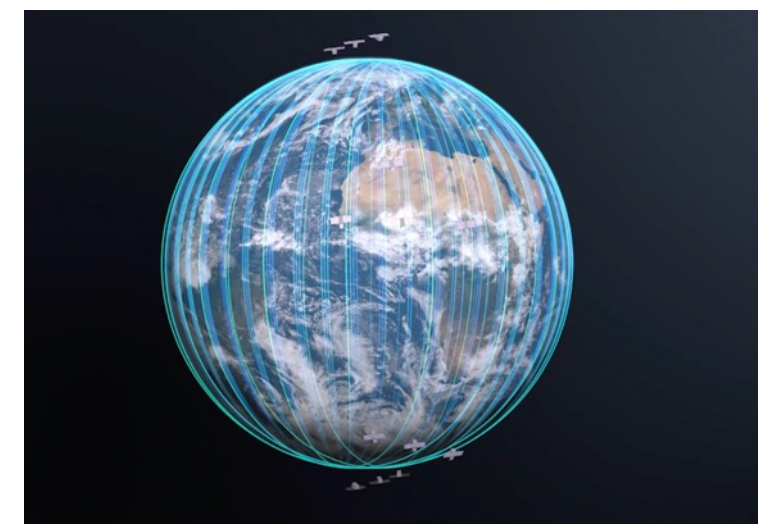




Carbon Mapper



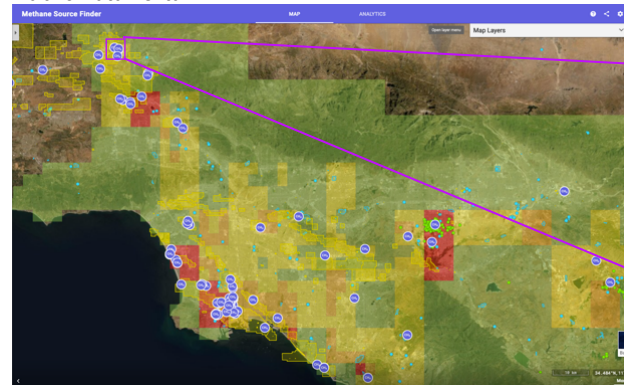
- New non-profit, leading a public-private partnership, philanthropic funding
- Funded to launch first 2 satellites in 2023 with visible-infrared imaging spectrometers
- Expand constellation starting 2025, daily operational monitoring of priority regions
- Build-out and continuity supported by commercial products: including 25+ land & ocean ecosystem variables
- All CH₄ and CO₂ data publicly available, for free
- Ongoing airborne surveys, research and mitigation prototyping programs



Orbit altitude (km)	400
Orbit type	sun synchronous
Sample interval (days) [full constellation]	1-7
Spatial resolution (m)	30
Swath width (km)	18
Area coverage per day (km ² , average, per satellite)	93,000-630,000
Spectral range (nm)	400-2500
Spectral sampling (nm)	5
SNR @ 2300 nm	300 - 600
CH ₄ Minimum Detection Limit ¹ (kg/hr)	50 - 225
CO ₂ Minimum Detection Limit ¹ (kg/hr)	200,000 - 800,000

¹point source, 4500m² plume, single-detection, 5 m/s wind

Public Data Portal

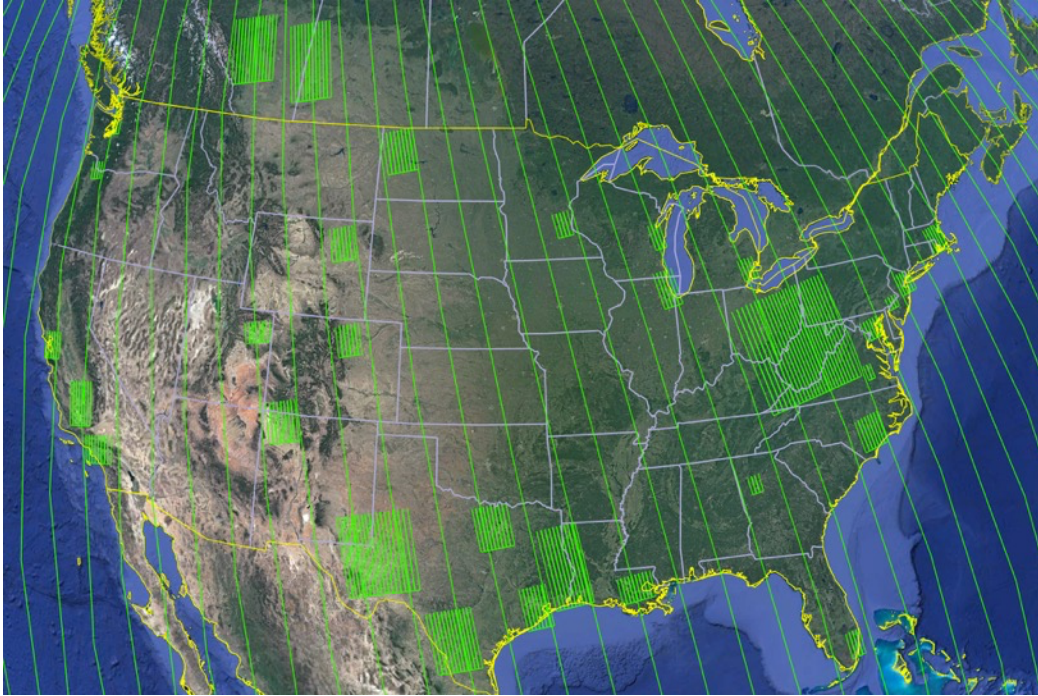


Data certification by California Air Resources Board



carbonmapper.org

Operations: pre-planned target deck + tip & cue
from MethaneSAT, TROPOMI, CO2M



Observing modes

Strip collects (white): highest SNR

Pushbroom collect (red): more area

Glint collect: offshore platforms, ships

Cusworth et al, 2021, Intermittency of large methane emitters in the Permian Basin

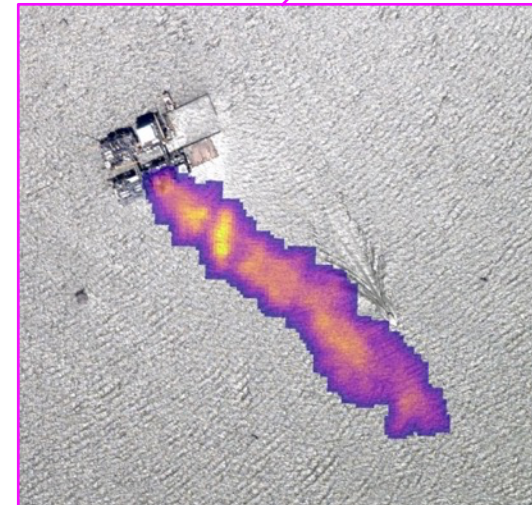
<https://pubs.acs.org/doi/10.1021/acs.estlett.1c00173>

Cusworth et al, 2021, Quantifying global power plant CO2 emissions...

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2020AV000350>

Duren et al, 2019, California's methane super-emitters,

<https://www.nature.com/articles/s41586-019-1720-3>



more at IWGGMS: 14 June, Duren, Session 1.4