

MicroCarb

Expected to launch 2024-2026

Key capabilities for carbon emission monitoring

1. Unique **city-scanning observing mode** that will allow us, for the first time, to map CO₂ emissions across cities
2. **Internationally agreed standards** will allow **interoperability** between sensors and confidence in the derived emissions estimates.
3. Provides **continuity of the atmospheric CO₂** record across the world, particularly the tropics, before launch of CO₂M and other sensors
4. **Complements** data collected by CO₂ sensors
5. **Enhances** data-driven capability to quantify UK **CO₂ fluxes**



Relationship with other carbon missions & programmes

1. **Solar Induced Fluorescence (SIF)** retrievals will complement data collected by **ESA FLEX** (launch 2025)
2. **TRUTHS** will provide benchmarked radiometric calibration reducing sensor to sensor bias
3. UK Greenhouse Gas Emissions Measurement and Modelling Advancement (**GEMMA**) Programme measurements will underpin Calibration/Validation activities in the UK
4. Will improve capability to help set the UK on a path towards development of new UK-led GHG missions