

8 December 2022

PRESS RELEASE

PR093-2022

Delivery of MicroCarb instrument marks first milestone on way to launch in 2024

After 56 days of thermal vacuum testing at Airbus Defence & Space's facility in Toulouse and several years in development, the MicroCarb instrument has been delivered to Thales Alenia Space UK for mounting on the spacecraft bus from the Myriade series, developed by CNES and integrated in the UK in partnership with the United Kingdom Space Agency (UKSA). Qualification and delivery of the instrument mark a first milestone on the way to the MicroCarb satellite's launch by Vega C scheduled early in 2024.

With global warming a growing concern, MicroCarb is designed to survey sources and sinks of carbon dioxide (CO₂)—the most important greenhouse gas—on a global scale. Today, amounts of CO₂ absorbed and released are hard to measure in certain parts of the world, due to a scarcity of ground-based measuring stations. Such data are however vital to paint a clearer picture of the causes and consequences of climate disruptions.

The MicroCarb instrument is an innovative passive spectrometer that will measure atmospheric concentration of CO₂ globally with a high degree of precision (on the order of 1 ppm), thus enabling scientists to analyse carbon exchanges on Earth's surface in very fine detail. The instrument will also be capable of measuring quantities absorbed by ecosystems to gain a closer insight into the exchange mechanisms at work and how they are being affected by global warming. The satellite will employ different modes of observation to refine measurements over several geographic regions. MicroCarb aims in this way to define the role that cities, forests and oceans play in gas exchanges, in order to better understand how they work and how they are distributed around the globe.

The MicroCarb mission is being funded in France chiefly through the government's PIA future investment programme, with additional partnerships between CNES and UKSA and the European Union. It is the first European milestone in the implementation of a global system for tracking CO₂. CNES is providing oversight of developments.

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