

Space CARBOn Observatory is moving forward with SCARBOn

*EU-Funded Mission for Space-Based Greenhouse Gas Monitoring
The Airbus-led consortium in SCARBOn succeeds the Horizon 2020 funded SCARBO project*

The SCARBOn project (Space CARBOn Observatory next step) has been officially launched: for over two years, this groundbreaking innovation action funded by the EU Horizon Europe programme, will significantly assist efforts in the fight against global climate change.

SCARBOn satellite constellation will complement the existing European (CO2M, Sentinel 5 and Sentinel 5-P) and international (Methanesat, GHGSat, Carbon mapper) missions by filling the local and chronological gaps with regards to user needs: a complete coverage at national and local scales (point sources, cities and urban areas) at sub-daily intervals to resolve diurnal to weekly changes for variable sources.

This will enable a better detection of possible **hot spots of pollution**. As an upside, the monitoring data will foster the development of added-value services and will represent a state-of-the-art European alternative to the burgeoning non-European commercial initiatives.

Greenhouse gases monitoring is crucial as the world strives to mitigate pollution, reduce emissions, and address the wide-ranging impacts of climate change. Regular, precise measurement data flows are essential for researchers and policymakers to take proper actions and track effectiveness of environmental policies. However, despite the existence of various monitoring solutions, including those space-based, the need for validated and demonstrable systems remains.

SCARBOn project is led by Airbus Defence and Space, Toulouse (France), and carried out by a diverse consortium of excellent innovation partners from 6 EU Member States. SCARBOn introduces a constellation of small satellites **tracking carbon dioxide (CO₂)** and **methane (CH₄) emissions** in the Earth atmosphere.

This collaborative project of greenhouse gas emissions monitoring from space builds on the achievements of its predecessor - the Horizon 2020 funded **SCARBO project** (Grant Agreement No. 769032).

"We are honoured to lead the SCARBOn project, which demonstrates the EU's determination to pioneer advancements in climate change monitoring and mitigation," said **Céline Belloc**, SCARBOn project manager at Airbus. "With the joint collaboration of our consortium partners, we are setting new standards in environmental monitoring, paving the way for a more sustainable future."

Employing the cutting-edge miniaturised static spectrometer sensor **NanoCarb** (result of previous joint efforts of French entities – Office National d'Etudes et de Recherches Aérospatiales, Université Grenoble Alpes and Absolut System) along with the aerosol sensor **SPEXone** (Airbus Netherlands), SCARBOn satellites will



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provide daily accurate global greenhouse gas emissions data, importantly complementing the ongoing Copernicus Anthropogenic Carbon Dioxide Monitoring mission of the European Space Agency.

Funded within the EU **Horizon Europe programme**, the SCARBOn project embodies the EU's dedication to advancing environmental protection and climate action. By improving the accuracy and frequency of greenhouse gas monitoring, SCARBOn will provide a contribution to the EU Green Deal achievement.

SCARBOn

Project in brief

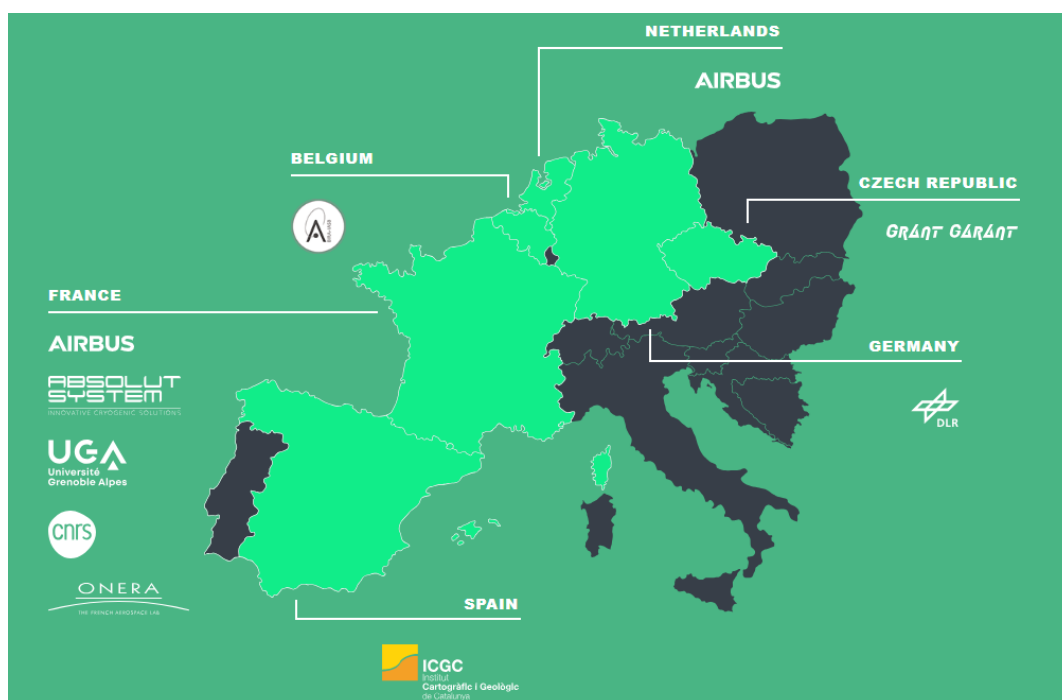
The SCARBOn project is coordinated by Airbus Defence and Space (France) and implemented by a multidisciplinary European consortium of **space industry**: Airbus Defence and Space, Airbus Netherlands, **research institutes**: Université Grenoble Alpes (UGA), Centre National de la Recherche Scientifique (CNRS), Office National d'Etudes et de Recherches Aérospatiales (ONERA), German Aerospace Center (DLR), Royal Belgian Institute for Space Aeronomy (BIRA-IASB), Institut Cartogràfic i Geològic de Catalunya (ICGC), and **SMEs**: Absolut System, GRANT Garant.

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Project duration: 1 January 2024 - 30 June 2026 (30 months)

Website: <https://www.scarbon-project.eu/>

Contact: info@scarbon-project.eu



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