



CLIMATE RESEARCH ON SCHEDULED FLIGHTS

Lufthansa Group has been committed for 30 years

Since 1994

Selected passenger aircraft are equipped with measuring instruments to support numerous **climate protection projects**.



More than

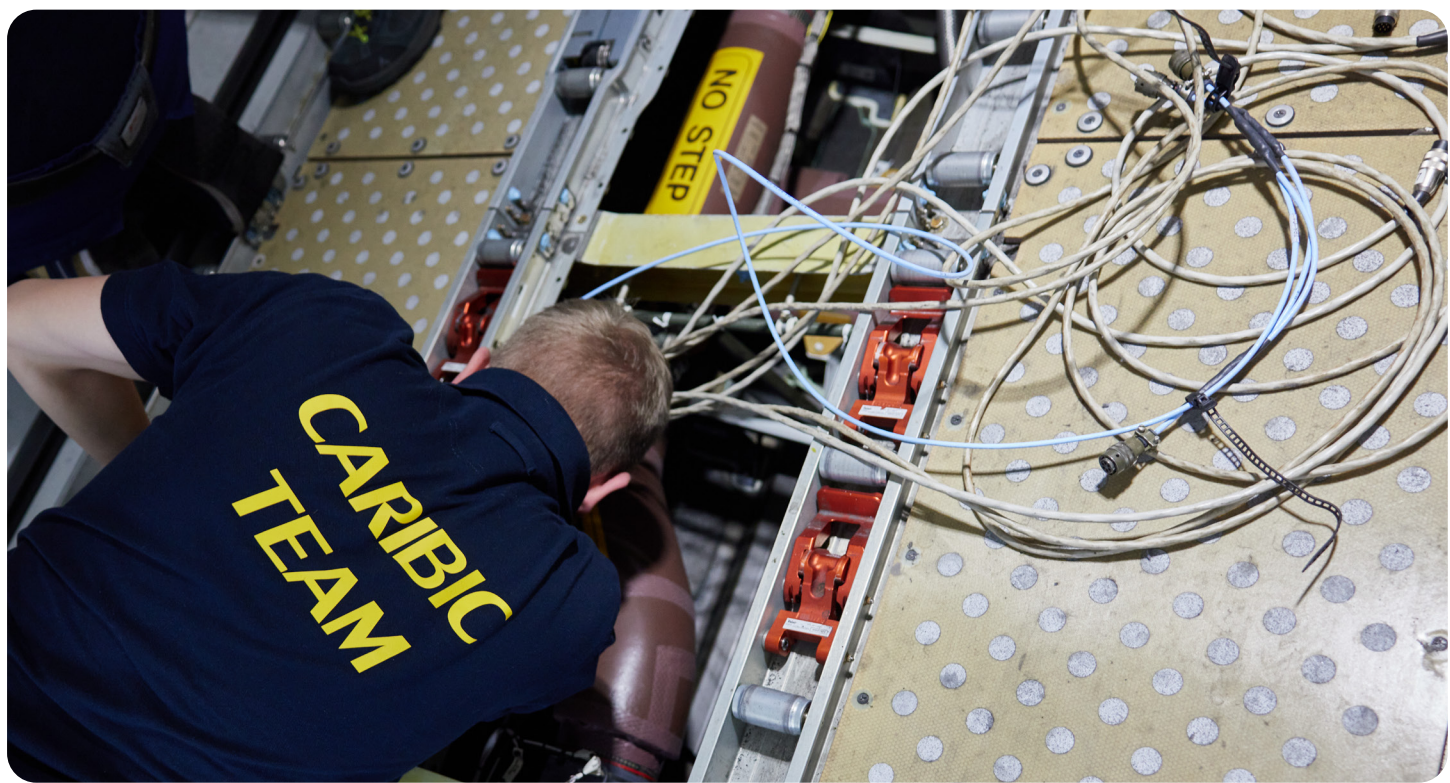
35,000

measurement flights on regular passenger flights.



Unique worldwide

Lufthansa Airbus A350-900 "Erfurt" is being converted for the **research project CARIBIC**.



Collecting and providing climate-relevant data – daily and globally.

Objective: **refine climate models** and **improve weather forecasts**.

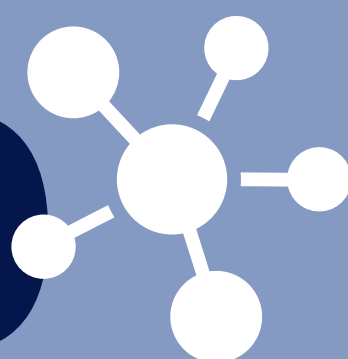


About

300

organizations

worldwide use the data.



With our route network, we offer climate research an **ideal measurement platform**.



Currently, **three long-haul aircraft** of the Lufthansa Group are equipped with measuring instruments for the **European research infrastructure IAGOS**.

A unique global database

on water vapor and ozone has been created.



THE LUFTHANSA GROUP'S CONTRIBUTION TO RESEARCH



MOZAIC

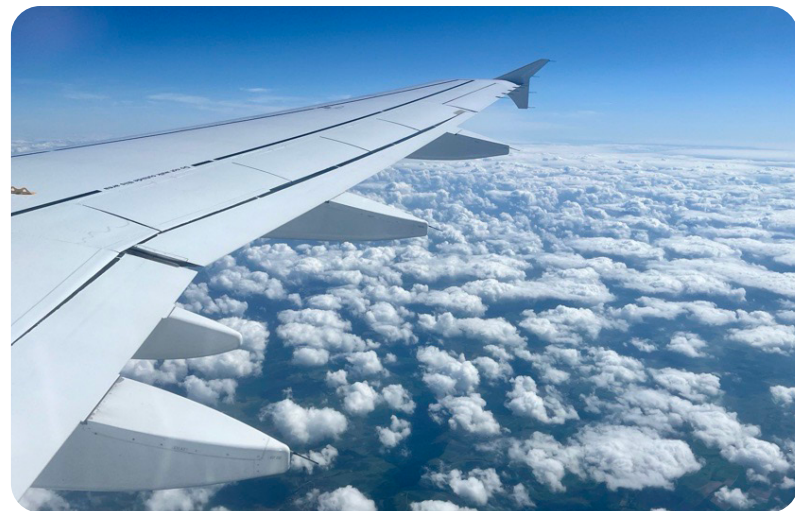
from 1994 to 2014

(Measurement of Ozone, Water Vapour, Carbon Monoxide and Nitrogen Oxides by Airbus In-Service Aircraft)

Equipment of two **Lufthansa A340-300** ("D-AIGI" and "D-AIGF") with **measuring instruments**.

Collection of extensive data.

Detection of **ozone, water vapor, carbon monoxide** and **nitrogen content** in the atmosphere.



AMDAR

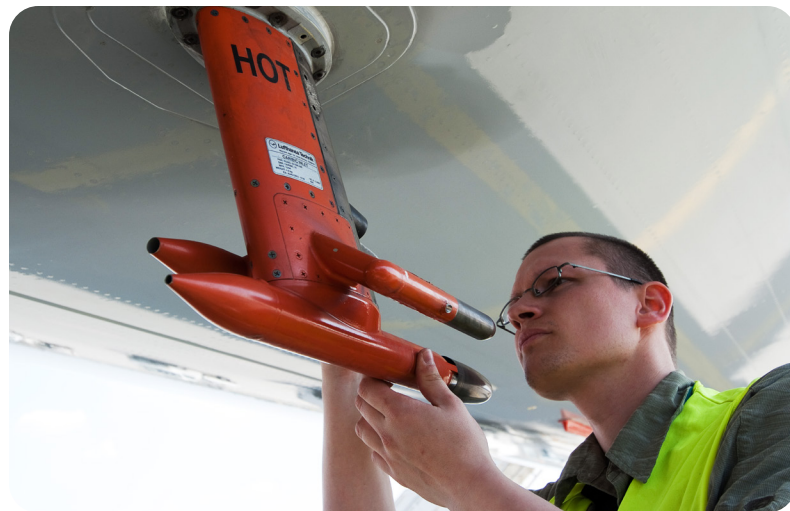
since 1999

(Aircraft Meteorological Data Relay)

Around **500** Lufthansa Group aircraft are equipped with the **AMDAR system**.

Acquisition of meteorological data.

For example, **for the daily weather forecast**.



CARIBIC

since 2004

(Civil Aircraft for the Regular Investigation of the atmosphere Based on an Instrument Container)

Equipping the Lufthansa Airbus A340-600 "D-AIHE" with a globally **unique measuring container**.

Around **500 test flights** completed on selected international routes by 2020.

The project will be continued in future with the **Lufthansa A350-900 "D-AIXJ"**, which is currently being converted in several stages.



IAGOS

since 2011

(In-service Aircraft for a Global Observing System)

Equipping three long-haul jets with a **compact measurement system**.

2011: Lufthansa A340-300 "D-AIGT"

2015: Lufthansa A330-300 "D-AIKO"

2022: Discover Airlines A330-300 "D-AIKE"

Daily measurement of climate-relevant data.

Data is automatically transmitted to the **CNRS research center** in Toulouse after each flight.



D-KULT

since 2022

(Demonstrator for Climate and Environmentally Friendly Air Transport)

The Lufthansa Group is a partner in the **joint project D-KULT**.

Research into the **avoidance of long-lasting contrails** with the aim of **reducing the overall climate impact** of a flight.

As part of D-KULT, Lufthansa is conducting the **"100 Flights Program"** with industry players. This involves **flying around climate-sensitive areas** with newly developed tools.

... And other projects.