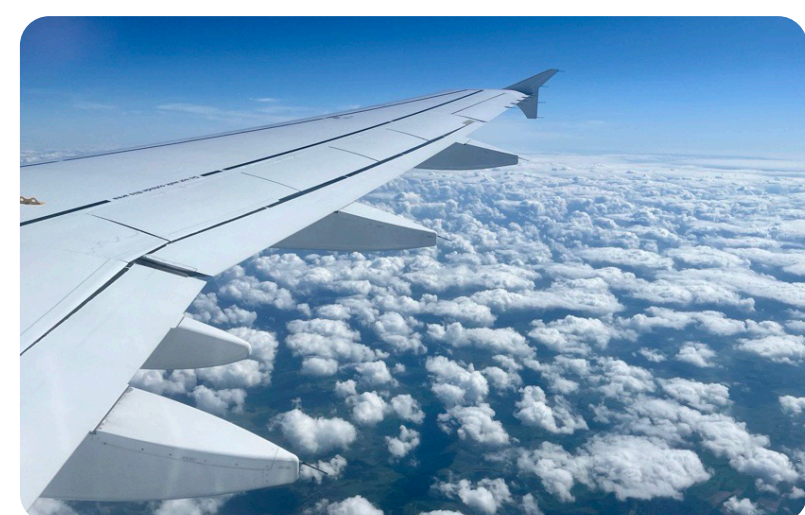


# THE LUFTHANSA GROUP'S CONTRIBUTION TO RESEARCH



## 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.**