



## **In-Service Aircraft for a Global Observing System- A new European Research Infrastructure**

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Understanding the chemistry of our atmosphere and its reaction to human influences is vital in developing global solutions to tackle climate change and air quality. Passenger aircraft provide a unique platform for directly measuring atmospheric composition, particularly in the highly-sensitive tropopause region and for vertical profiles in the troposphere.

IAGOS (In-service Aircraft for a Global Observing System, [www.iagos.org](http://www.iagos.org)) prepares the transition of routine aircraft observations from the two individual research projects MOZAIC and CARIBIC into a sustainable European infrastructure with enhanced measurement capabilities and global coverage. This is achieved by increased instrument reliability, lighter and smaller instruments, as well as new instrumentation, e.g., for GHGs, aerosol and cloud particles - key unknowns in climate modelling. An important aspect is the development of a suitable maintenance structure for world wide operation and the provision of near-real-time data to centres engaged in air quality forecasting, for example within the Atmospheric Core Service of GMES.