

# DLR - Deutsches Zentrum für Luft- und Raumfahrt

German Aerospace Research Center

Space Agency of the Federal Republic of Germany

Aeronautics

Space

Space Agency

Transport

Energy

*To open up new dimensions for exploring the Earth and the Universe, for protecting the environment and for promoting mobility, communication and security*



# Locations and Employees

> 6.000 employees work in  
28 research institutes and  
facilities in

- 10 locations,
- 6 remote sites.

Regional offices in Brussels  
Paris and Washington.



# Institutes in Oberpfaffenhofen

Cluster Angewandte Fernerkundung

Institut für Hochfrequenz- und Radarsysteme

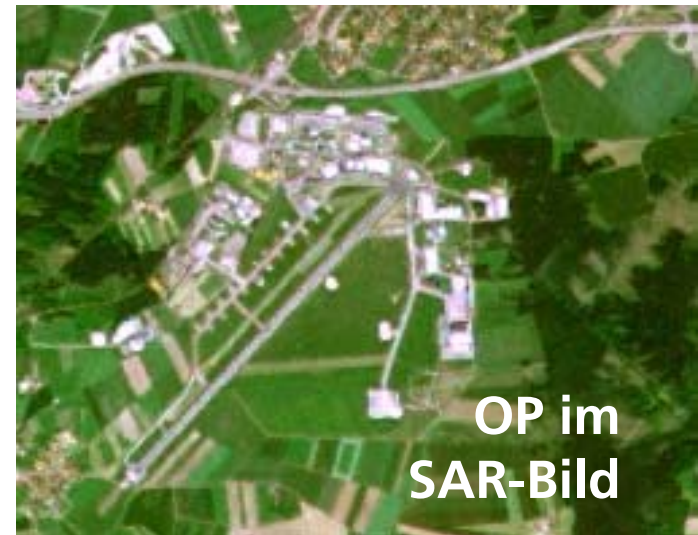
Institut für Kommunikation und Navigation

Institut für Robotik und Mechatronik

Institut für Physik der Atmosphäre

Raumflugbetrieb

Flugexperimente



# Institut für Physik der Atmosphäre

## Institute of Atmospheric Physics

Prof. Dr. U. Schumann

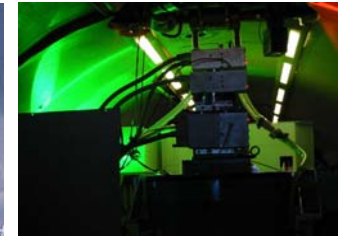
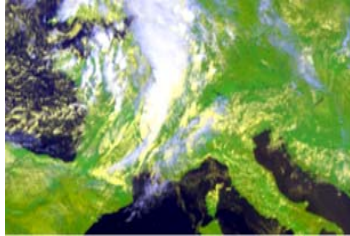
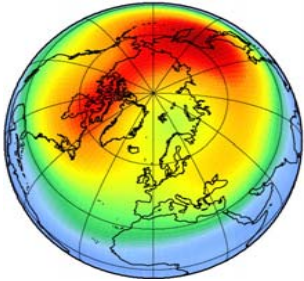
Atmospheric  
Dynamics  
Prof. Dr. R. Sausen

Atmospheric  
Trace Species  
Dr. H. Schlager

Atmospheric  
Remote Sensing  
Dr. B. Mayer

Cloud Physics and  
Transport Meteorology  
Dr. T. Gerz

Lidar  
Dr. G. Ehret



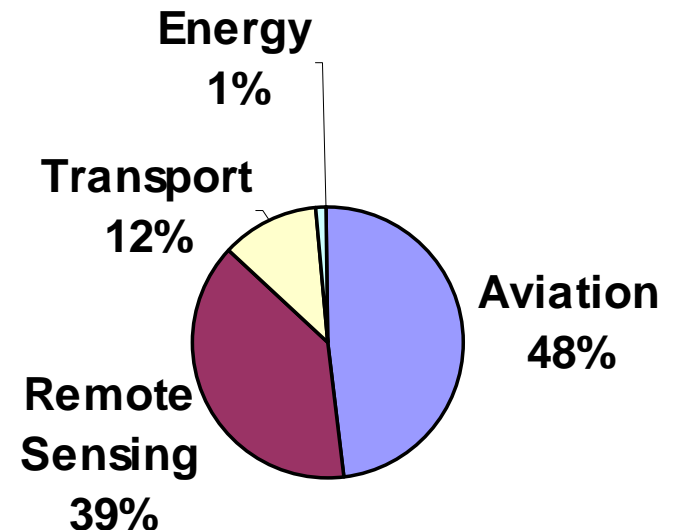
Founded July 1, 1962, Precursors since 1924

110 coworkers,  
incl. 28 Doctoral students and  
8 Professors/Lecturers

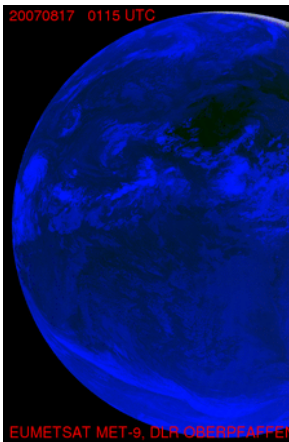
Budget 2008: 13 M€  
incl. 50 % external income

Investment value: 12 M€

60-80 peer reviewed journal publications/year



# Institut für Physik der Atmosphäre (IPA)



Development of the required **methods**

**Education, Application und Exploitation**



# Modelled Ash Concentration from FL000 to FL200 at 1800 UTC 10/05/2010

This is a guidance product, supplemental to the official VAAC London Volcanic Ash Advisory and Volcanic Ash Graphic products.

Issue time: 201005100000

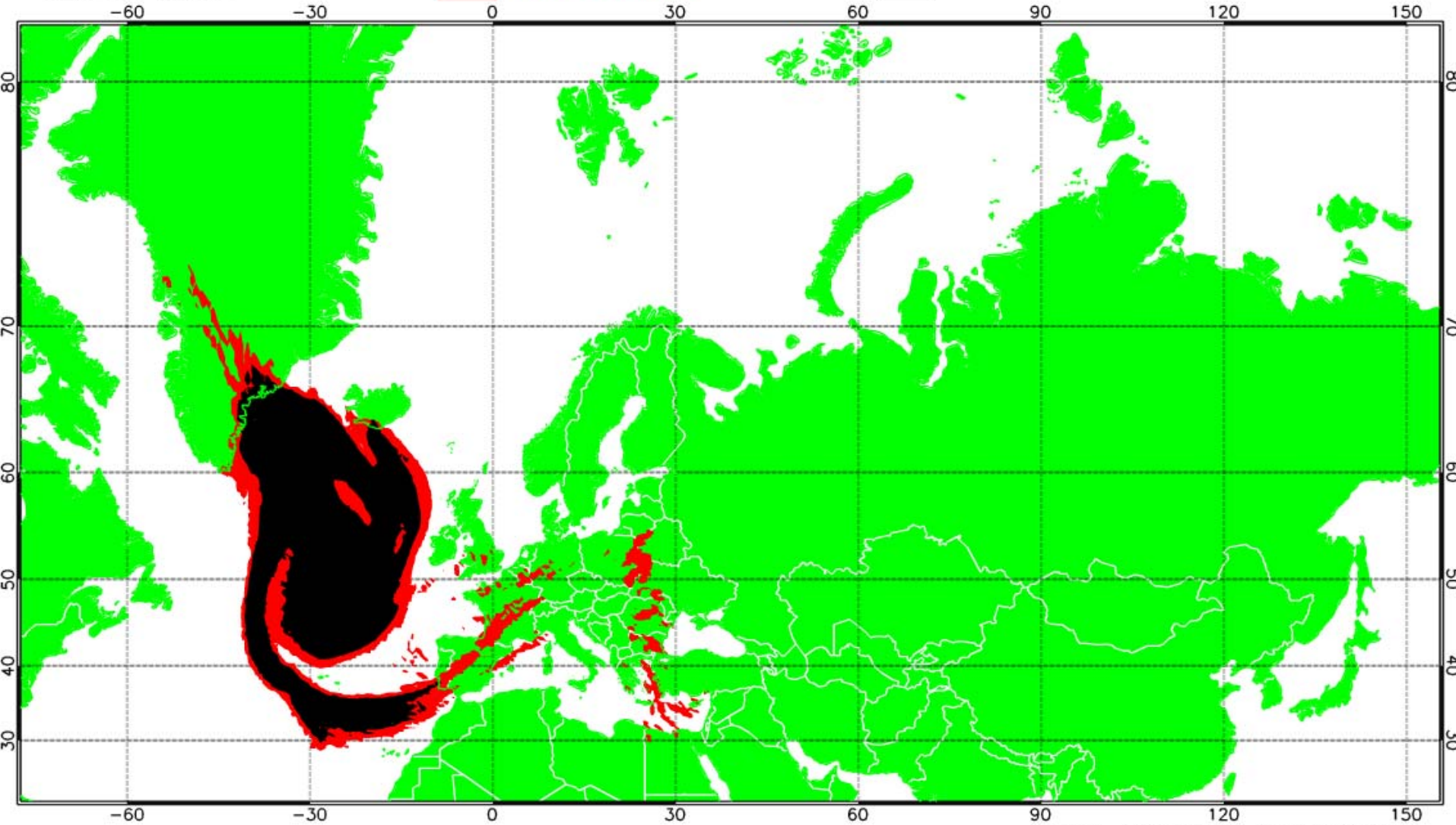
**Met Office**



Predicted area where volcanic ash may be encountered



Predicted area of ash concentrations that exceed acceptable engine manufacturer tolerance levels



© Crown Copyright 2010. Source: Met Office



# Vision and Mission

## of the Department of Cloud Physics and Transport Meteo

End to end probabilistic weather analysis and forecasting, providing precisely the information needed to make decisions.

### Observations

- radar
- lidar
- satellite
- conventional data

### Analysis and Forecast

- seamless, probabilistic fusion
- extrapolation nowcasting
- data assimilation
- forecast

### Products

- wake vortex
- thunderstorm
- wind and shear
- CAT
- snow, ice