

HITEC Lab

Title: Aeroplane measurements in the upper troposphere and lower stratosphere

Date: 12 November, 2014

Time: 9:30 – 16:30

Location: [Forschungszentrum Jülich](#) ► IEK-7, Build. 5.2, Room 3012

09:30 **Welcome and introduction**

09:40 **Introduction to the two climate research institutes IEK-7 and IEK-8**

10:00 **Airborne Research in the UTLS: the Science**

- Why measure in the UTLS?
- What can aircraft do that other platforms can't?

10:20 **Airborne Research in the UTLS: the Platforms**

- Brief overview aircraft and aircraft programmes
- From espionage to science: the M55 Geophysica
- The German HALO aircraft
- IAGOS: flying instruments on passenger aircraft (includes visit of labs and water vapour sensor calibration facility)

12:00 – 13:00 *Lunch Break*

13:00 **Airborne Research in the UTLS: the Technology (presentations and lab visits)**

- Small and light: from lab measurement to airborne instrument
- Inlet position and design, mechanical constraints
- Measuring in a special environment: a challenge for designing electronics

14:00 **Airborne Research in the UTLS: the Planning**

- Introduction to "objective oriented flight planning"
- Flight planning exercise (large group)

15:00 **Campaign Cinema (featuring material from past campaigns)**

16:00 **Questions & Answers**

16:30 End and snacks

The HITEC Labs are hands-on periods of practical training lasting 2 to 3 days, in which small groups of students from various institutes concentrate on one method that is applied in various fields. The aim of the HITEC Labs is to enable the PhD students to appreciate that a method originating from an unrelated field may also be applied in their own work. If students should discover that they require more intensive instruction in applying the method than can be imparted during the HITEC Lab, then they can make arrangements with PhD students at the institute in question to work at the institute for a limited period.