

## HITEC Theme Day

**Title:** Climate relevant processes in the atmosphere

**Date:** 16 September, 2015

**Time:** 9:00 – 16:30 o'clock  
afterwards *get together* with snacks and drinks

**Location:** Wuppertal University ► **Lecture Hall 5, Building G, Level 10, Room 07**

The role of the atmosphere in the climate system and its underlying processes are of crucial importance for understanding and predicting climate variations, natural disasters, and air quality and thus for the living conditions on Earth. The chemical composition of the atmosphere is observed with innovative satellite and aircraft techniques. Dynamical and chemical processes as well as related feedback mechanisms and interaction with other climate subsystems are studied in order to improve the prediction of global and regional climate change. To develop adequate mitigation and adaptation strategies, a reliable scientific knowledge base about the atmosphere is required.

### You will learn:

Acquiring basic knowledge of processes in the atmosphere such as chemical composition, radiative effects, transport, and waves, which trigger climate change in different regions of the atmosphere.

### This information day will provide an overview of

- The upper troposphere and lower stratosphere
- Asian Monsoon
- “Geo-engineering”
- Atmospheric gravity waves
- Stable isotopes in trace gases
- Measurement techniques of atmospheric trace gases

### Contents:

- 1) Climate relevant processes in the upper troposphere and lower stratosphere, Prof. M. Riese, Jülich / Wuppertal
- 2) Asian Monsoon – an important pathway into the stratosphere?, Dr. Paul Konopka, Jülich
- 3) “Geo-engineering” A way to mitigate global warming?, PD Dr. Rolf Müller, Jülich / Wuppertal
- 4) Atmospheric gravity waves - an important mechanism coupling the different layers of the atmosphere, Dr. Peter Preuße, Jülich
- 5) Stable isotopes in trace gases – from the reconstruction of past climates to current atmospheric processes, Prof. Ralf Koppmann, Wuppertal
- 6) Guided Lab Tour: Atmospheric Physics Group, Atmospheric Chemistry Group

### Who should attend:

HITEC Ph.D.-fellows;

Postgraduate-, Ph.D. and postdoctoral fellows from the fields of energy and climate research

### **HITEC Days**

HITEC Days are an inherent part of the graduate school Helmholtz Interdisciplinary Doctoral Training in Energy and Climate Research (HITEC). They devote a whole day to a method or a scientific topic with lectures and discussions. The methodological days serve to encourage scientific interdisciplinarity and will enable the PhD students to extend their range of methods with respect to their own scientific work. HITEC Days always end with a ‘Get together’, some snacks and drinks. HITEC Days are open for HITEC Ph.D. students and other interested young scientists.