

Date: Tuesday, 17 September 2013, 9 am – Thursday, 26 September 2013, 1 pm (8 full days)
Venue: Karlsruhe Institute of Technology (KIT), Institute of Meteorology and Climate Research (IMK-IFU)



SCHEDULE & CONTENTS (as of 18 Sept)

	Tuesday, 17.09.2013	Wednesday, 18.09.2013	Thursday, 19.09.2013	Friday, 20.09.2013		Monday, 23.09.2013	Tuesday, 24.09.2013	Wednesday, 25.09.2013	Thursday, 26.09.2013
Theme for day	<i>Atmospheric structure</i>	<i>Measurements of wind, turbulence</i>	<i>Field laser applications</i>	<i>Area source strength & fluxes</i>		<i>Complex structures</i>	<i>Flow over complex terrain; modelling</i>	<i>Atmospheric boundary layer; UAVs</i>	
9 am - 12 noon	Bradley Welcome, course outline Banta MOS, wind & temperature profiles, turbulence, limitations	Grant / Schäfer Determination of area source strengths & fluxes: Basics & quality assurance; quality control methods	Tuzson Laser gas analysers: Principles, performance & perspectives	Emeis Surface measurement instrumentation, vertical profiles with masts, sodars, RASS ceilometers radiosondes, horizontal data from scintillometers		Bange Atmospheric layers, transitions and diurnal variations	Mann Turbulence	Wenig Introduction to modelling of radiative and dynamical processes	Bradley Project work, summary of course
12 – 1 pm	Lunch	Lunch	11.30: Excursion / Lunch at Lake Starnberg	Lunch		Lunch	Lunch	Lunch	Lunch
1 – 5 pm	Bradley Time scales & length scales, sampling, filtering, autocorrelation, spectra	Banta Principles of Lidars for wind & turbulence measurements, examples	Steinbrecher et al. Schechenfilz field site visit , operating field laser (NDIR & CO ₂ , H ₂ O, CH ₄ , N ₂ O, sonics, fluxes, scintillometers)	Schäfer / Grant Determination of area emission source strengths & fluxes: methods & applications		Emeis Mixing layer height, low level jets	Mann Flow over complex topography, the Bolund Experiment	Bange Principles & use of Unmanned Aerial Vehicles (UAVs), new developments in UAVs	Departure
5 – 5.45 pm	Discussion/ Exercises	Discussion/ Exercises	Bus back to Garmisch	Discussion/ Exercises		Discussion/ Exercises	Discussion/ Exercises	Discussion/ Exercises	
7 - 9 pm	Ice-Breaker						Social Event		