



Tasks and Activities of Field Experiments and Instrumentation

- Preliminary discussions of projects and investigations within the scope of field experimental work together with the principal investigators
- Design and development of stationary and mobile (ground based and airborne) measurement systems for trace gases (mainly CO₂ and CH₄) and meteorological variables
- Design and development of mobile (ground based and airborne) air sampling systems
- Design and assembly of extensive site installations (towers of up to 50m height) to measure turbulent exchange of trace gases (mainly CO₂ and CH₄), of water and heat and to measure associated environmental variables
- Design and assembly of power supply systems for site installations
- Preparation, organisation and performance of measurement campaigns and expeditions
- Involvement in site selection of investigation areas
- Selecting and purchasing of sensors, instruments and equipment or providing advice on purchase options
- Maintenance and repair of sensors, instruments, equipment and site installations
- Calibration, test and inter-comparison of sensors and instruments
- Development of software for acquisition, processing, analysis and quality check of measured data
- Data archiving on the institute data base for ease of user access
- Giving advice within the scope of measurement and sampling techniques for realising experimental research activities
- Plant cultivation in greenhouse and planting patches and control of test series with plants
- Development of laboratory measuring equipment, open to manipulate atmospheric and ground variables such as humidity and temperature
- Development and construction of a gas mixing unit
- Design and assembly of extensive laboratory installations, such as the establishing of an Isotopic labelling unit

Group leader: Olaf Kolle

Karl Kübler, Martin Hertel, Kerstin Hippler, Istvan Hejja, Agnes Fastnacht, Nadine Hempel
