



ATMO ACCESS
Access to Atmospheric Research Facilities



Services provided by ACD-C and LACIS-T

Aerosol Chamber of the Atmospheric Chemistry Department (ACD-C) and Turbulent Leipzig Aerosol Cloud Interaction Simulator (LACIS-T)



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SERVICE 1 – Training on: (a) state of the art offline and online analytical instrumentation, (b) good chamber practice at ACD-C

TYPE OF SERVICE	Training service
SERVICE DESCRIPTION	a) Hands-on training sessions on state-of-the-art analytical instrumentation connected to ACD-C. b) Training on how to perform chamber experiments by experienced scientists.
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Open
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	PI: Prof. Hartmut Herrmann; Contact person: Dr. Falk Mothes

SERVICE 2 – Scientific research on tropospheric multiphase processes under controlled chamber conditions at ACD-C

TYPE OF SERVICE	Research service
SERVICE DESCRIPTION	<p>ACD-C with its twin chamber setup is a unique research infrastructure to study VOC degradation mechanism, SOA formation processes, the chemical composition of the gas/ particle phase, and toxicological effects of formed SOA. The twin chamber is equipped with a broad online and offline instrumentation, including two SMPS, PTR-TOFMS, PTR-QMS, two CAPS, two sub-ppb level NO₂ analysers, an AMS, a CI-API-TOFMS to comprehensively characterize a wide variety of chamber processes.</p> <p>The Leipzig Biomass Burning Facility (LBBF) as additional part of ACD-C allows studies on primary emissions as well as the processing of the emitted smoke. A broad online and offline instrumentation at ACD-C enables highly sophisticated research on tropospheric multiphase processes to provide the highest level of understanding on a molecular level.</p>
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Open
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round

TIME CONSTRAINTS	None
CONTACT	PI: Prof. Hartmut Herrmann; Contact person: Dr. Falk Mothes
SERVICE 3 – Newly developed instrumentation testing, (inter)calibrations and intercomparisons at ACD-C	
TYPE OF SERVICE	Innovation service
SERVICE DESCRIPTION	ACD-C provides the possibility of testing new instrumentation and to perform (inter)calibrations or intercomparisons. Existing standard operation procedures can be used for comparison of new with established analytical techniques/instruments by the user.
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Open
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	PI: Prof. Hartmut Herrmann; Contact person: Dr. Falk Mothes
SERVICE 4 – Support for instrument (innovation) development at ACD-C	
TYPE OF SERVICE	Technological service
SERVICE DESCRIPTION	The technological services of ACD-C provide comprehensive basic principles for instrument development and strategic improvements.
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Open
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	PI: Prof. Hartmut Herrmann; Contact person: Dr. Falk Mothes
SERVICE 5 – Scientific research on cloud-microphysics - turbulence interaction at LACIS-T	

TYPE OF SERVICE	Research service
SERVICE DESCRIPTION	<p>LACIS-T is a unique infrastructure for investigating turbulence and its influences on cloud-microphysical processes. The investigations take place under well-controlled and reproducible flow, turbulence and thermodynamic (temperature, humidity) conditions.</p> <p>LACIS-T is equipped with high-end instrumentation for characterizing the prevailing thermodynamic, flow, turbulence and microphysical conditions. This includes measurements of temperature, mean water vapor concentration, flow velocity, turbulence intensity and dissipation rate as well as cloud particle size distributions.</p>
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Academia
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	<p>Dennis Niedermeier (niederm@tropos.de) Frank Stratmann (stratmann@tropos.de)</p>

SERVICE 6 – Testing of (new) instrumentation, and instrument intercomparisons under turbulent conditions at LACIS-T

TYPE OF SERVICE	Technical and innovation service
SERVICE DESCRIPTION	<p>LACIS-T provides the possibility of testing (new) instrumentation (e.g., velocity, temperature, humidity, as well as optical particle sensors) and to perform sensor intercomparisons under well-defined laboratory conditions.</p> <p>Existing standard operation procedures can be used for comparison of new with established instruments by the user.</p>
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None

CONTACT	Dennis Niedermeier (niederm@tropos.de) Frank Stratmann (stratmann@tropos.de)
SERVICE 7 – Training on LACIS-T including state-of-the-art instrumentation	
TYPE OF SERVICE	Training service
SERVICE DESCRIPTION	Training on how to perform experiments in humid turbulent flows by experienced scientists as well as hands-on training on high-end and state-of-the-art instrumentation for characterizing turbulent flows, as well as thermodynamic and aerosol particle and droplet microphysical properties.
ATMOSPHERE TYPE	Controlled atmosphere
TYPE OF ACCESS	Physical
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	Dennis Niedermeier (niederm@tropos.de) Frank Stratmann (stratmann@tropos.de)

