ACTIVITY REPORT:

Atmospheric Composition and the Asian Monsoon (ACAM)

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28th SPARC SSG meeting

Part II: Activity reporting

February 2021

ACAM Activity overview

Objectives

- to foster research related to the Asian Monsoon in the fields of emissions, air quality, chemistry, aerosols, convection, clouds, and UTLS impacts.
- to support the building of an international research community for Asian Monsoon science including local scientists in Asia
- to assist joint field experiments

Main Projects

- biennial international workshops with strong participation from Asian countries
- biennial training schools for students and early-career scientists in particular from developing countries in Asia
- support of coordinated model simulations and field campaigns related to ACAM science
- organisation of ACAM-related sessions during major international conferences

ACAM Progress and achievements

Achievements

- Organisation of four ACAM workshops and three ACAM training schools in Kathmandu, Nepal (2013), Bangkok, Thailand (2015), Guangzhou, China (2017), and Bangi, Malaysia (2019) and start of the preparation of the fifth ACAM workshop originally planned for 2021, now scheduled for 2022 due to the Corona pandemic

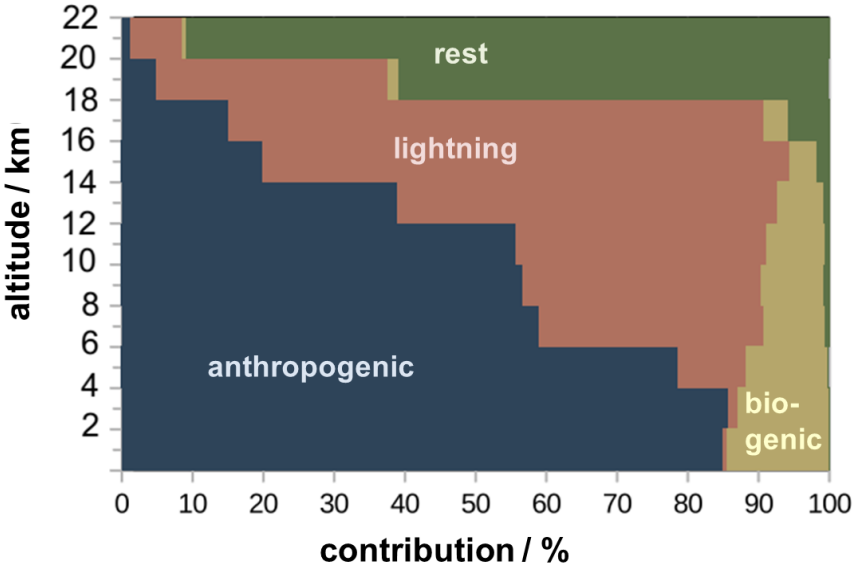
- Planning of an on-line ACAM training school for summer 2021 with focus on the use of satellite and model data sets for ACAM science

- Involvement of key ACAM scientists in the preparation of the major field campaign ACCLIP (Asian Summer Monsoon Chemical and Climate Impact Project) originally planned in the western Pacific for summer 2020, now postponed to 2022

ACAM Progress and achievements

- Initialisation of coordinated model simulations related to ACAM in cooperation with AeroCom and CCMI
- Planning of an ACAM-related session at the EGU 2021
- Further analysis of measurements during the StratoClim campaign, e.g. on the origin of observed enhanced nitrogen oxides in the Asian monsoon UTLS:

Relative contributions to NOy in the ASMA during StratoClim



(Stratmann, Schlager et al. GRL, in preparation, 2021)

ACAM Collaborations

- ACCLIP (involvement in the preparation of the field campaign)
- StratoClim (field campaign data analysis)
- CCMI, AeroCom (coordinated model simulations)
- SSRiC (analysis of SO_2 measurements during StratoClim)
- EUMETSAT, CAMS (ACAM training schools)
- EMeRGe (analysis of air pollution measurements in East Asia)

ACAM Future plans

- On-line ACAM Training School in summer 2021 (focus on use of satellite and model data for ACAM science)
- Fifth ACAM Workshop and Training School in 2022 (on-site events)
- Involvement in ACCLIP campaign 2022 (science focus on characterisation of air exported from the Asian summer monsoon anticyclone to the western Pacific)
- Further publications of StratoClim observations (e.g. measurements of reactive nitrogen and sulfur species)

ACAM Emerging issues

- Financial support for the 5th ACAM workshop and training school in 2022 to enable the participation of attendees from countries of transitional economies in Asia