

Overview of the StratoClim Asian Monsoon Aircraft Campaign: Measurements and First Results

Fred Stroh and the The StratoClim Aircraft Field Campaign Team

Forschungszentrum Jülich GmbH, Institute for Energy and Climate Research (IEK-7), Jülich, Germany (f.stroh@fz-juelich.de)

The StratoClim aircraft field campaign employing the high-flying research aircraft M55 Geophysica was carried out from mid July to mid August of 2017 from Kathmandu, Nepal, in the frame of the EC FP7 funded StratoClim project. As a result we obtained the first detailed data set on climate relevant dynamical, chemical, and microchemical processes within the Asian Summer Monsoon anticyclone employing a comprehensive chemical and aerosol payload consisting of 26 different instruments on a total of 8 science flights and exploring the 12-20km altitude regime above Nepal, India, and Bangladesh. While mostly flying inside the anticyclone area we probed the ATAL layer, the cold tropopause region, and the lower stratosphere in or above regions of convective activity as well as of potential Himalayan updraft.

An overview of the instrumentation, observation strategies, and first results will be presented.