Seminar on Physics and Chemistry of the Atmosphere
03.12.2021, WiSe 2021/2022, IUP Bremen

Air pollution along the Gulf of Guinea during the African monsoon: Results of the DACCIWA campaign

Adrien Deroubaix
(IUP)

Abstract

West Africa is facing significant population growth, associated with environmental challenges, particularly along the coast.

The air quality in West Africa is affected by various sources because in addition to anthropogenic emissions from the large urban areas, there is the combustion of biomass from Central Africa and dust from the Sahara. During the West African monsoon, these different pollutants are transported and mixed in a complex vertical structure. One of the objectives of the European DACCIWA (Dynamics-Aerosol-Chemistry-Cloud Interactions in West Africa) project has been to improve our understanding of the interactions between air pollution and coastal atmospheric dynamics.

In this presentation, I will discuss the spatial variability as well as the vertical structure of air pollution in Southern West Africa, based on different observational datasets and numerical simulations performed with the WRF-CHIMERE model. I will finish by presenting some potential perspectives following the DACCIWA campaign.