

## **Modulation of Anthropogenic Aerosol concentration in East Asia due to meteorological condition in the early and mid-21st century**

Sujung Lee (1) and Sangwook Yeh (2)

(1) Hanyang University, Korea, Republic Of (tnwjd4579@naver.com), (2) Hanyang University, Korea, Republic Of (swyeh@hanyang.ac.kr)

It is well known that there exist interactions between Anthropogenic Aerosols (AA) and climate, which should be understood to predict weather and climate variability in a changing climate. Previous literature suggests that the AA concentration would be influenced by meteorological conditions in a changing climate. In particular, East Asia is one of the regions where AA emission is gradually increasing in the recent past, therefore, it is useful to examine how the AA concentration in East Asia would be changed under global warming. To examine this, we analyze the GEOS-chem simulation assimilated by the meteorological conditions simulated by a CESM in four RCP scenarios, i.e. RCP2.6, RCP4.5, RCP6.0 and RCP8.5, during the present climate (1996-2005), the early (2016-2025) and mid-21st century (2046-2055), respectively. In this study, we analyze how the East Asian winter monsoon is able to modify the AA concentration due to the corresponding emission in the early and mid-21st century compared to the present climate.