Sub-seasonal seesaw of PM2.5 over the North China Plain in autumn and early winter

*Lian Xue[1]

1. Nanjing University

Severe PM2.5 pollution often strikes the North China Plain in autumn and winter in recent years. Due to its high impacts on society and human health, the prediction of pollution level at the end of the year is crucial to policymakers. Despite emission control policies, natural climatic variability is remarkably important in air quality prediction by modulating circulation and chemical production. Traditional analyses are mostly based on the seasonal averaged. While recent studies revealed a significant sub-seasonal variation of circulation which could mediate the air quality over the NCP on a higher frequency. In this study, a seesaw phenomenon on sub-seasonal timescale is reported, providing a new aspect to conduct sub-seasonal air quality prediction. Possible links to sub-seasonal atmospheric oscillation are also discussed.

Keywords: Sub-seasonal, PM2.5, NCP

