Abstract Details

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Category: Ocean and Atmospheres

Paper ID: 57-OOA-A1280

Title: Effect of Anthropogenic Activities in Asian Continent on Ozone over t Western Pacific

Abstract:

Ozone (O3) is formed in the troposphere by photochemical reactions involving the oxides of nitrogen (NOx) and non-methane hydrocarbor (NMHCs). Increases in the emissions of these O3 precursors over the continent can lead to an increase in the O3 level over the Asian regio including the western Pacific. The assessment of this effect requires quantitative understanding of emissions, transport, and chemistry of precursors. In situ aircraft measurements of the O3 precursors provic detailed information in investigating these processes, especially wher combined with numerical models. The aircraft data were obtained ove western Pacific in January and April-May, 2002 during the PEACEA an campaigns. Chemical and transport processes of O3 from winter to sp have been analyzed using a box model and 3-dimensional Chemical-Transport model. Impacts of NOx emissions from the Asian continent over the Pacific have been assessed by the 3-D model validated by th aircraft data.

Presentation Mode: Oral

Keywords: ozone,troposphere, Asia

Status: Pending.

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