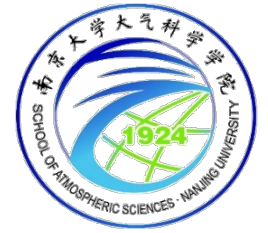




# GCA1, NUIST, 2018.5

## Poster B9

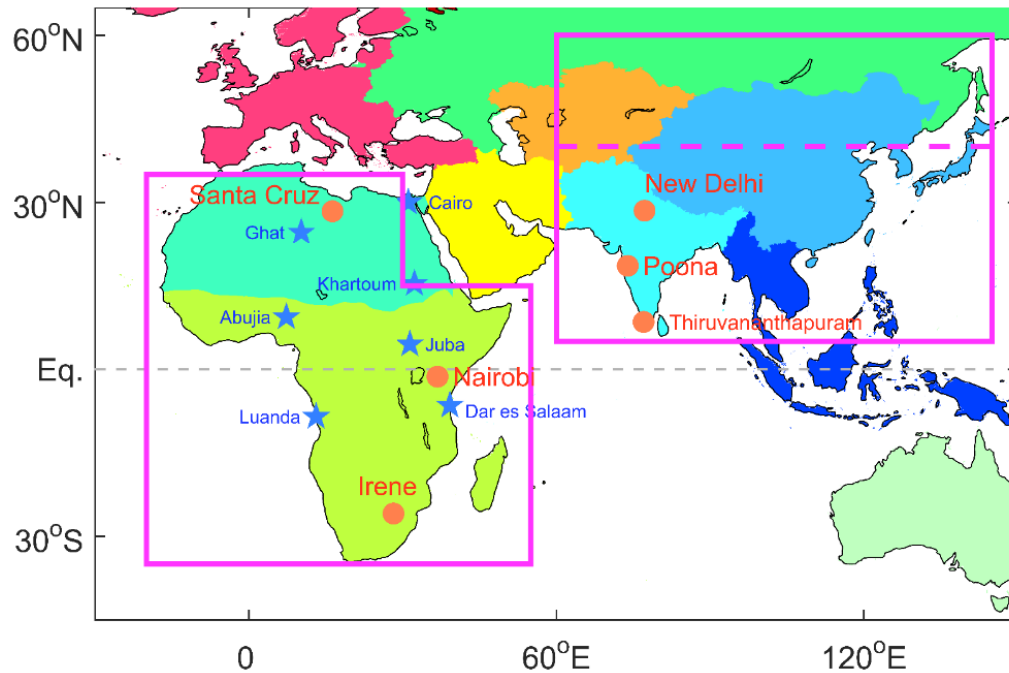


# Characteristics of intercontinental transport of tropospheric ozone from Africa to Asia

Han Han<sup>1</sup> (hhannju@163.com), Jane Liu<sup>1,2</sup>, Huiling Yuan<sup>1</sup>, Bingliang Zhuang<sup>1</sup>, Ye Zhu<sup>1,3</sup>, Yue Wu<sup>1</sup>, Yuhan Yan<sup>4</sup>, Aijun Ding<sup>1</sup>

<sup>1</sup>School of Atmospheric Sciences, Nanjing University, Nanjing, China <sup>2</sup>University of Toronto, Toronto, Ontario, Canada

<sup>3</sup>Shanghai Public Meteorological Service Centre, Shanghai, China <sup>4</sup>Chinese Academy of Science, Institute of Atmospheric Physics, Beijing, China



GEOS-Chem simulations

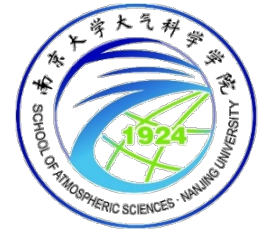


Contributions and mechanisms of the transport



# GCA1, NUIST, 2018.5

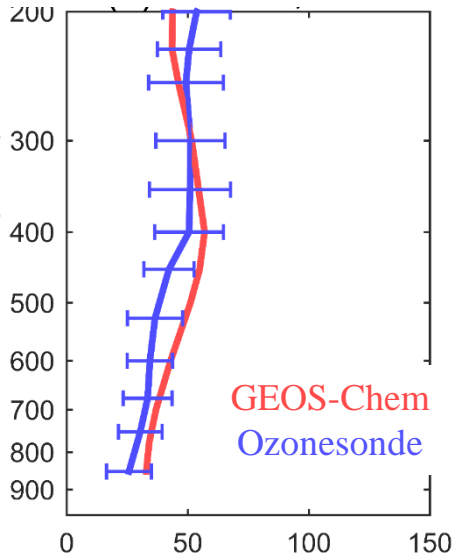
## Poster B9



### Model evaluation

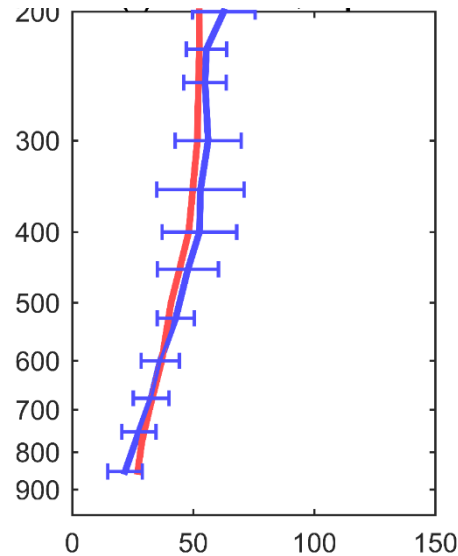
#### Ozonesonde

(a) Nairobi, Jan.



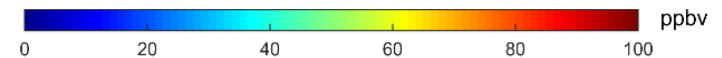
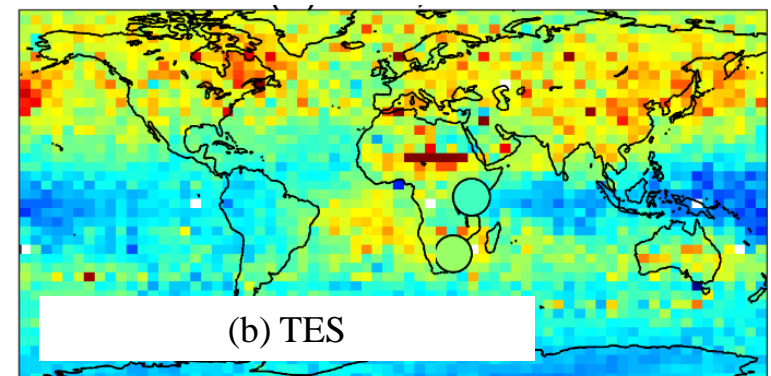
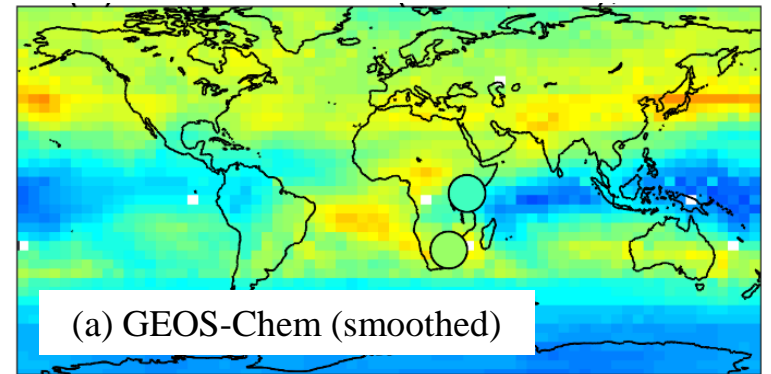
$r = 0.69$   
Bias = 10.7%  
RMSE = 7.6 ppbv

(b) Nairobi, Apr.



$r = 0.99$   
Bias = -2.3%  
RMSE = 4.3 ppbv

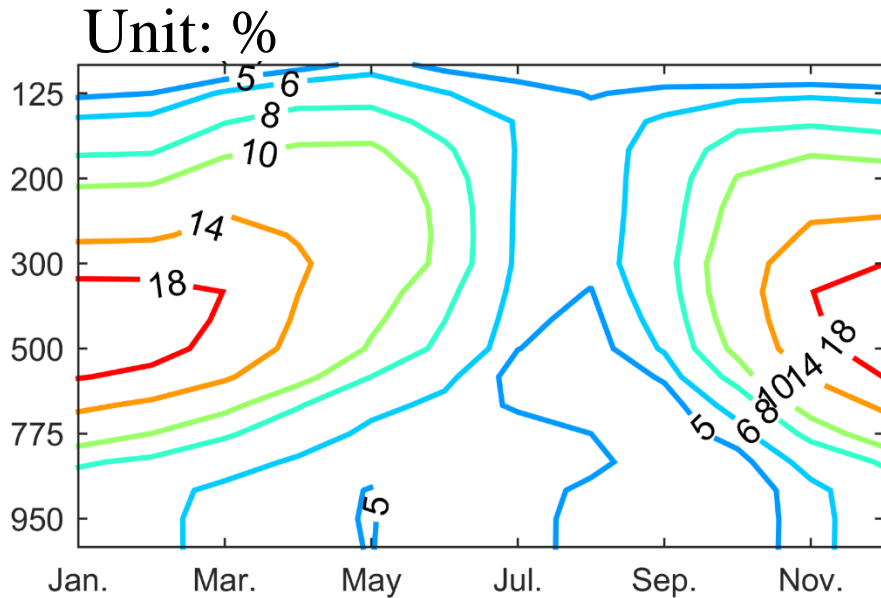
#### TES



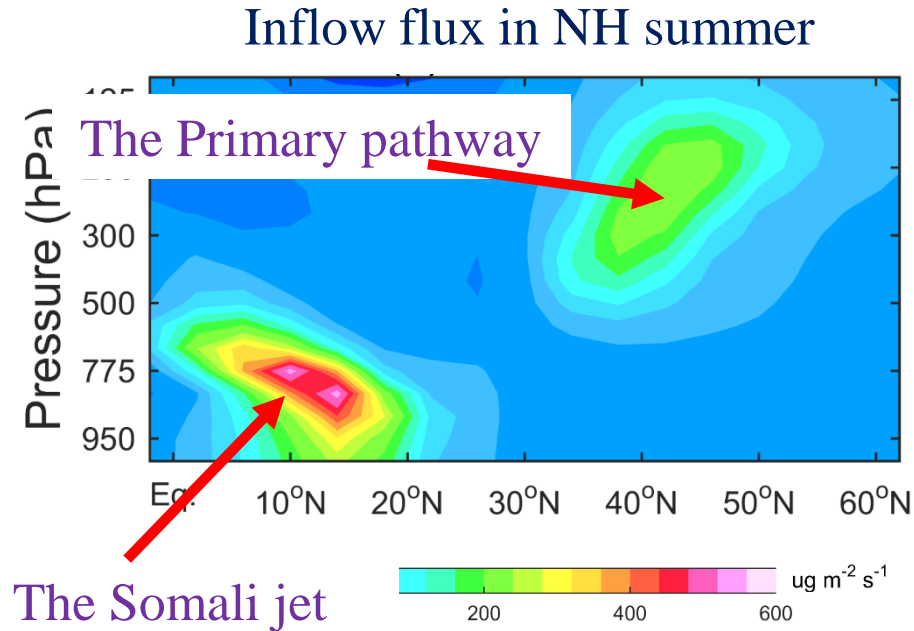


# Contributions and pathways

Fractional contribution



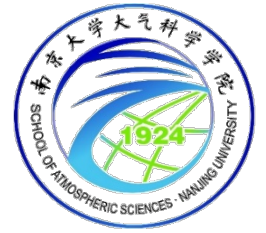
Two identified pathways





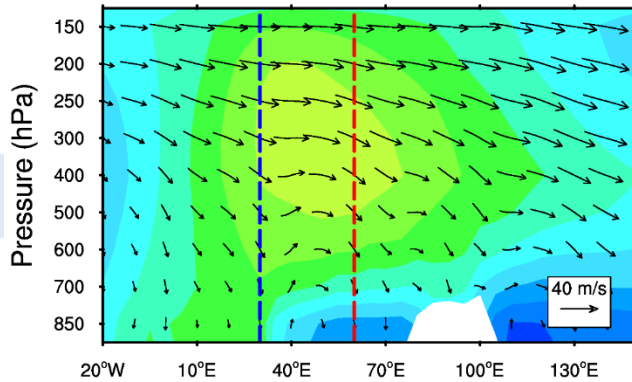
# GCA1, NUIST, 2018.5

## Poster B9

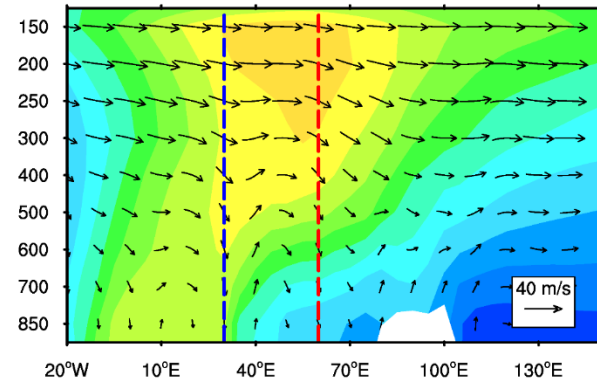


### Seasonal variations of the transport

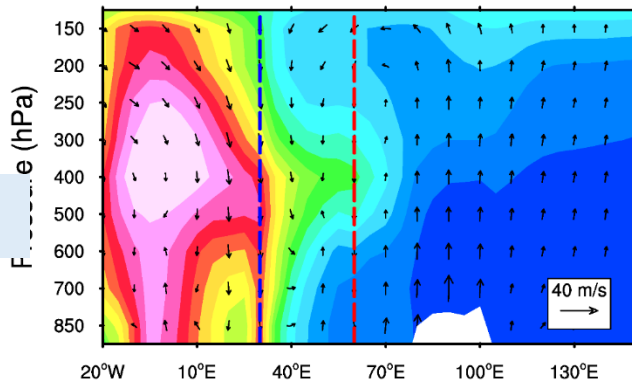
NH winter



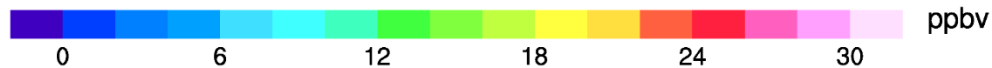
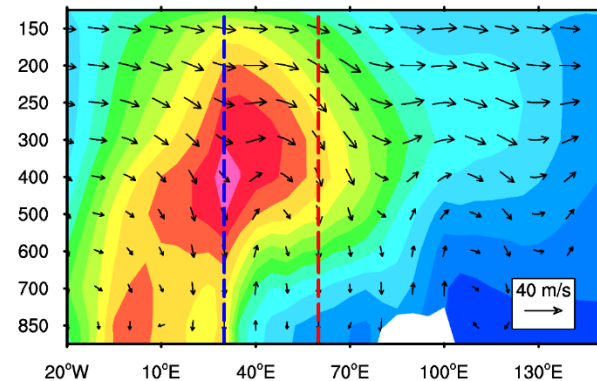
NH spring



NH summer



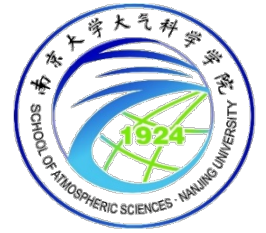
NH autumn





# GCA1, NUIST, 2018.5

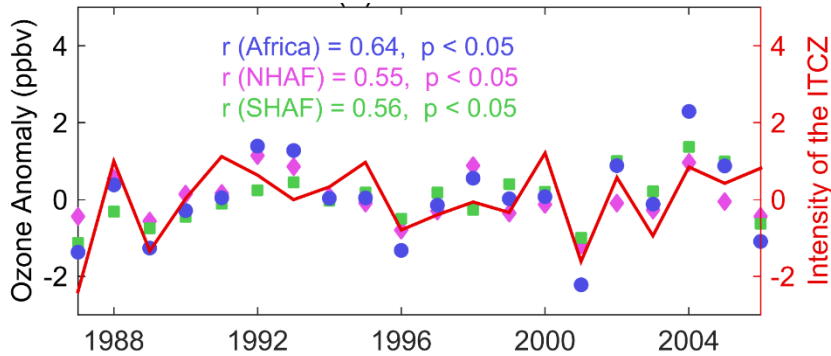
## Poster B9



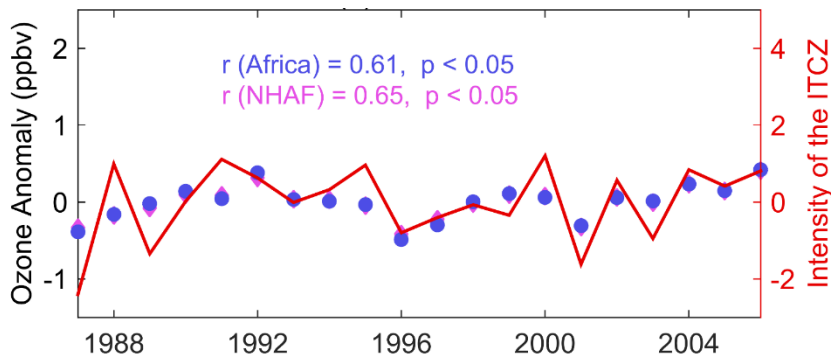
# Impacts of meteorology on the interannual variations

## The African ITCZ

(a) Upper troposphere (200 hPa)



(b) Surface (975 hPa)



## The Somali jet

