

# Size distributions AeroCom ExpA

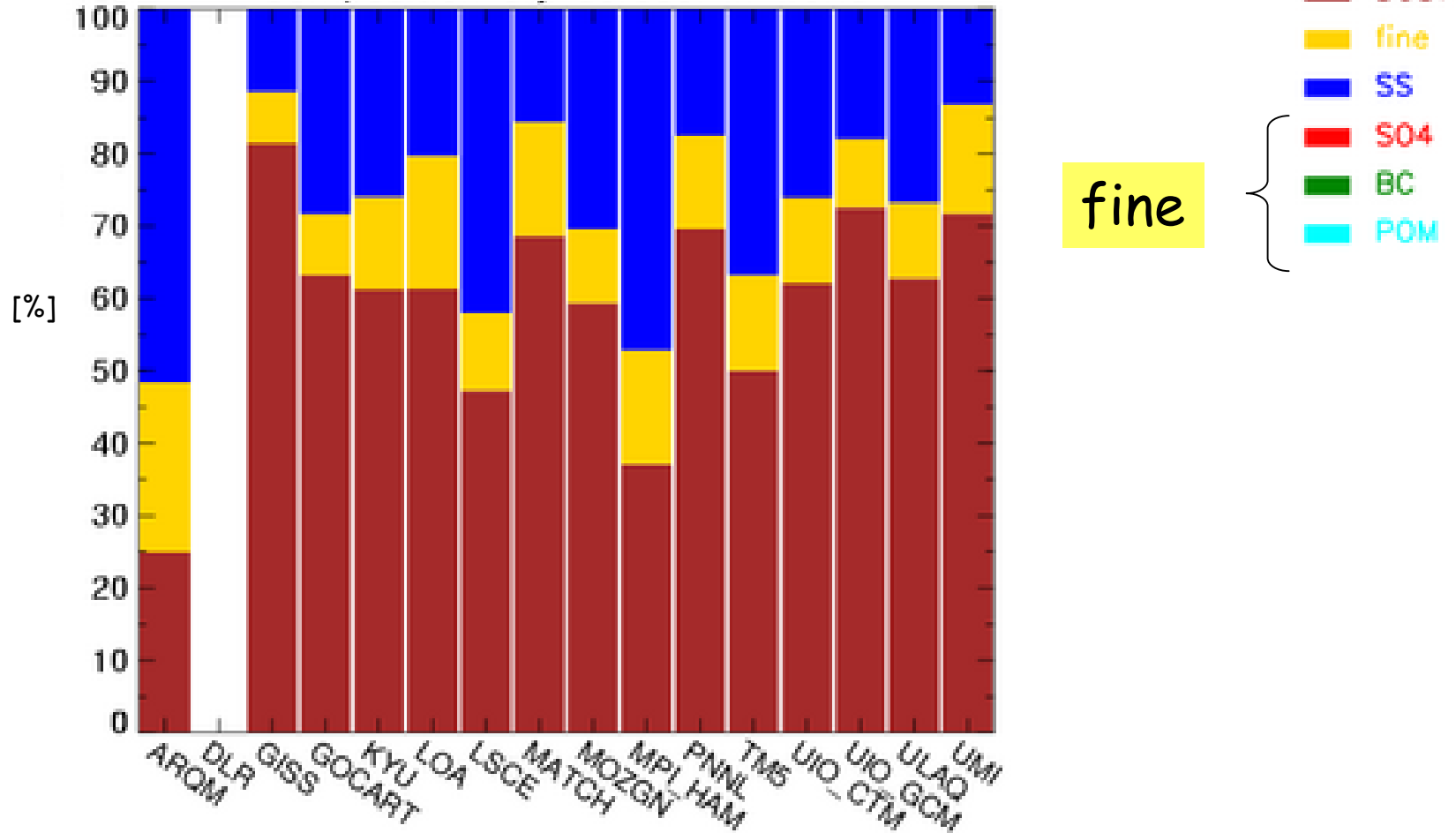
Christiane Textor

Michael Schulz

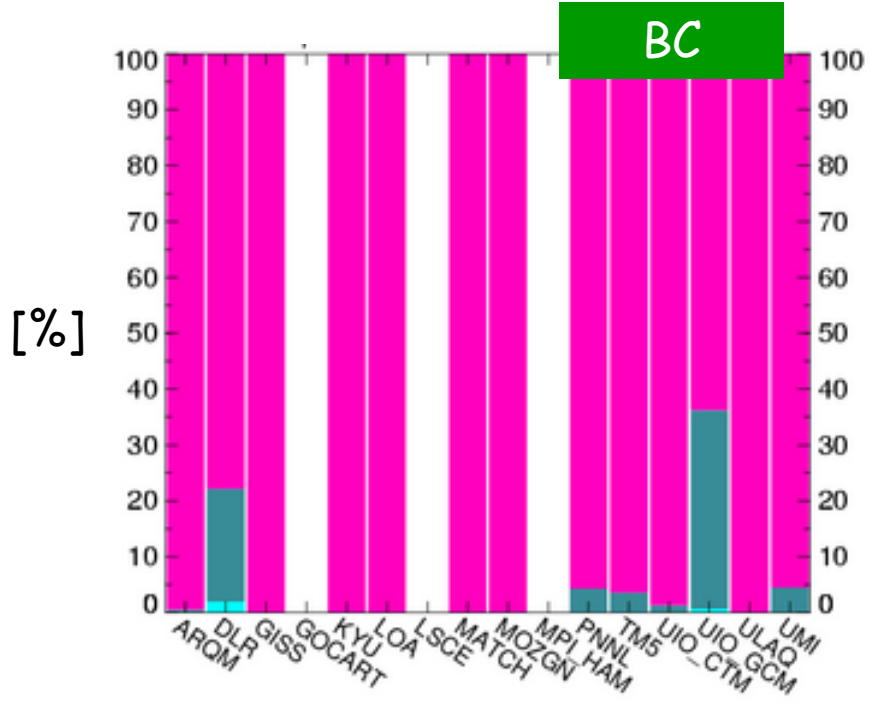
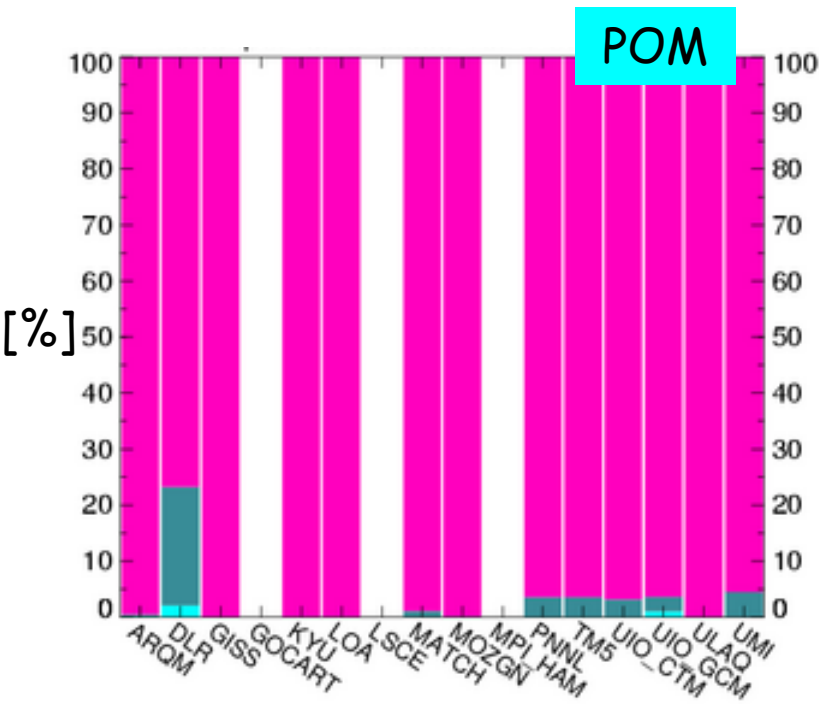
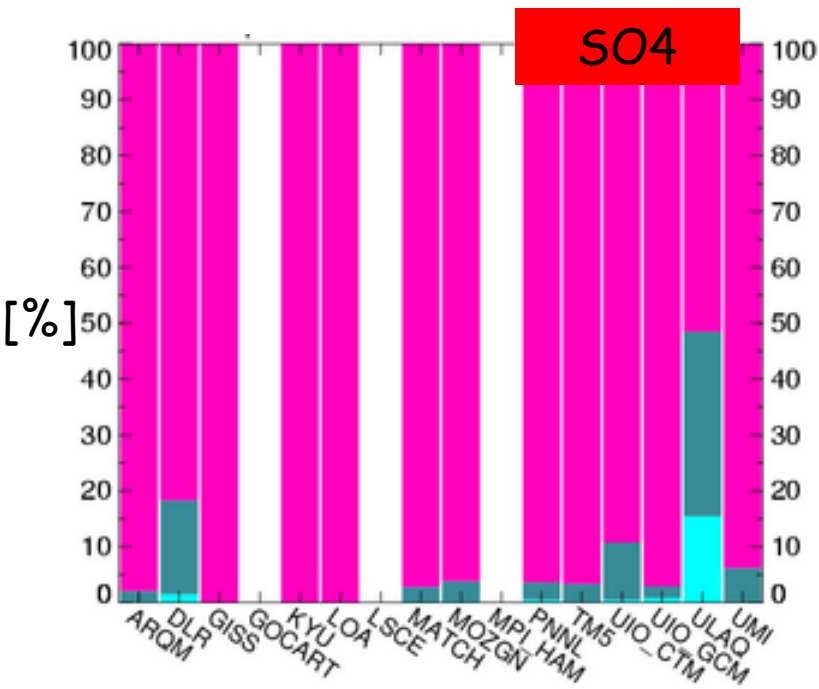
Sarah Guibert

Stefan Kinne

## Mass fraction of total aerosol

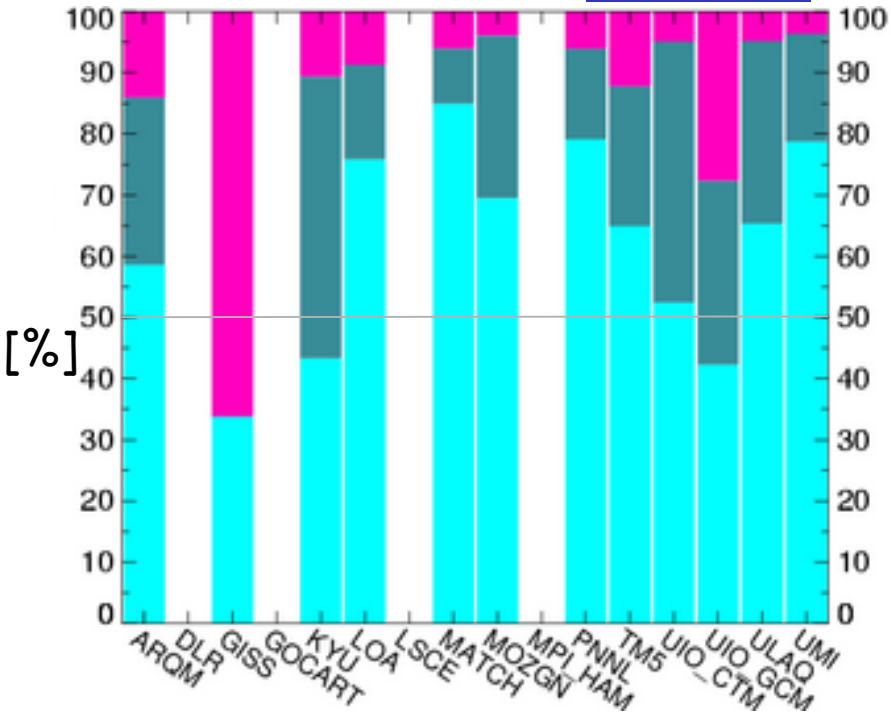


# Mass fraction per size intervall smaller particles



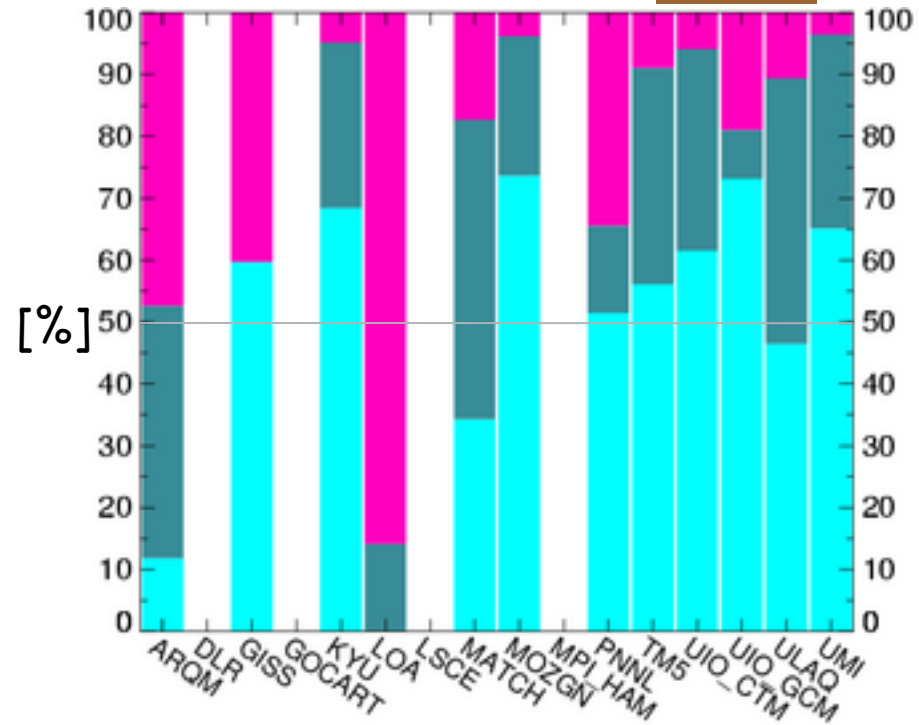
# Mass fraction per size intervall larger particles

SeaSalt



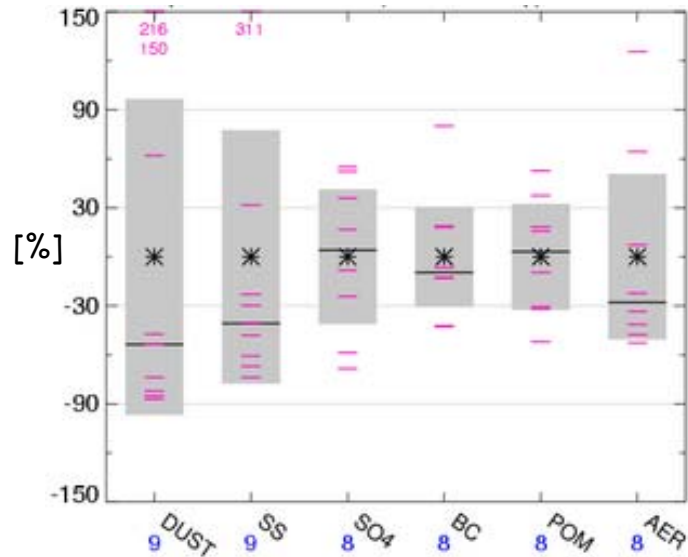
- Acc:  $r < 0.5\mu\text{m}$
- Coa:  $0.5\mu\text{m} < r < 1.25\mu\text{m}$
- Sup:  $r > 1.25\mu\text{m}$

Dust

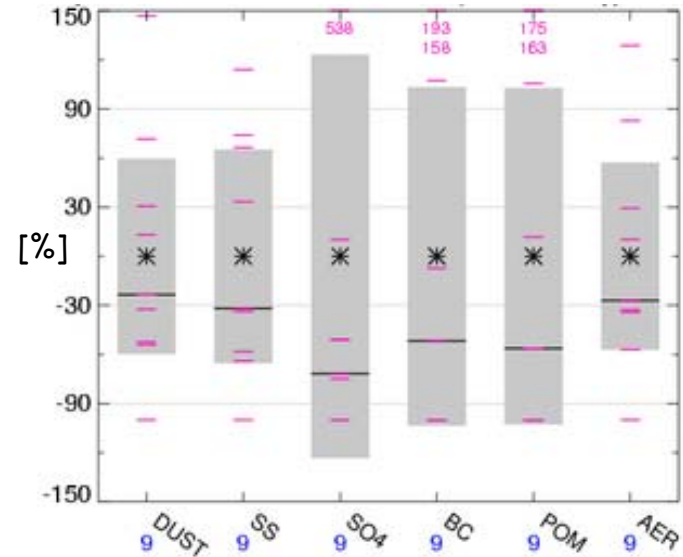


# Uncertainty for mass per size intervall

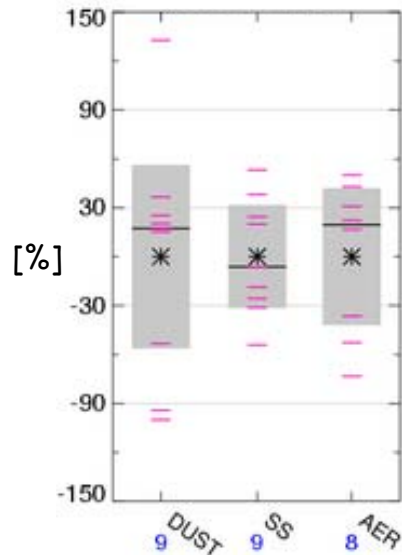
Acc:  $r < 0.5\mu\text{m}$



Coa:  $0.5\mu\text{m} < r < 1.25\mu\text{m}$



Sup:  $r > 1.25\mu\text{m}$



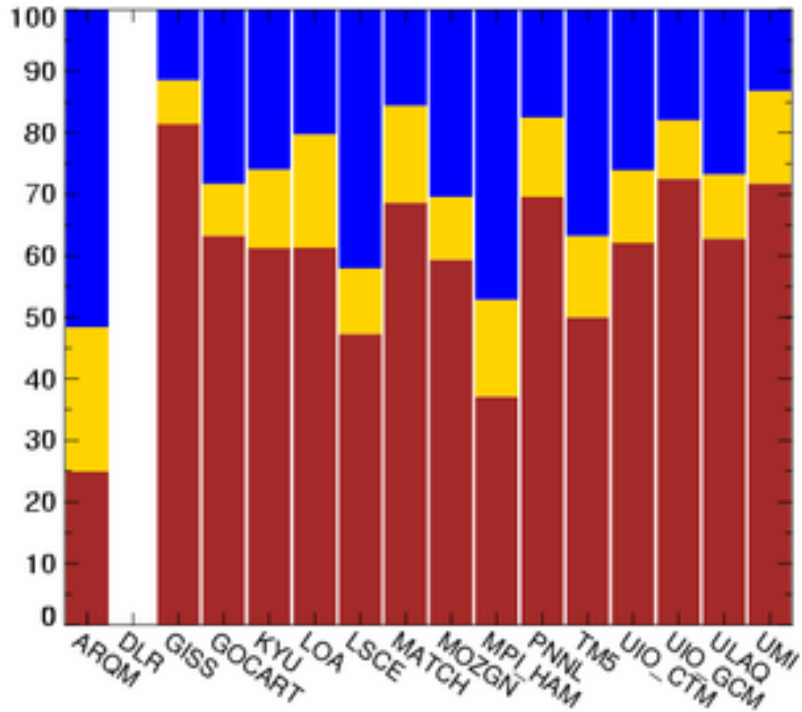
- norm. data
- \* mean
- median
- uncertainty

Uncertainty  $U$ :  
twice the average absolute deviation from the all-models-mean of the normalized data

$$U = \frac{2}{N} \sum_{i=1}^N |\text{data}|$$

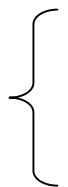
# Fine fraction: SO4, BC, POM

## Mass fraction of fine aerosol

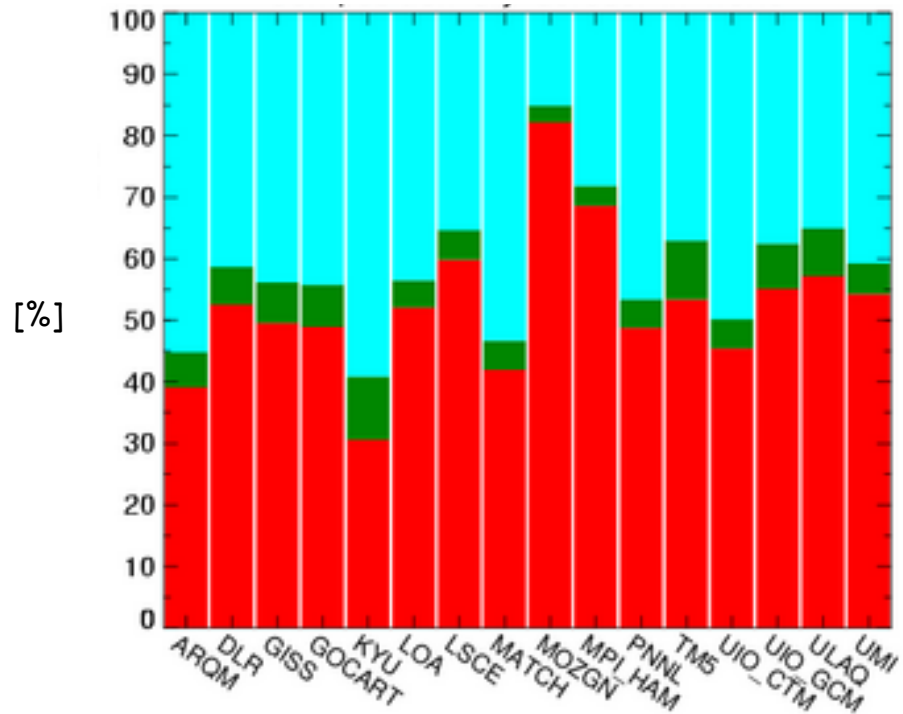


- DUST
- fine
- SS

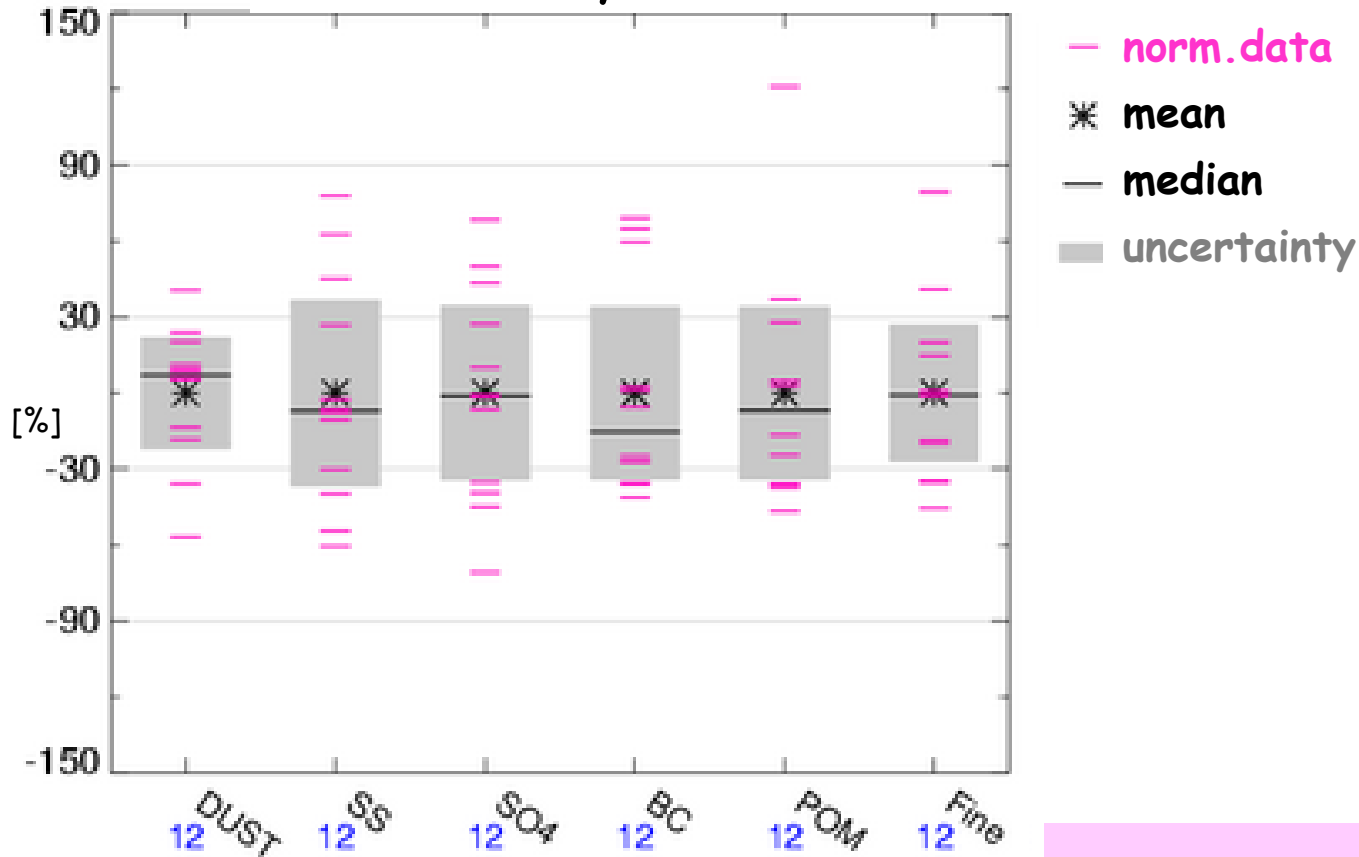
fine



## Composition of 'fine' aerosol



## Uncertainty



Uncertainty  $U$ :  
 twice the average absolute  
 deviation from the all-models-  
 mean of the normalized data

$$U = \frac{2}{N} \sum_{i=1}^N |\text{data}|$$