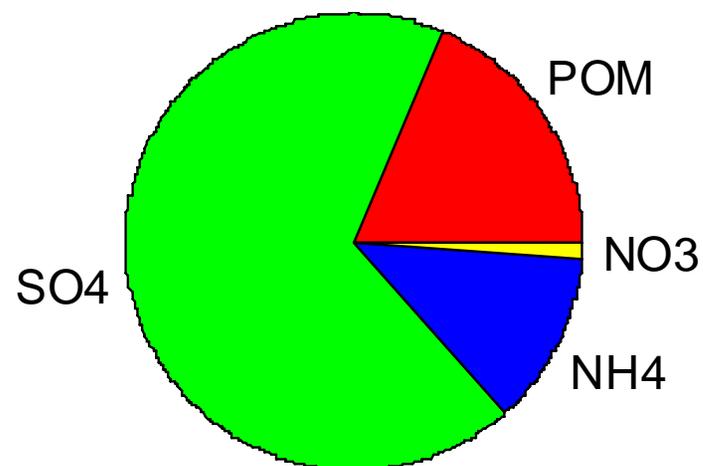


Question G-3

How high are background concentrations of ozone and aerosol, and how do they vary spatially and temporally?

Under southerly flow, the sub-micrometer (60% RH) aerosol in the marine boundary layer over the Gulf of Mexico advecting into Texas was comprised primarily of $(\text{NH}_4)\text{HSO}_4$ (80%). The mean total concentration was $4.0 \pm 3.5 \mu\text{g m}^{-3}$. The NH_4/SO_4 molar ratio was 0.89 ± 0.43 .

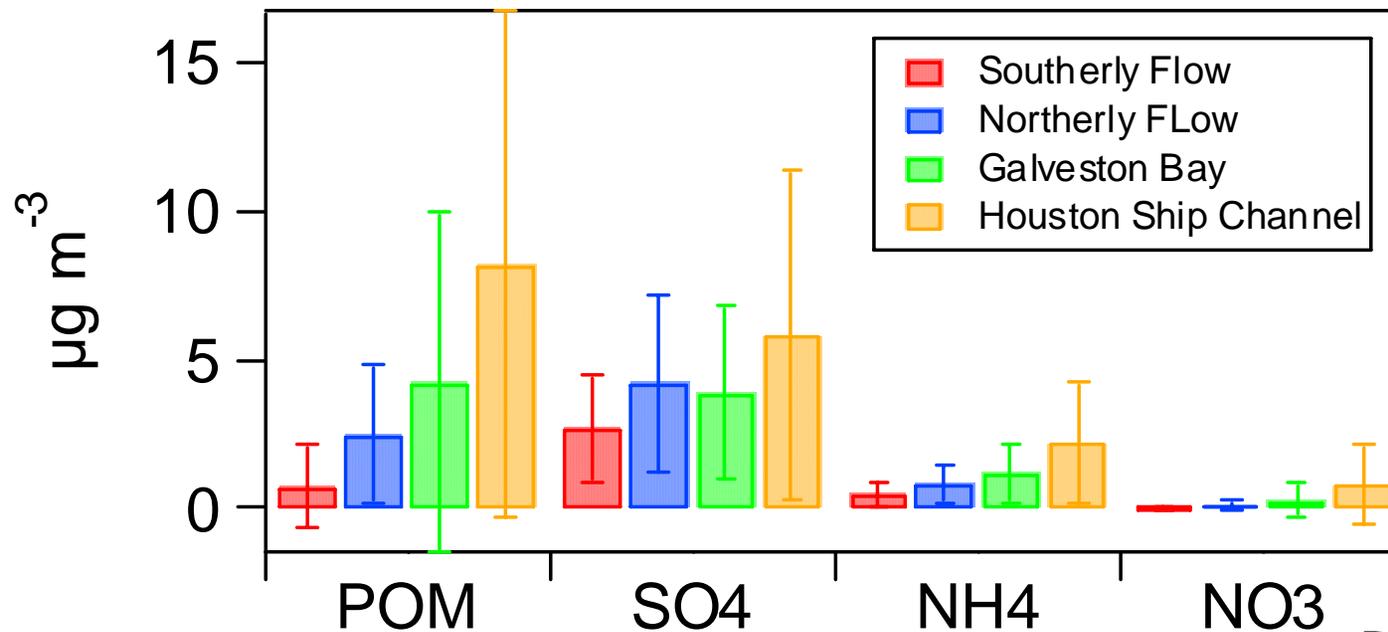


Bates & Quinn, PMEL

Question G-1

How do emissions from local and distant sources interact to determine the air quality in Texas?

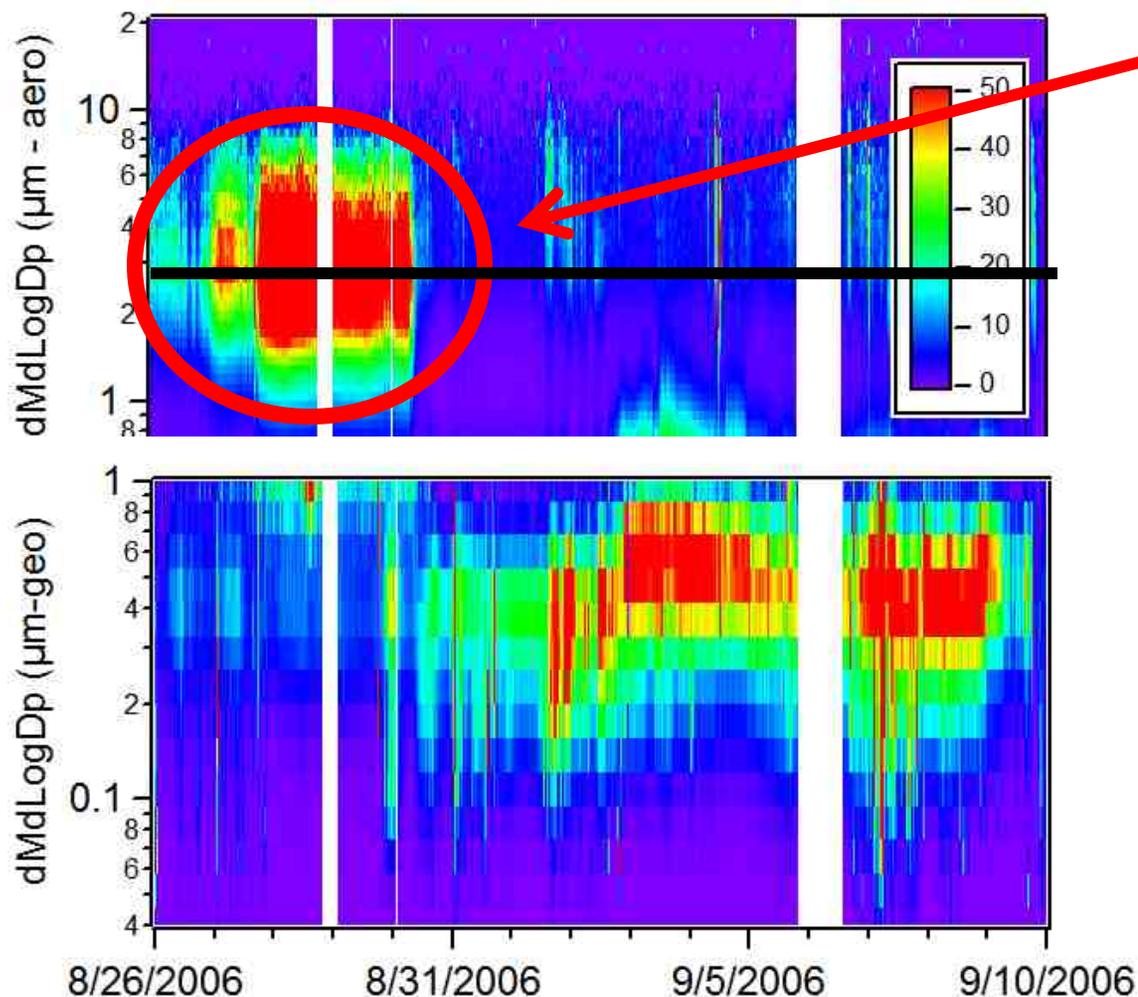
Sulfate concentrations measured in the Houston Ship Channel (HSC) were twice as large as that measured over the Gulf of Mexico (GoM) under southerly flow. Particulate organic matter (POM) concentrations were a factor of 10 greater in the HSC than that measured under southerly flow over the Gulf of Mexico.



Bates & Quinn, PMEL

Question G-3

How high are background concentrations of ozone and aerosol, and how do they vary spatially and temporally?



Saharan dust was a major component of PM 2.5 on 4 days during TexAQS 2006.

Scattering from the dust resulted in low visibility in Galveston Bay and a white haze during the day.

PM_{2.5} dust concentrations averaged $15 \pm 1.7 \mu\text{g m}^{-3}$ during this period.

Bates & Quinn, PMEL

Question D

What distribution of anthropogenic and biogenic emissions of ozone and aerosol precursors can be inferred from observations?

A work in progress-

What can aerosol distributions along the HSC tell us about sources?

