

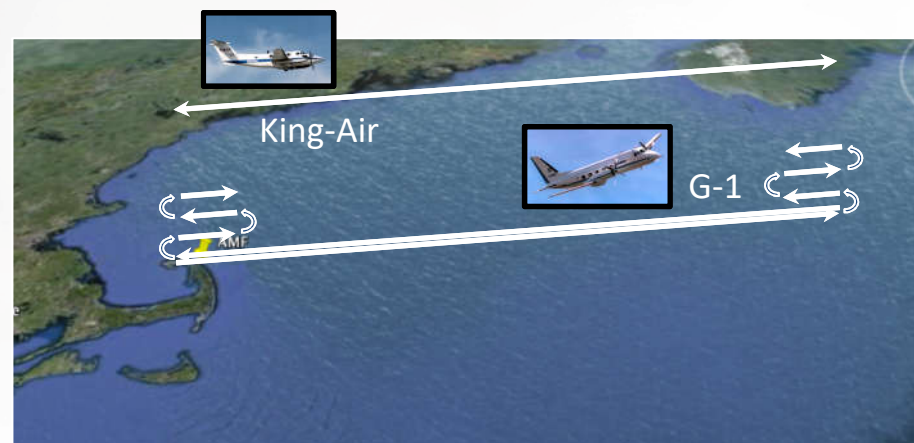
Highlights from the Two Column Aerosol Project (TCAP)

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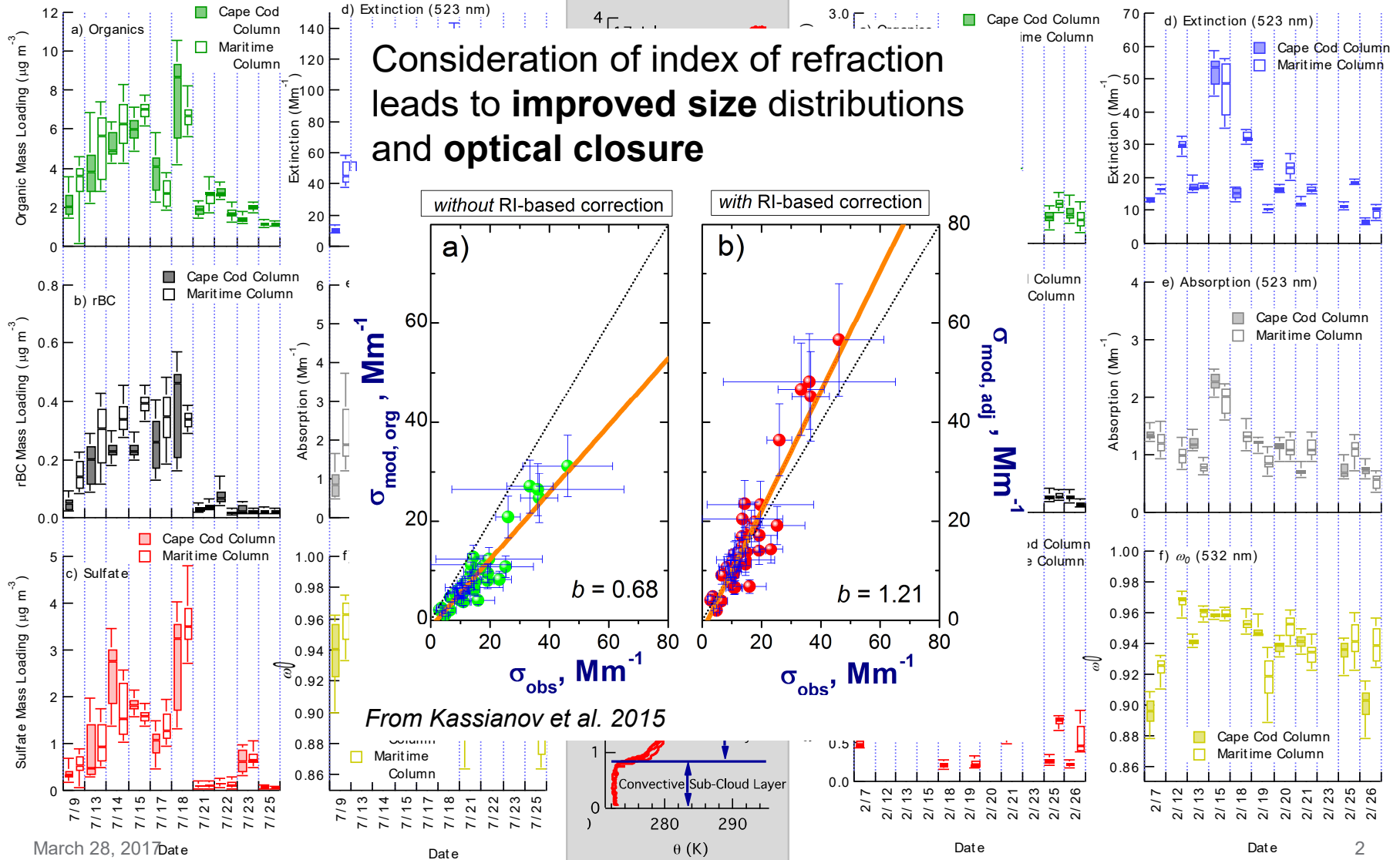


Seasonal variations in aerosol composition and optical properties near column base

Summer: More aerosol mass

Winter: Similar amounts of rBC

Consideration of index of refraction leads to improved size distributions and optical closure



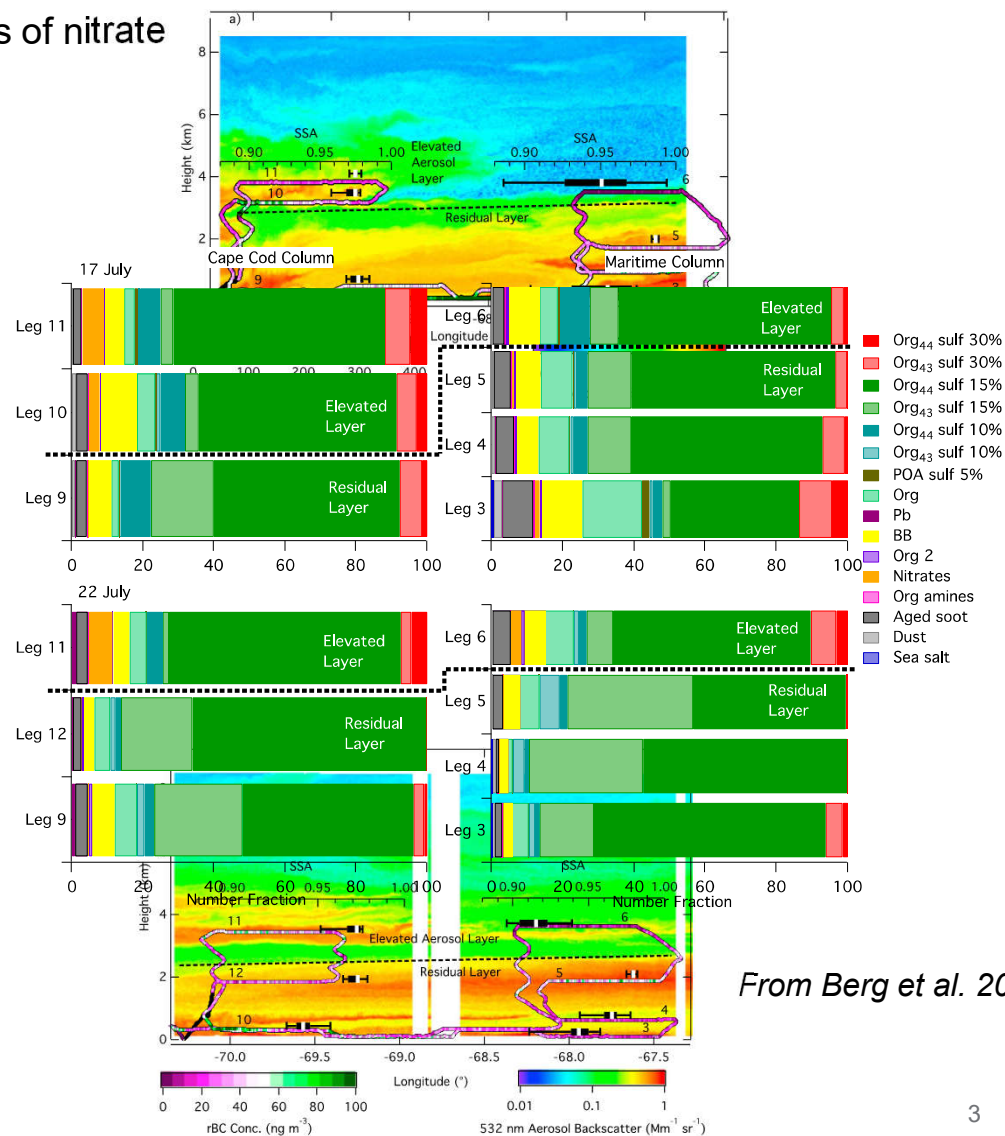
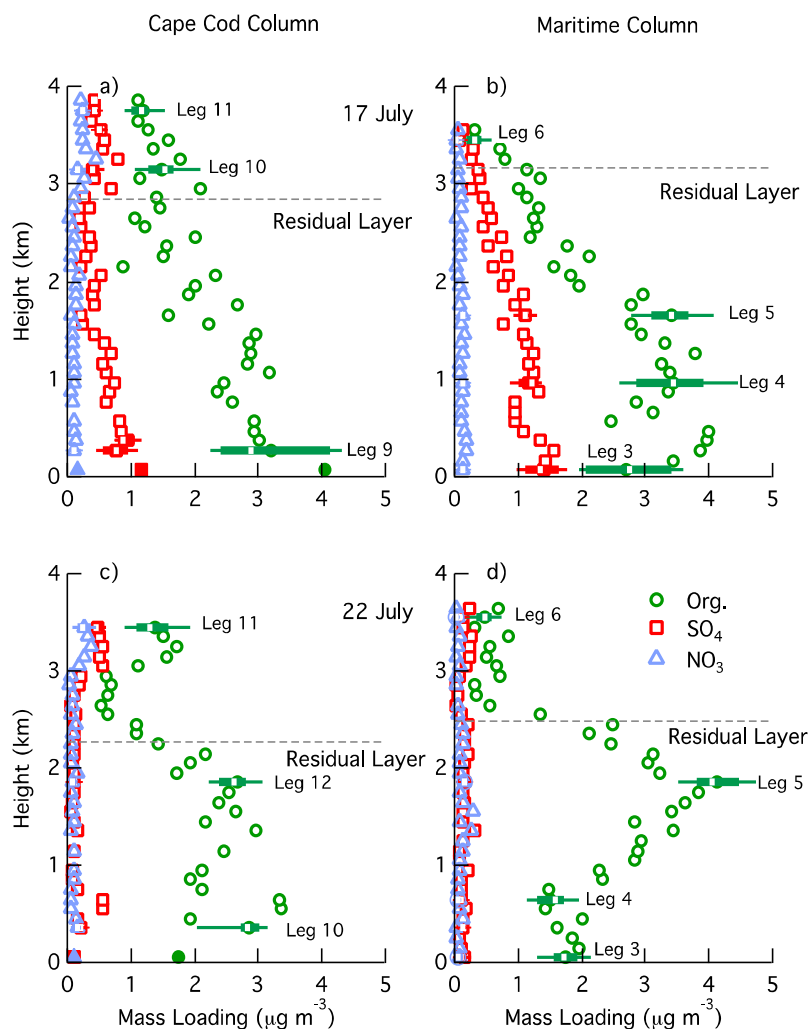
March 28, 2017 Date

From Berg et al. 2016

Aerosol composition and mixing state

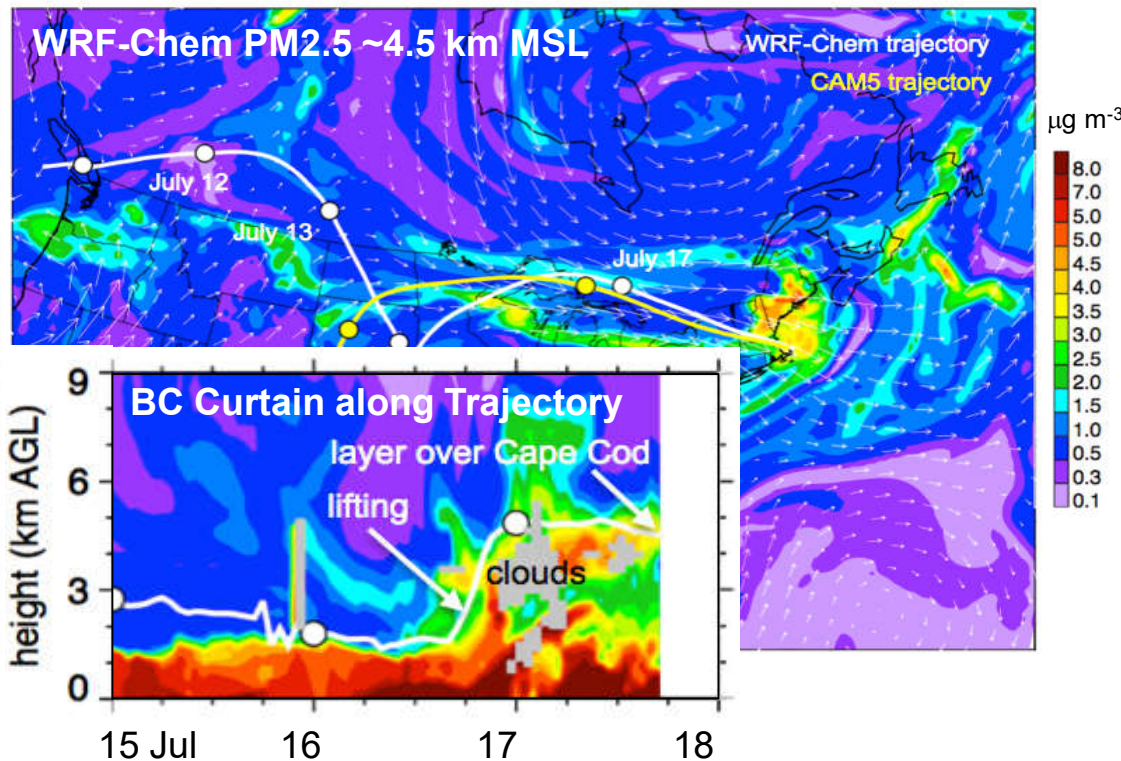
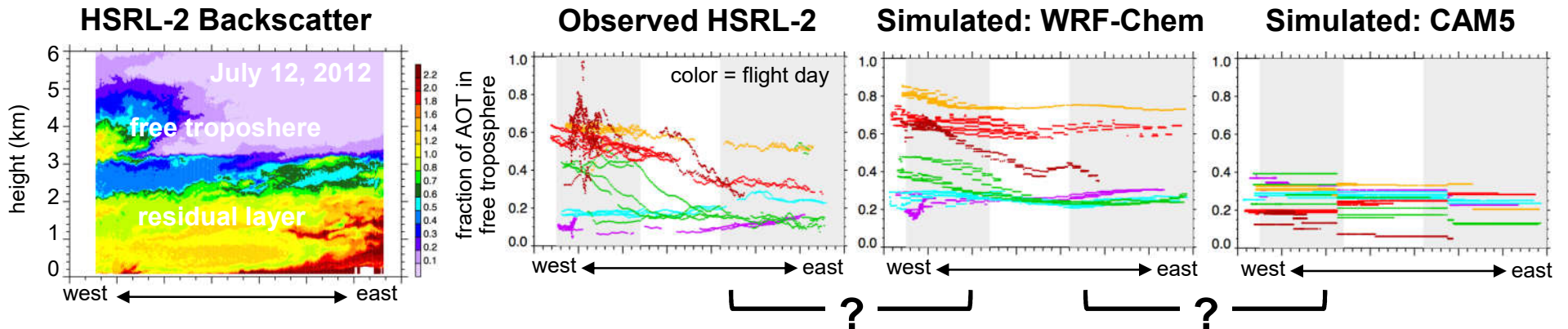
► Majority of aerosol are of mixtures of organics and sulfate

■ Elevated layers have enhanced amounts of nitrate



From Berg et al. 2016

Observed and simulated impact of elevated aerosol layers



- ▶ Regional model captures better the mean vertical motions associated with pre-frontal conveyor belts
- ▶ Parameterization of convective transport a secondary issue in this case

from Fast et al., JGR, 2016