

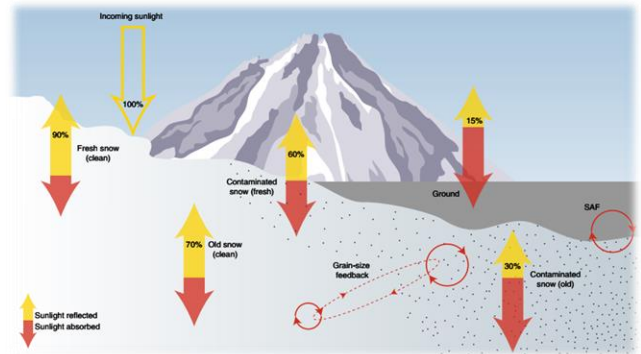
# Radiative Effects of Organic Carbon Deposited on Snowpack

• Yue Zhou, Alexander Laskin, et al. (ARM/ASR PI meeting, June 23, 2021)



## Motivation

- Composition-specific influence of OC on the snow albedo reduction.

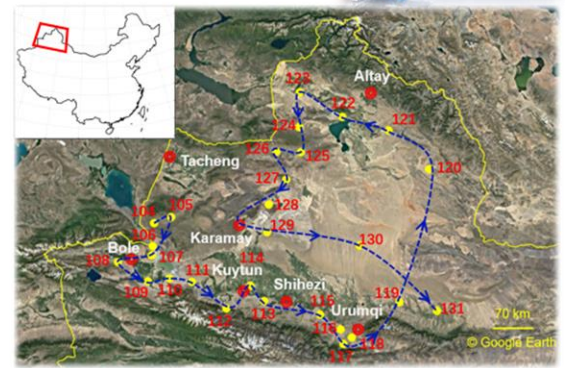


<https://doi.org/10.1038/s41558-018-0296-5>

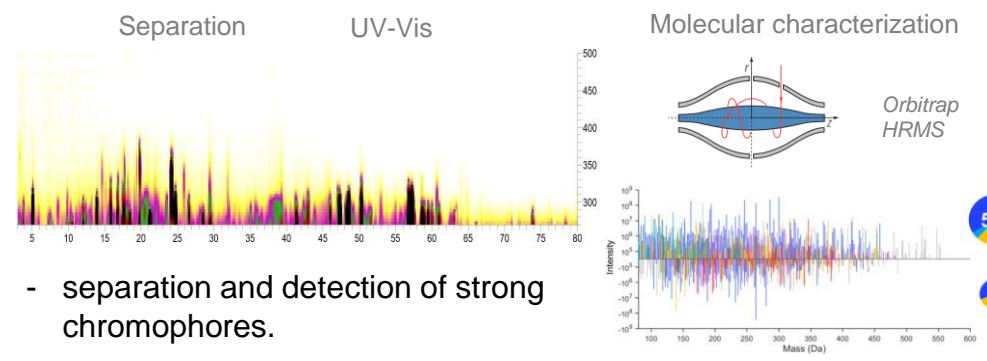
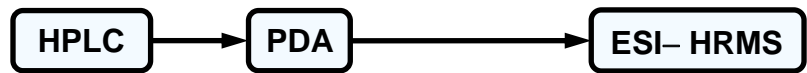
## Snow sampling



- Xinjiang, China; 28 sites

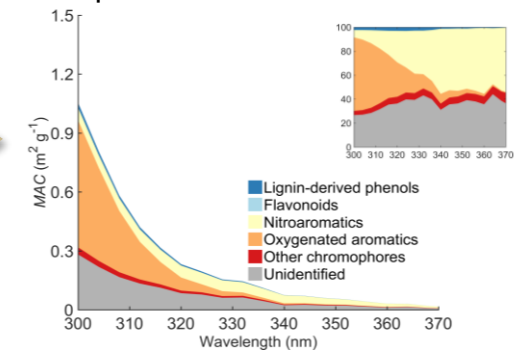


## Composition-specific optical properties of snow BrC



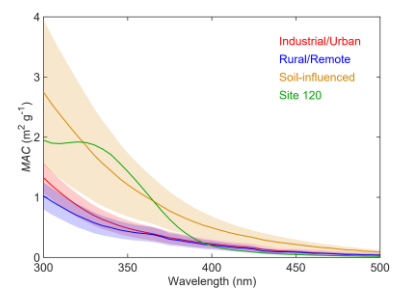
- separation and detection of strong chromophores.

- relative contributions of different types of chromophores to the total MAC.



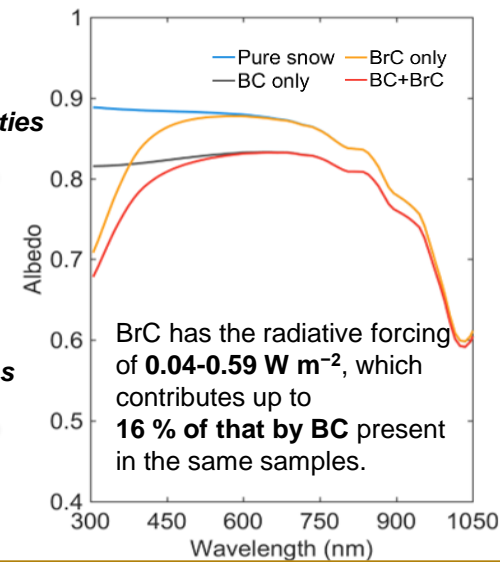
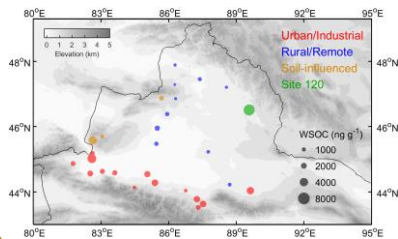
## Radiative forcing of snow BrC

<https://doi.org/10.5194/acp-21-8531-2021>



BrC optical properties

WSOC concentrations



Snow physical properties

Model simulation



EarthSciCode/  
SNICARv2  
SNICAR snow model codes (for educational & research purposes only)

Snow, Ice, and Aerosol Radiation (SNICAR) model