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- **Team:** Allison Aiken, Katie Benedict, Abu Sayeed Md Shawon, Kyle Gorkowski

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- **Goal 1:** Analyze Aerosol Observing System (AOS) and Tethered Balloon Sonde (TBS) measurements for seasonal and diurnal cycles (FY23-24 FICUS)

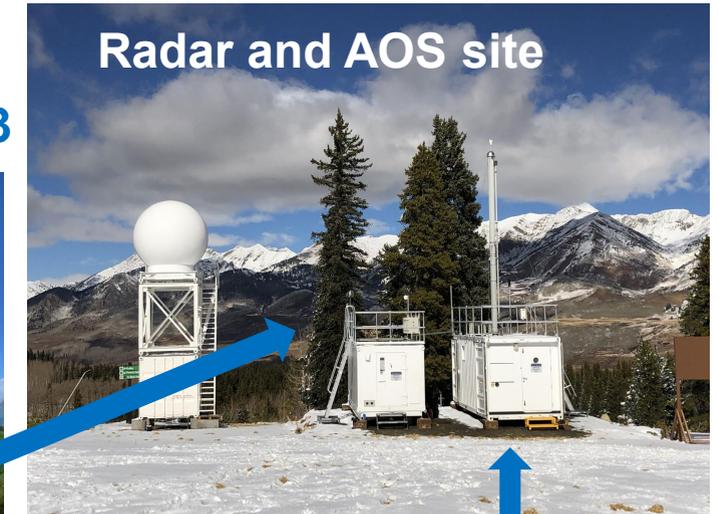
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- **Goal 2:** Study Supermicron and Bioaerosol during the SAIL Supermicron Bioaerosol Field campaign (FY22-FY23 ARM)

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Supermicron Aerosol
Sensors
June 2022 – June 2023



Radar and AOS site

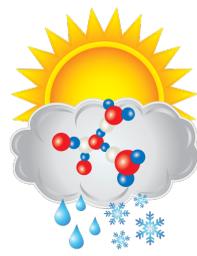


Gothic AMF2 Site

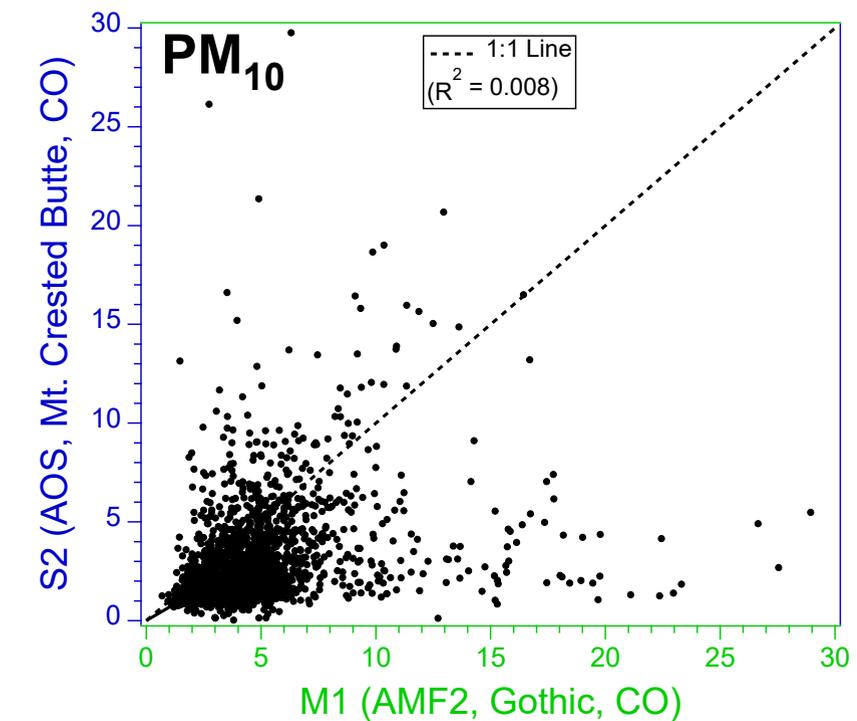
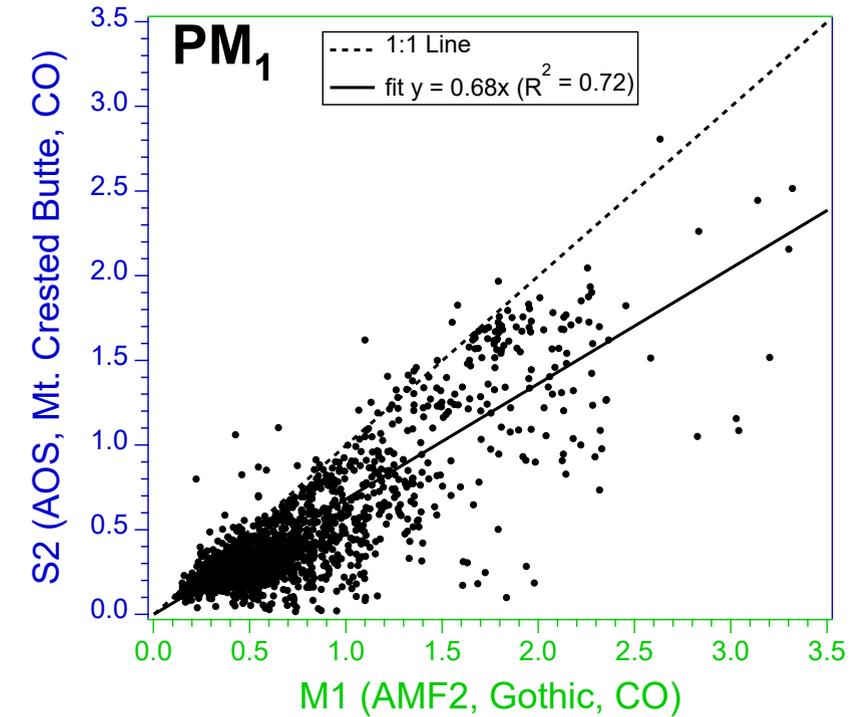
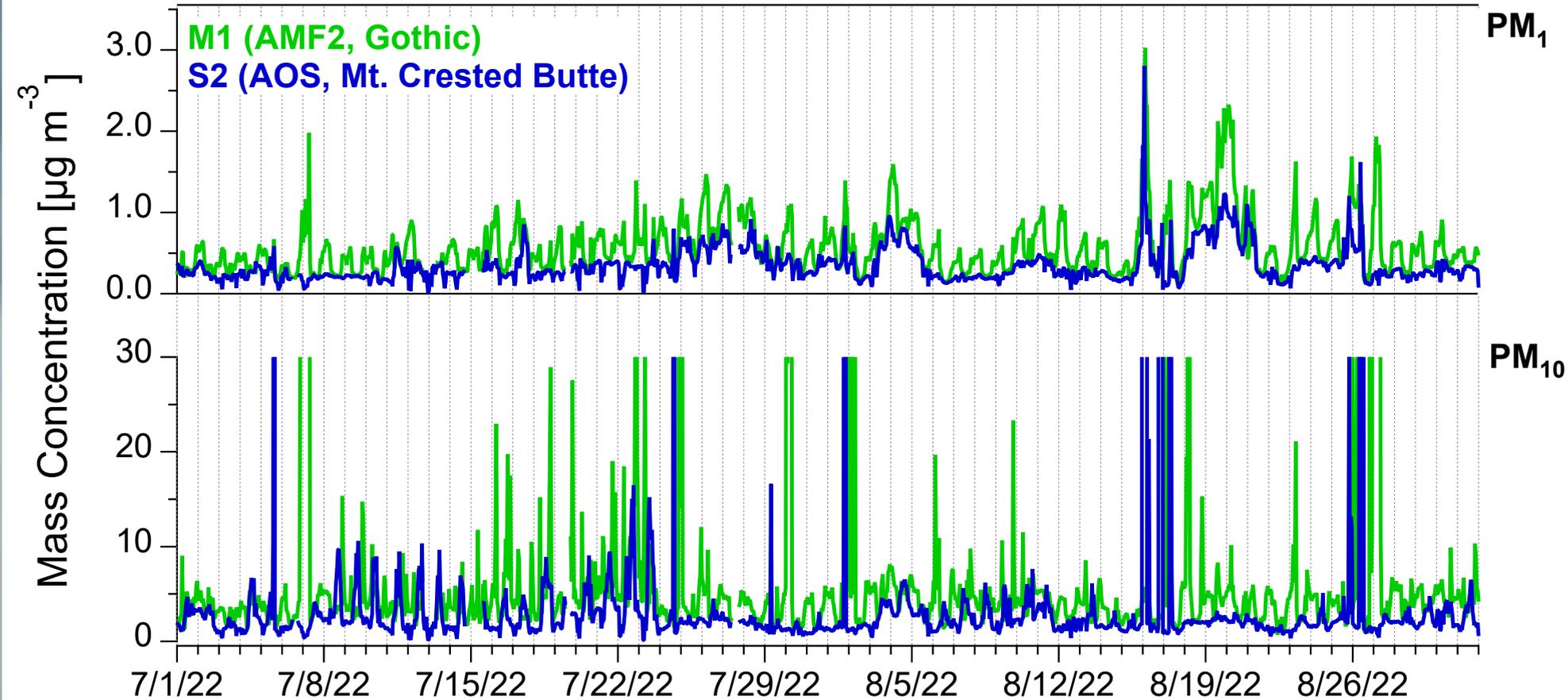


Wideband Integrated
Bioaerosol Sensor
(WIBS)

June – Sept 2022,
Mar – June 2023



Summer 2022



- PM₁ is well-correlated at the two sites and has a diurnal cycle at M1 that is not observed at S2 (AOS)
- PM₁₀ is not well-correlated between the sites

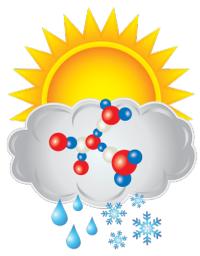
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SAIL Aerosol Regimes and Processes: Results

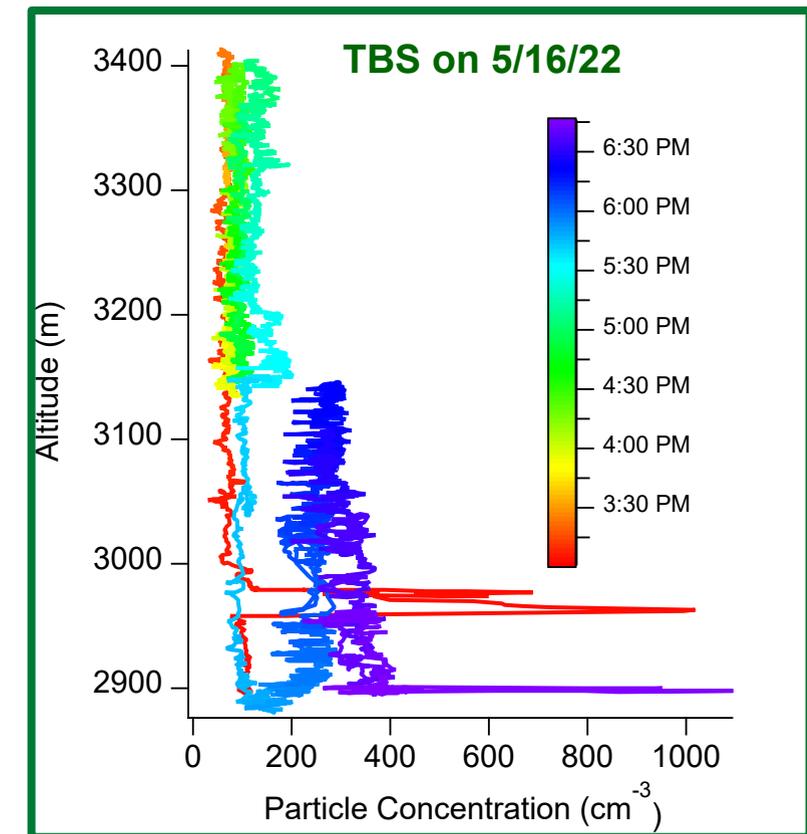
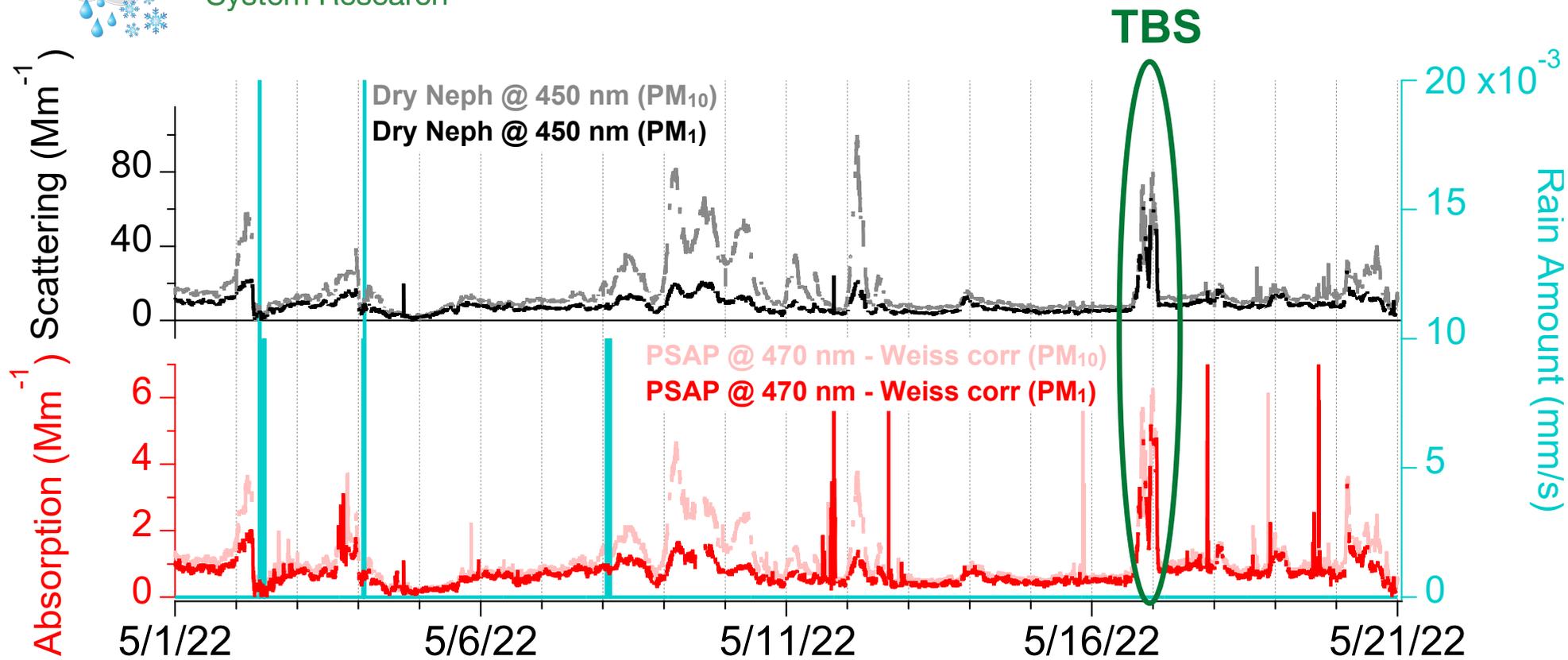
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- AOS: Elevated supermicron events observed in May
- AOS and TBS: Submicron biomass burning event

FY23 FICUS Awardee

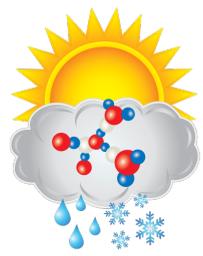


Allison Aiken
Los Alamos National Laboratory

Seasonal Vertical Aerosol Profiling for Aerosol-cloud-precipitation interactions to Advance Mountainous Hydrological Process Science

Aerosols are critical for understanding the water cycle of mountainous regions, but a complete understanding cannot be provided without vertically resolved observations. The project aims to provide a greater understanding of aerosols and associated meteorological conditions for complex mountainous terrain in the East River Watershed of the Upper Colorado River.





SAIL Aerosol Regimes and Processes: Results

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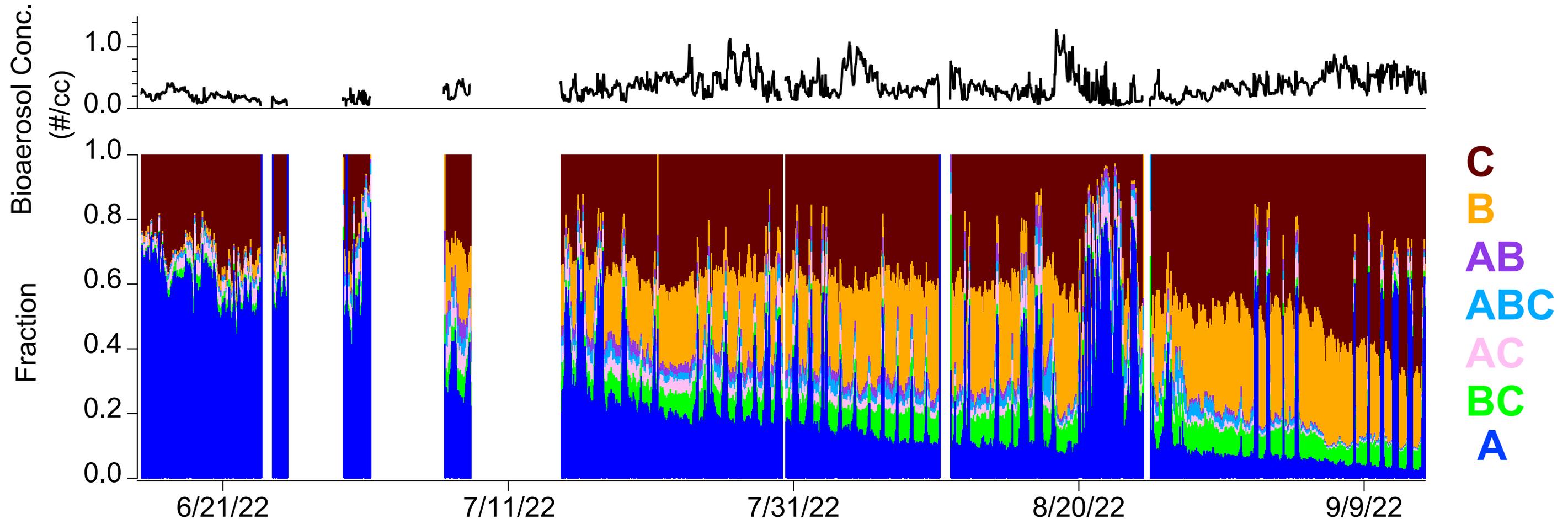
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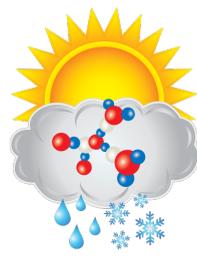
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- Timeseries of different types of fluorescent particles changed during the 3-month initial deployment
- Offline filter samples of bioaerosol also were collected and are being analyzed



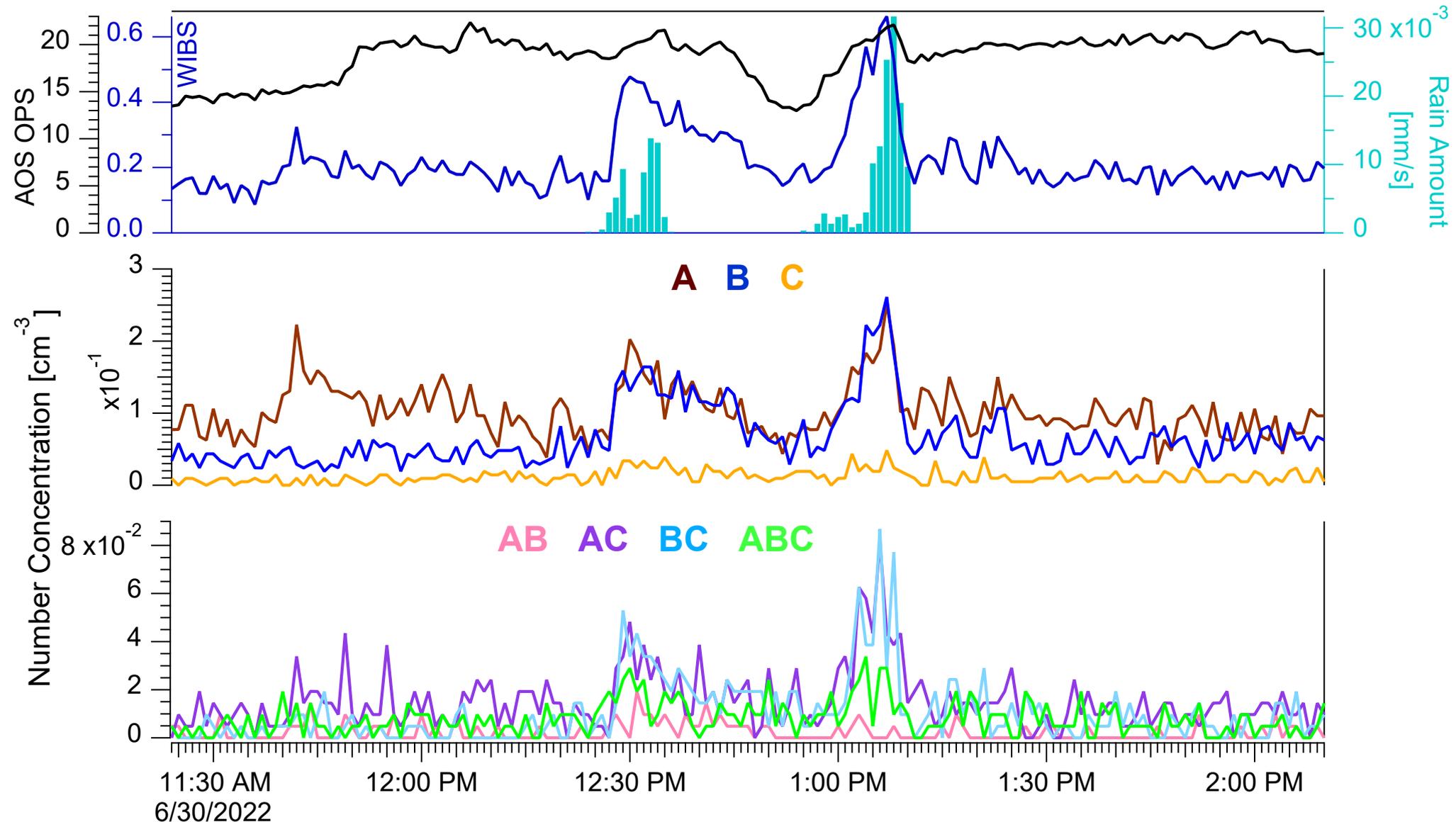


SAIL Aerosol Regimes and Processes: Results

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- Initial WIBS deployment sampled 54 rain events from June 15 – Sept 13, 2022
- Example below of one event showing the fluorescent particle type time series

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