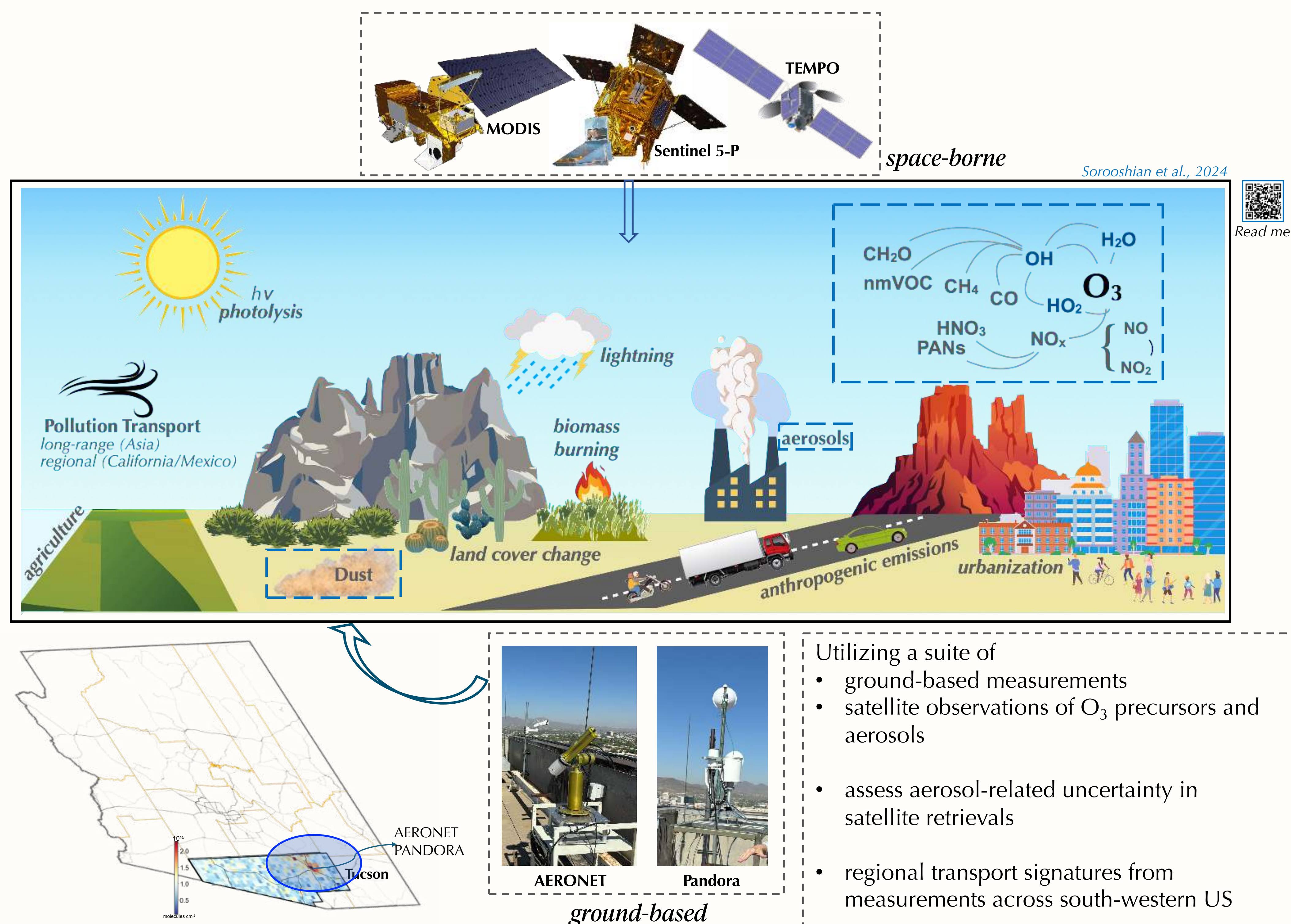


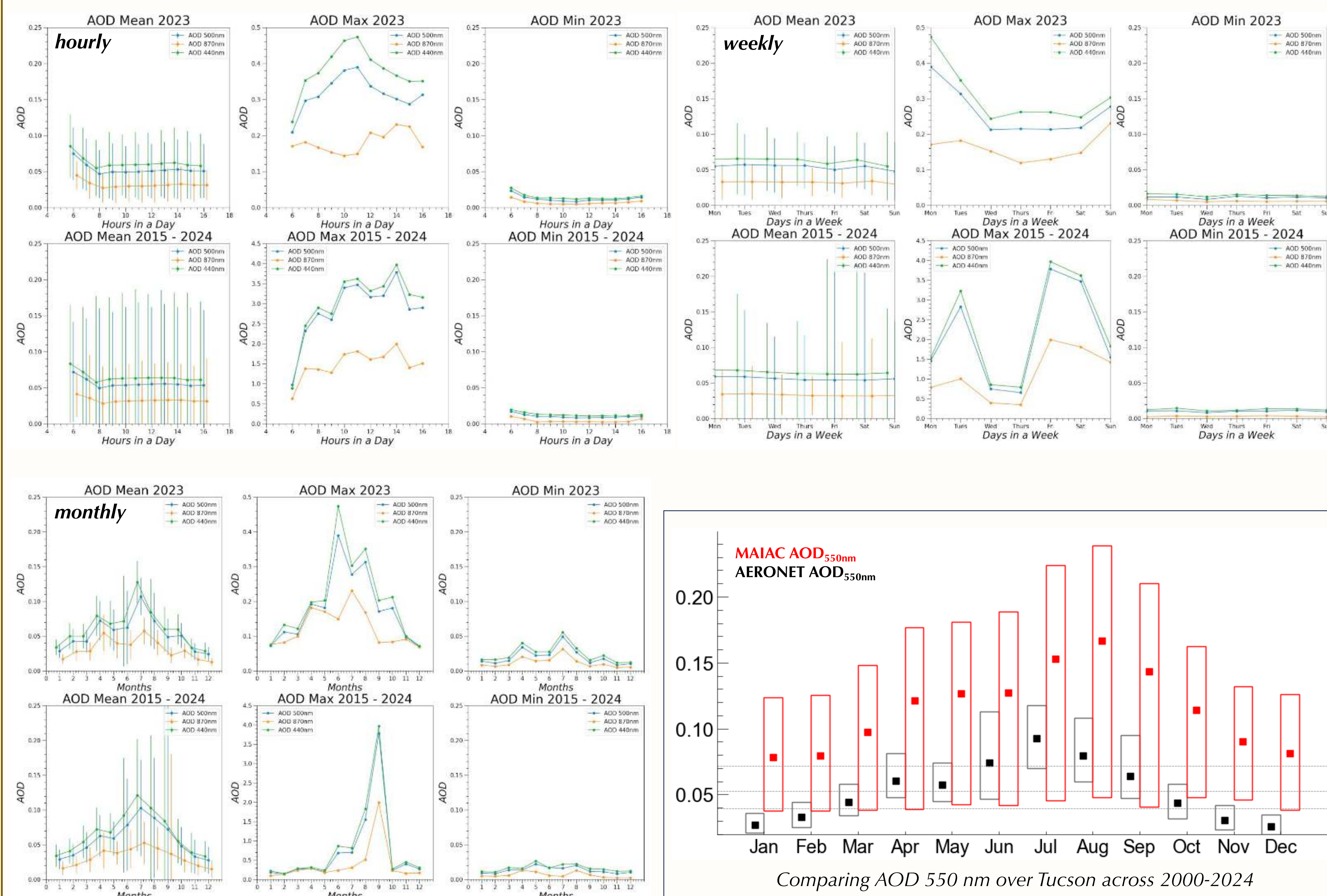


Chayan Roychoudhury | Aviel R. Arellano | Seyedmohammadamin Mirrezaei | Yafang Guo | Grace B. Betito | Armin Sorooshian | Avelino Arellano

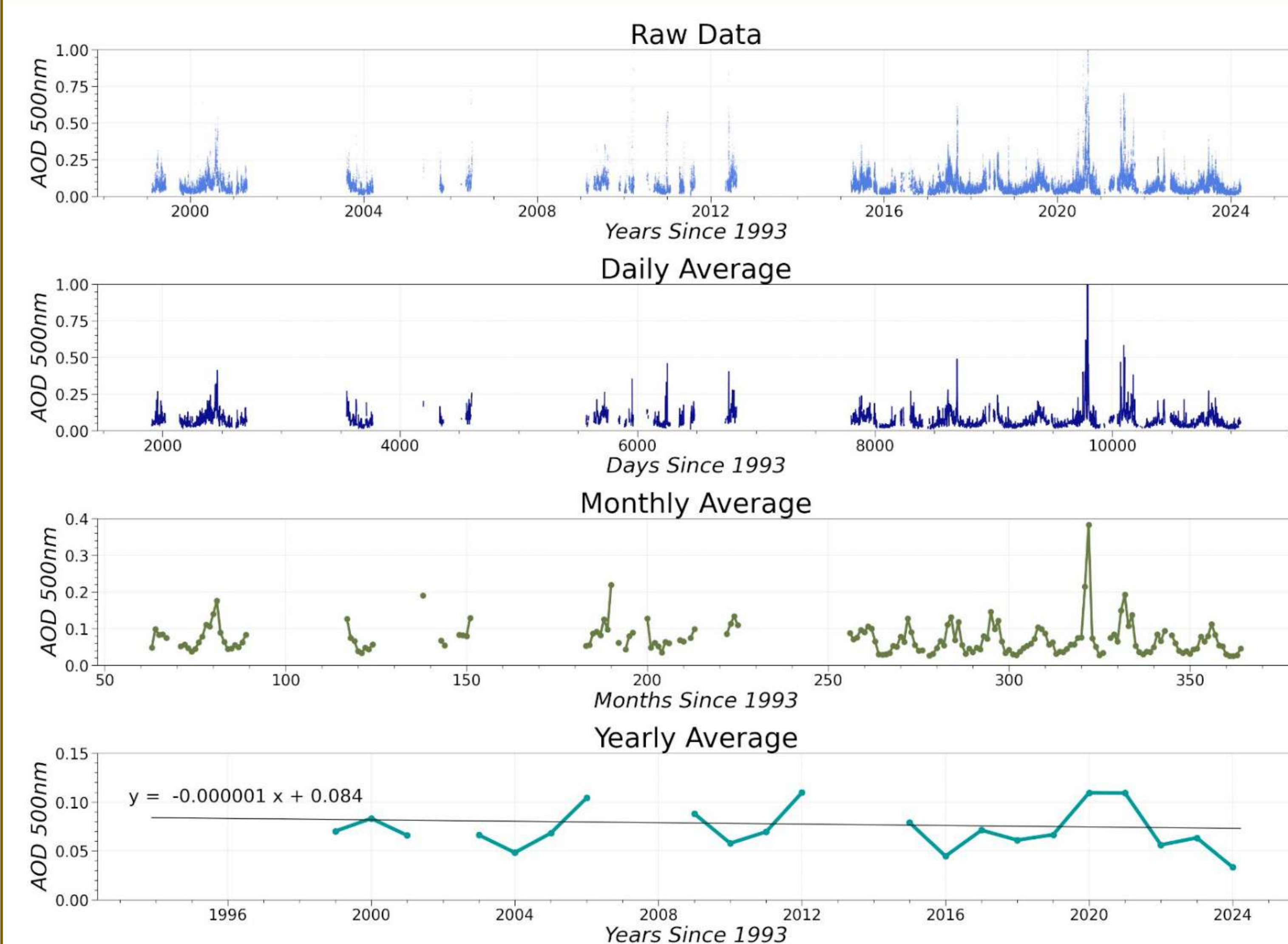
Unique Environment of Arizona



Leveraging collocated observations seasonality of aerosols over Tucson



Leveraging collocated observations aerosol observations from AERONET over Tucson



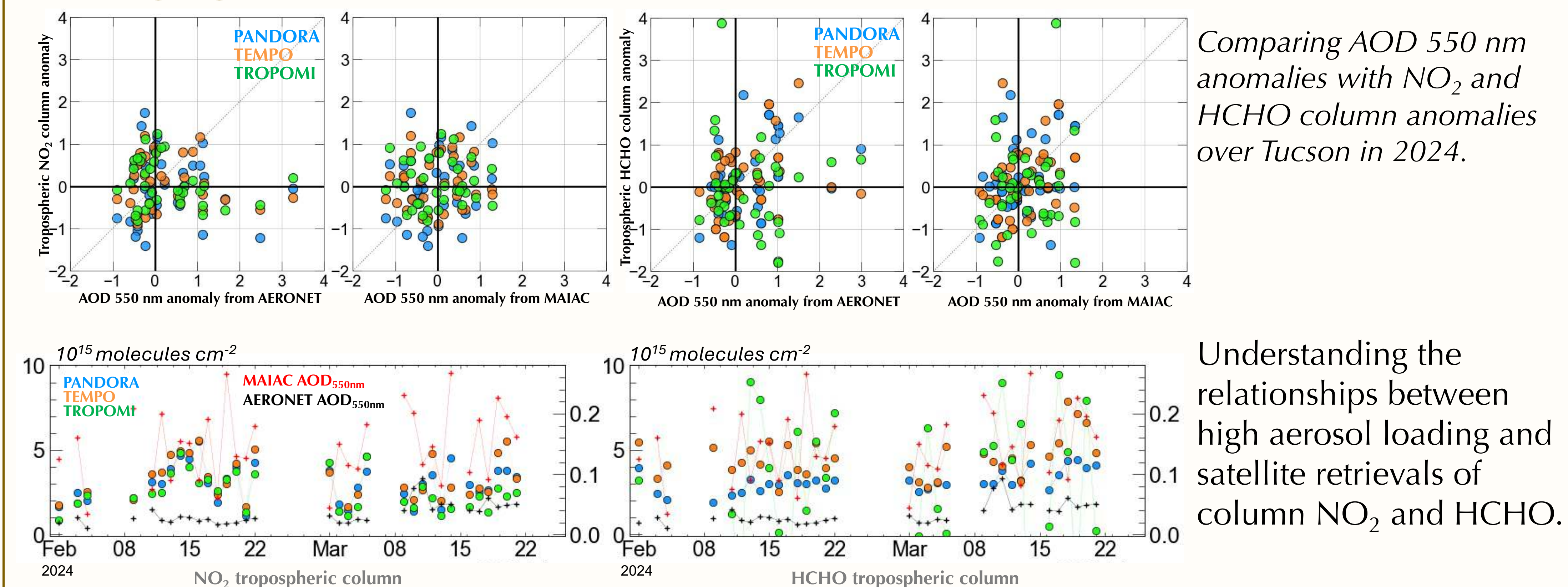
AERONET observations of AOD at 500 nm in Tucson since the early 2000s

Dust storms or *haboobs* often occur during the July-September monsoon season over Arizona.



NWS Tucson, 10th July 2021, 7 PM
A haboob sweeping across Tucson.

Leveraging collocated observations O₃ precursors from space and ground



Initial results show influences of aerosols on NO₂ and HCHO retrievals for higher aerosol loadings. This is consistent with the fact that high pollution events like dust storms can lead to an average 50% of uncertainty in air mass factor calculations that impact NO₂ and HCHO retrievals from satellites. This can in turn impacts the assessment of tropospheric ozone, its precursors and the chemical regimes influencing ozone over the south-western US. We plan to conduct detailed analysis to better understand these influences.

Lorente et al., 2017