

Abstract Submitted  
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**Variability of Aerosol Optical Properties Based on Particle Size, Concentration and Origin** RUDRA ARYAL, SETH MALHOTRA, Eckerd College — This work provides time series of size segregated aerosol optical depth (AOD), absorption angstrom exponent, single scattering albedo, aerosol size distribution observed over Tudor Hill, Bermuda. Aerosol optical properties (absorption and scattering) are compared with corresponding chemical compositions. It is observed that coarse particle light scattering is dominated by sea salt particles and fine aerosol light scattering is dominated by non-sea salt sulfate. The concentration of coarse sea salt aerosols shows a strong correlation with the wind speed however chemical composition observed in fine particles did not show any connection with the wind speed. The possibility of different origins of aerosol particles such as from continental, oceanic, industrial etc. will be presented based on the back trajectory analyses and the chemical composition.

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