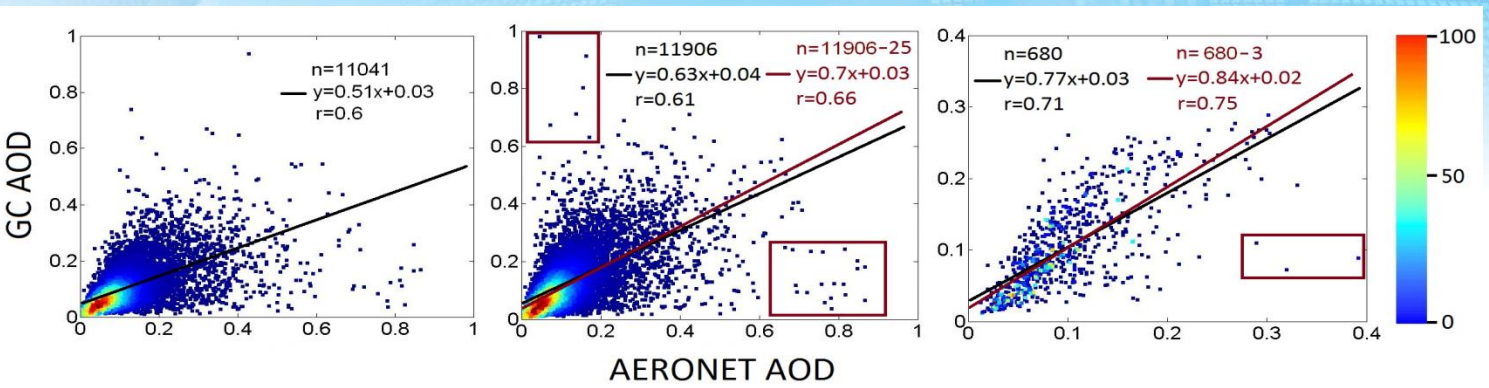
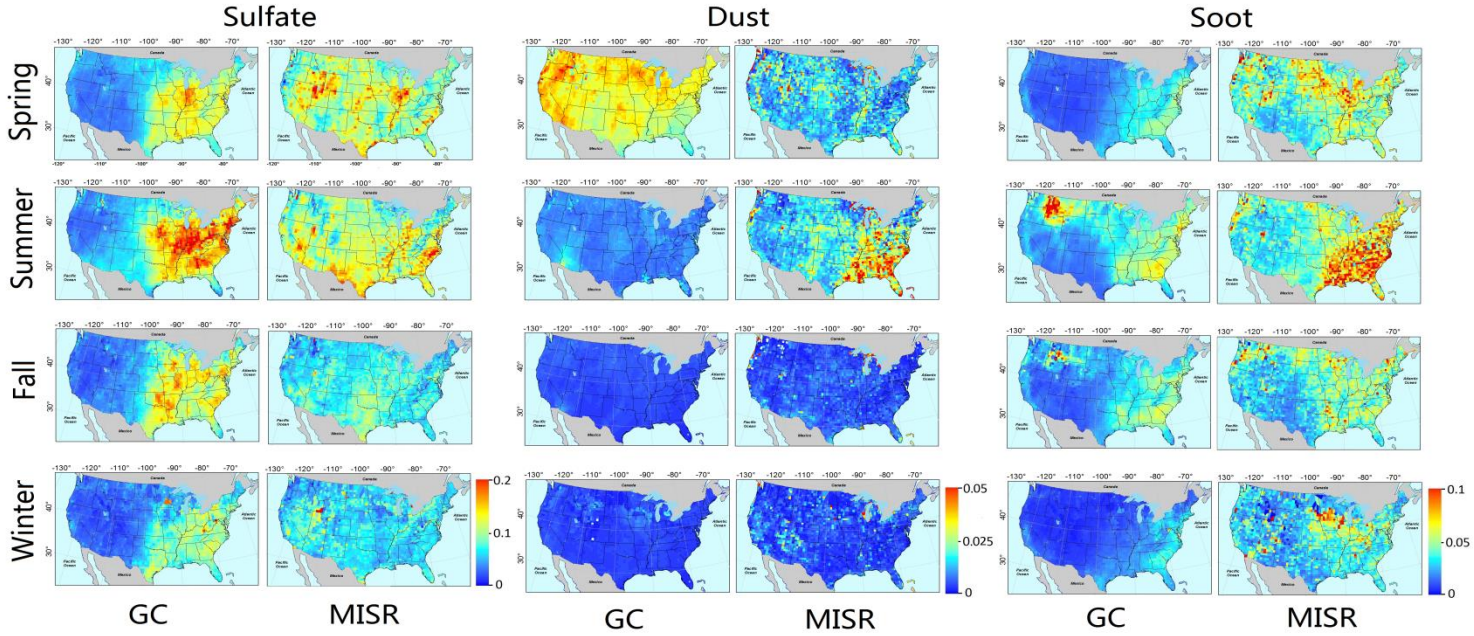
GC simulated aerosol optical depths in the contiguous U.S. under various geographical and climatic conditions were evaluated by AERONET and MISR.



The agreement between AERONET and GC was improved after controlling for spatial variability, removing outliers, and averaging over a monthly timescale. Smaller correlation coefficients are seen in the summer and winter, in the evening, and in the western U.S.



The large discrepancies between GC and MISR componential AODs are due to GC uncertainties such as local inorganic aerosol emissions, fire events, and dust transport, and MISR retrieval errors from the bright surface reflectance and inappropriate optical properties

Shenshen Li, et al., 2013, JGR