



Relationship between wind speed and aerosol optical depth over remote ocean

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The effect of wind speed on aerosol optical depth (AOD) at $0.55 \mu\text{m}$ over remote ocean regions is investigated. Remote ocean regions are defined by the combination of AOD from satellite observation and wind direction from ECMWF. According to our definition, many ocean regions cannot be taken as remote ocean regions due to long-range transportation of aerosol from continents. Highly correlated linear relationships are found in remote ocean regions with a wind speed range of $0\text{--}20 \text{ ms}^{-1}$. The enhancement of AOD at high wind speed is explained as the increase of sea salt aerosol production.

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