



Opportunities for understanding of aerosol cloud interactions in the context of Marine Cloud Brightening Experiments

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Anthropogenic aerosol impacts on clouds constitute the largest source of uncertainty in radiative forcing of climate, confounding estimates of climate sensitivity to increases in greenhouse gases. Projections of future warming are also thus strongly dependent on estimates of aerosol effects on clouds. I will discuss the opportunities for improving estimates of aerosol effects on clouds from controlled field experiments where aerosol with well understood size, composition, amount, and injection altitude could be introduced to deliberately change cloud properties. This would allow scientific investigation to be performed in a manner much closer to a lab environment, and facilitate the use of models to predict cloud responses ahead of time, testing our understanding of aerosol cloud interactions.