



Mechanisms for indirect effects from aerosol pollution on mixed-phase clouds

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Aerosol pollution can have various effects on mixed-phase clouds. They can alter coalescence and raindrop-freezing for droplet activation by CCN aerosols. They can alter aggregation of ice crystals and snow formation. This can alter the lifetime of mixed-phase clouds, as well as the reflectivity for solar radiation. Simulations of observed cases of mixed-phase clouds have been performed to examine the mechanisms for effects from aerosol pollution on them. Such mechanisms are discussed in the presentation.