

Dienstag, 13.06.2024, 14.00 Uhr

Leipziger Meteorologisches Kolloquium

Prof. Dr. Daniel Rosenfeld

(The Hebrew University of Jerusalem)

“The Large opposite effects of fine and coarse soluble aerosols on both shallow and deep convective clouds”

It is well-established that adding fine aerosols to marine shallow clouds leads to larger drop concentrations, which enhance cloud albedo, suppress rain, increase cloud cover, and adjust the liquid water path. The effect of fine aerosols on the invigorating and electrification of deep convective clouds (DCC) is still under intense scientific debate, but we show compelling supporting observational evidence. Furthermore, the aerosol convective invigoration leads to positive radiative forcing. New findings show that added coarse sea spray aerosols have the opposite effects to those of fine aerosol convective invigoration. Surprisingly, adding modest amounts of coarse sea spray aerosols to clean shallow marine clouds can increase their cloud radiative effect beyond what can be achieved by adding only fine aerosols.

Link:

<https://eu02web.zoom-x.de/j/61754227997?pwd=aFVRZXlTTWEvY2lIK2s3ZkUxRTVGUT09>

Meeting-ID: 617 5422 7997

Kenncode: 586500

Ort: TROPOS, Seminarraum, Geb. 23.1