### Modelling aerosol-cloud-climate interactions

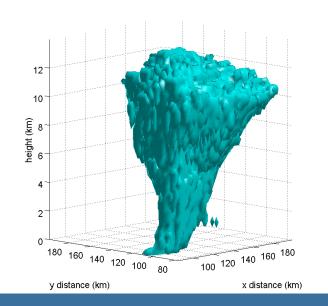
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## The MIT 3-D/2-D cloud-resolving model

**Aerosols** Number of CCN or IN Multi modal model

#### Radiation

*δ-four-stream including ice cloud* 

**Chemistry** Species: 25g+16c,r+7i Reactions: 35g + 21eq + 32aq + 7h

Cloud physics module winds, T, P, Qv, lightning 4 Hydrometeors (Q & N) 40+ microphysical conversions

> Environment large-scale forcings and input fluxes

References: Wang and Chang, 1993; Wang et al., 1995; Wang and Prinn, 2000; Wang 2002; Ekman and Wang, 2004

# **Research interests**

- Impact of aerosol concentration and composition on convective cloud development and cloud characteristics.
- Transport and formation/processing of aerosols within convective clouds.
- Formation of sea salt aerosols and transport/processing of these aerosols and their climate impact (CAM/CCSM).

#### Increased hygroscopic aerosol concentration

# Increased hydrophobic aerosol concentration

