



## SCIENTIFIC LECTURE

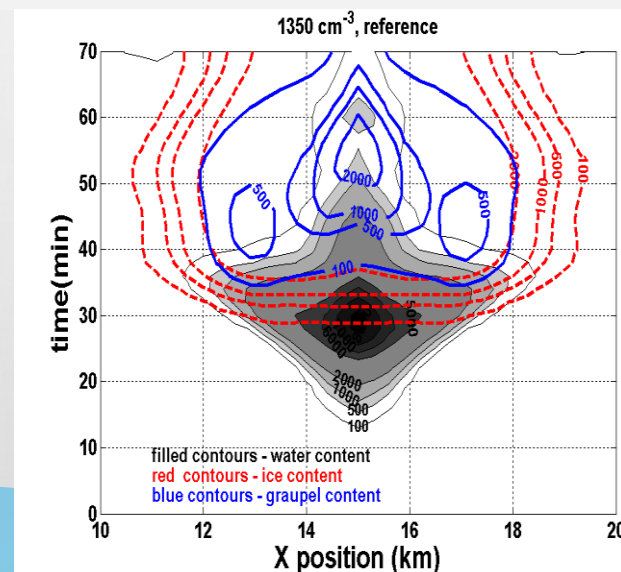
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# “Aerosol-Clouds-Precipitation Interactions-Invigoration or Suppression”



**Abstract:** *The potential growth of clouds is determined by the environmental conditions such as temperature and humidity. However, the fulfilment of this potential is determined by a small subset of aerosols that are responsible for the formation of cloud drops and ice crystals, leading to precipitation. In order to understand through observations the role of aerosols in clouds, one must find a way to isolate or keep constant, the environmental conditions while observing the effects of different aerosol concentrations on clouds' properties such as cloud's height (invigoration or suppression) and horizontal dimensions (cloud fraction). The lecture will describe observational and theoretical results of such effects on warm clouds (no ice) and on mixed phase clouds. In addition, some results from airborne measurements in a dust storm over the Eastern Mediterranean will be shown with its potential effects on clouds and precipitation.*



2D simulation of Aerosols Effects on the Dimensions  
of Clean Vs. Polluted Mix-Phase Clouds



**Publications:** *Over 170 publications in refereed scientific journals on topics of aerosols and cloud physics, atmospheric electricity in terrestrial and planetary clouds, weather modification and ice nucleation.*

**Recently published book:** *Levin, Z. and W.R. Cotton (Eds.), “Aerosol Pollution Impact on Precipitation; A scientific review”, Springer Press., 382 pp, 2009 Received the 2009 Atmos. Sci. Librarians Intern. (ASLI) "Honourable mention for an authoritative, well-organized, forum-based approach to the evaluation of a problem in the fields of meteorology / climatology / atmospheric sciences.*