

EINLADUNG

zum Vortrag von

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The atmospheric fate and effects of organic aerosol particles: An interplay between natural sources and human activities

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Dienstag, 3. März 2015, um 17:30 Uhr

Ort: Lise-Meitner-Hörsaal, Fakultät für Physik, Universität Wien,
1090 Wien, Strudlhofgasse 4 / Boltzmannngasse 5, 1. Stock

Barrierefreier Zugang: Boltzmannngasse 5, Lift, 3. Stock rechts über den Gang zum Hintereingang des Hörsaals

Abstract:

A significant fraction (20-90%) of atmospheric sub-micron particulate matter consists of organic compounds. The biosphere is thought to be the primary source of these particles, thus suggesting that organic aerosol would be an important component of the atmospheric composition even without any human interference. Knowing the sources, atmospheric processing and loss mechanisms of biogenic organic aerosol particles is thus important for defining the baseline to which the present day conditions are compared to when estimating the human effects on radiative forcing and climate. After being emitted, organic particles interact with inorganic aerosol constituents (such as sulfate, nitrate and sea salt) and cloud water. Understanding these interactions is necessary for accurate assessment of the consequences of political choices related to e.g. land-use change, urban air quality or agricultural emissions. I will present an overview of our work focusing on the interactions of atmospheric organic particles with inorganic aerosol constituents and cloud water – ranging from molecular simulations to macroscopic scale cloud modeling.

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