



PHYSIKALISCHES KOLLOQUIUM

EINLADUNG

26.1.2011/Wh

Am Montag, dem 31.1.2011, 16.15 Uhr in W2-1-148

spricht

Prof. Dr. Jörg Schumacher
Technische Universität Ilmenau
Fakultät für Maschinenbau

über

“Cloud pattern analysis in shallow moist convection”

The most prominent appearance of moist turbulent convection are clouds in the atmosphere of the Earth and other planets. A better understanding of their formation and life cycles is of central interest for more reliable predictions of climate change. We study cloud formation processes numerically in the setting of so-called moist turbulent Rayleigh-Bénard convection with a simplified thermodynamics of phase changes. The sensitivity of this problem to changes of the Rayleigh number, the aspect ratio of the convection layer and the water vapor concentration is studied. We also discuss the relation of turbulent transport across the layer to the cloud cover and compare our results with those from numerical experiments that use parameterizations of the small-scale turbulence, such as so-called large-eddy simulations.

Einladender: Joachim Peinke