



# Physikalisches Kolloquium

**Michael Reeder, Monash University, Australia**  
**»Atmospheric Solitary Waves and Undular Bores«**

*Einführung: S. Jones*

---

Solitary waves are isolated finite-amplitude waves of permanent form. Although their mathematical properties have been studied for the past century and a half, only recently have they been viewed as fundamentally important in the evolution of a wide variety of dynamical systems in the physical and biological sciences. Solitary waves have been observed in the lower atmosphere, often at the leading edge of evolving undular bores, which is the atmospheric equivalent of an undular bore on a tidal river. The 'morning glory' of northeastern Australia is by far the best documented and most widely known example of an atmospheric undular bore. A spectacular low-level roll cloud, or a series of roll clouds, regularly accompanies the passage of these bores. Although much attention has been focused on undular bores in northeastern Australia, similar disturbances have been reported in most parts of the world. This talk reviews the physics of atmospheric undular bores, with an emphasis on the morning glory.

---

**Freitag, 16.05.2008, 17 Uhr c.t.,**  
**Universität Karlsruhe (TH), Otto-Lehmann-Hörsaal, Physik-Flachbau (Geb. 30.22).**  
**Anschließend Nachsitzung im Gastdozentenhaus „Heinrich Hertz“**