

# DIESE WOCH

## PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik  
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 18.01.2012, 17 Uhr c.t.  
Großer Hörsaal, Raum \_0.111,  
Max-von-Laue-Str. 1

**Prof. Dr. Anke-Susanne Müller**  
Karlsruher Institut für Technologie, Karlsruhe

### *„Coherent Synchrotron Radiation in the ANKA Storage Ring“*

Over the past few years highly intense radiation in the THz spectral range has become an important research tool. One possibility to generate intense coherent THz radiation with high repetition rates is the generation from ultra-short bunches in electron storage rings with quasi-isochronous lattices.

The power of the emitted coherent radiation scales with the number of electrons squared and with the form factor of the charge distribution.

It is therefore extremely sensitive to even tiny changes of the longitudinal bunch profile. Such deformations can be caused for example by the strong coherent radiation field or by wake fields due to the ring's geometric impedance. The investigation of the emitted coherent THz radiation therefore opens a new access window to longitudinal beam dynamics.

This talk will introduce the special requirements for the generation of coherent THz radiation in a storage ring and discuss the observations and experiences at ANKA.

Die Dozenten der Physik

# Kolloquium

<http://www.uni-frankfurt.de/fb/fb13/Termine/index.html>