

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 24.11.2011, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Festkolloquium anlässlich des 85. Geburtstages von
Prof. Dr. Herbert Daniel

16:15: Begrüßung: **Prof. Dr. Martin Stutzmann,**
Dekan der Fakultät f. Physik der TU München
Prof. Dr. Stephan Paul
Prof. Dr. Herbert Daniel,
Physik Department E18 der TU München

16:30: Festkolloquium:

Prof. Dr. Allen Caldwell
Max-Planck-Institut f. Physik, München

**Accelerator ideas for the future:
Muon Colliders and Plasma Wakefield Accelerators**

The construction of ever larger and costlier accelerator facilities cannot continue forever, and new technologies will be needed to push the energy frontier. Two possible avenues for the future will be discussed: a novel acceleration technique based on plasma wake fields, and colliding muons rather than electrons. Plasma wakefield acceleration is a rapidly developing field and the current status and experimental plans will be discussed. As for muon colliders - muons have the advantages of electrons in that they have no substructure, while the heavier mass suppresses synchrotron radiation such that high energies can be reached in a circular accelerator. However, muons are unstable and decay in two microseconds, such that novel techniques are needed to use them effectively in a particle collider.

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