

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 15.11.2018, 16¹⁵ Uhr

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

Dr. Susanne Mertens

(MPI f. Physik, München)

KATRIN - first data and the future

The neutrino is one of the most fascinating particles of the Standard Model. While our understanding of the neutrino has changed dramatically over the past decade, some of its fundamental properties such as its nature and mass are still unknown. Moreover, it remains an open question whether or not there exists a right-handed partner to the known left-handed neutrino, a so-called sterile neutrino. The prime goal of the Karlsruhe Tritium Neutrino (KATRIN) experiment is to directly probe the mass of neutrinos by measuring the tritium beta decay spectrum close to its endpoint. Its unprecedented source and spectrometer qualities, however, allow to extend its physics goal to also search for sterile neutrinos in the eV to keV mass range. This talk will present the current status of the KATRIN experiment and the progress of the R&D towards a sterile neutrino program of KATRIN.

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