

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 13.12.2018, 16¹⁵ Uhr

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

Dr. Anna Zsigmond

(Max-Planck-Institut für Physik, München)

Searching for Majorana neutrinos with GERDA

The observation of neutrinoless double beta ($0\nu\beta\beta$) decay would establish both the violation of lepton number conservation and the Majorana nature of the neutrino, as well as constrain the neutrino mass hierarchy and scale. The GERDA experiment has reached an important milestone in the search for $0\nu\beta\beta$ decay with ^{76}Ge by achieving a half-life sensitivity of 10^{26} years. This is made possible by the background-free conditions in GERDA and by a factor of two increase in exposure since the last data release in 2017. The latest results from GERDA will be presented and compared to other $0\nu\beta\beta$ decay experiments. Additionally, the relevance of this search for probing the neutrino mass scale will be discussed.

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