

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

Garching Maier-Leibnitz-Kolloquium

Donnerstag, 14.07.2022, 16¹⁵ Uhr

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

Dr. Kai Urban

(Physik Department T31, Technische Universität München)

Large Electroweak Corrections in WIMP Dark Matter Annihilation

Weakly interacting massive particles (WIMPs) are among the most discussed and promising candidates for dark matter to date. If these WIMPs have TeV-scale masses, the hierarchy between the dark matter mass and the electroweak scale induces large electroweak corrections which require resummation. In this talk, I will discuss how the inclusion of non-relativistic potentials (leading to the so-called Sommerfeld enhancement) up to next-to-leading order modifies the predicted dark matter relic abundance and indirect detection signal. Furthermore, I will also outline how the resummation of Sudakov logarithms further reshapes the γ -ray signal in indirect detection experiments.

Hybrid online access via ZOOM:

<https://lmu-munich.zoom.us/j/98457332925?pwd=TWc3V1JkSHpyOTBPQVIMelhuNnZ1dz09>

Meeting ID: 984 5733 2925

Passcode: 979953

gez. Peter Thirolf
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