

21. April 2022

## Einladung zum Physikalischen Kolloquium

29.04.2022 **Markus Klute, ETP, Karlsruher Institut für Technologie**

**»The LHC legacy and prospects«**

*Einführung: G. Drexlin*

Abstract: The Large Hadron Collider (LHC) at CERN has had two successful and highly productive runs (2009-2013 and 2015-2018), colliding protons and heavy ions with center-of-mass energies of up to 13 TeV and collecting an unprecedented amount of data. Its highlight, the Higgs Boson discovery in 2012, completed the Standard Model of fundamental particle interactions. While the impact of the collected data has been tremendous, many open questions in the world of elementary particle physics remain. At the dawn of the LHC Run 3 (2022-2025), the experiments have an extensive program exploring the uncharted territory at the energy frontier. I will review the main conclusions from the LHC to date and present the prospects of the LHC program in Run 3 and beyond.

Der Vortrag findet um 15:45 Uhr im Otto-Lehmann-Hörsaal, Physik-Flachbau (Geb. 30.22), statt.

Zusätzlich wird der Vortrag im Livestream angeboten:

<https://cern.zoom.us/j/68804671705>

Meeting ID: 688 0467 1705

Passcode: 549740