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# Physikalisches Kolloquium

June 6, 2023 at 4:15 p.m.  
HS KPH

Prof. Susan Gardner  
University of Kentucky - USA

## **QCD for New Physics Searches at the Sensitivity Frontier**

Questions that drive searches for physics beyond the Standard Model include the physical origin of the cosmic baryon asymmetry and of dark matter. Quark dynamics, as realized through the theory of quantum chromodynamics (QCD), can appear in these studies in very different ways. In this talk, I develop these possibilities explicitly, first describing the role of QCD in ultra-sensitive searches for new physics, particularly at low energies, and then turning to how its features could be exploited in describing the undiscovered universe, along with the essential observational and experimental tests that could confirm them.

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