Particle Physics
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I N V I T A T I O N

as part of the Particle Physics Seminar

to the talk by

Andrea BANFI

(University of Sussex)

on

"Coherence violation in jet observables"

Abstract:
In high-energy hadronic collisions, such as those occurring at the Large Hadron Collider, it is widely believed that radiation collinear to the two incoming protons can be absorbed into universal parton distribution functions, encoding the probability to extract a parton (quark or gluon) from a given hadron. This picture is based on a property of soft radiation known as coherence. However, Coulomb gluon exchanges between the incoming partons challenge coherence, and give rise to large logarithmic contributions to jet observables, whose general structure is elusive. These coherence violating effects were found for the first time in non-global observables such as the interjet energy flow.
In this talk, based on 2511.11799, I will show that they are also present in global observables, such as one-jettiness, giving rise to super-super-leading logarithms.

Time: Tuesday 28 April 2026, 4:15 p.m.

Location: Erwin-Schrödinger Lecture Hall, 1090 Vienna, Boltzmanngasse 5, 5th floor

Join Zoom Meeting - Meeting ID: 933 4269 3866 Passcode: 185096
https://univienna.zoom.us/j/93342693866?pwd=aUpTR0VJNUhJY2Q0ajdaKzI1YWVBQT09

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