

# Phenomenology 2014 Symposium



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## Jet Radiation Radius

*Tuesday, 6 May 2014 16:45 (15 minutes)*

In this talk, I will introduce the concept of jet radiation radius which quantifies how the jet radiation is distributed around the jet axes. I discuss the color and momentum dependence of the jet radiation radius, and two applications: quark-gluon discrimination and W jet tagging. In both cases, smaller (sub)jet radii are preferred for jets with higher PTs, albeit due to different mechanisms: the running of the QCD coupling constant and the boost to a color singlet system. A shrinking cone W jet tagging algorithm is proposed to achieve better discrimination than previous methods.

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