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New Flavours of Jet Flavor

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Since jets are highly non trivial objects it is a delicate problem to meaningfully assign a flavor label to them. We show that modern jet substructure techniques can give us new ways to tackle this problem.

We propose two different approaches. On the one hand, we introduce a novel fragmentation-function framework that allows one to connect a flavor definition in the deep UV, where partons live, to an IR definition, where jets live. The IR definition involves the Winner-Take-All axis and it has the advantage that the resulting evolution equations are linear. On the other hand, we consider the issue of interfacing measurements involving flavored jets (typically heavy-flavors) with precision calculations in QCD. We introduce a jet-flavor algorithm, based on Soft Drop grooming, which is at the same time IRC safe through NNLO and easy to implement in experimental analyses.

Declaration

I certify that I have checked that I am authorised to submit the abstract with the listed co-authors with their current affiliations

Change of Speaker

I understand that change of speaker is allowed provided that no participant gives more than one talk. Otherwise, we will ask the speaker to choose between one or the other abstract to be presented.

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