## BOOST 2016: 8th International Workshop on Boosted Object Phenomenology, Reconstruction and Searches in HEP



Contribution ID: 19 Type: not specified

## Y-splitter with grooming as an effective boosted object tagger

Thursday 21 July 2016 17:30 (20 minutes)

It has recently been shown that the Y-splitter method with trimming is a very effective method for tagging boosted electroweak bosons, outperforming several standard taggers at high pt. Here we analytically investigate this observation and explain the performance of Y-splitter with a range of grooming techniques from first principles of QCD. We also suggest modifications that considerably simplify the analytical results, thereby increasing robustness, and make the results largely independent of the details of grooming.

## **Summary**

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Session Classification: Plenary