

# Some thoughts on jet grooming

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Aaron Angerami  
Lawrence Livermore National Laboratory

2018 JETSCAPE Winter School and Workshop  
Berkeley, CA  
Saturday January 6, 2018

# Why do jet grooming?

- ▶ **Study boosted objects**
- ▶ **Define properties of jets that can be calculated in QCD**
  - **Softdrop grooming rules designed such that you can calculate jet properties in particular QCD approximation**
    - **In an approximation (e.g. MLLA) the  $z_g$  distribution is related to the splitting function**

## **Choose/design grooming procedure in HI that...**

- ▶ **Respects the approximations we use in theoretical descriptions of quenching**
  - **In Softdrop, C/A declustering  $\leftrightarrow$  assumption of angular ordering in QCD calculation**
- ▶ **We have good experimental control over**
  - **Declustering that's robust against UE fluctuations**
  - **Does not strictly rely on jet constituent = particle assumption**