

# An Investigation of the Natural Jet Width of the Semi-Classical Jet Algorithm using Monte-Carlo Simulation

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## **Abstract**

I will write an abstract at the end.

## **1 Introduction**

Jets - A paragraph on what jets are, how they are formed, hadronisation of free quark due to quark confinement.

- A small bit on why they are interesting, studies that have used them.

Jet Algorithms - Why we need them?

- Jets appear as clusters in the calorimeter, from that using algorithms we want to reconstruct the jet and find its properties.

Current Jet Algorithms - CA/AKT/KT as defined in the TASI lectures or in towards jetography.

- They are used at ATLAS/CMS

SC Jet Algorithm - Define it as in Tseng, Evans [1]

- Discuss Motivations for it.
- Discuss Pruning Effect.

## References

- [1] Jeff Tseng and Hannah Evans. Sequential recombination algorithm for jet clustering and background subtraction. *Phys. Rev. D*, 88:014044, 2013.