

Limitations of Precision Top Mass Measurements at HLLHC and Prospects for the 4top Process

Stephen Wimpenny
University of California, Riverside

Snowmass EF03 Top-Heavy Flavor Kick-off Meeting 5-27-2020

Precision Top Mass Measurements at HLLHC

Questions:

- 1.) What are the limiting factors and where can things be improved?
(b-fragmentation, color re-connection effects.....)*
- 2.) How far is it useful to push these at HLLHC given that e^+e^- threshold scans can do better in measuring the mass?*
- 3.) What is realistic and how much data is needed?*

Studies of 4top Production at HLLHC

Questions:

- 1.) What is needed to move beyond the 'evidence' stage to 'study'?*
- 2.) What is realistic and how much data is needed?*
- 3.) What do these give in terms of EFT and constraints on BSM physics?*