Contribution submission to the conference Aachen 2019

Reconstruction of heavy flavour jets for Higgs physics at future e^+e^- colliders — •Yasser Radkhorrami[1,2] and Jenny List[1] — [1]DESY Hamburg — [2]University of Hamburg

The reconstruction of heavy flavour jets plays an important role in precision measurements of the Higgs boson. $H \to b\bar{b}$ is the most frequently occuring decay mode of the Higgs boson. Furthermore, measuring the $H \to c\bar{c}$ decay mode will be possible for the first time at an e^+e^- collider. The International Large Detector proposed for the International Linear Collider is designed for particle flow reconstruction and optimised to achieve a jet energy resolution of 3-4% for light-flavour jets. Due to harder fragmentation functions and presence of semi-leptonic decays, heavy-flavour jets are expected to behave differently. In this study, b- and c-jets are for the first time included in the evaluation of the jet reconstruction performance. Different strategies for correcting the b- and c-jet energy based on the identification of leptons in the jets will be presented and their impact on the jet energy resolution will be evaluated.

Part:	T
Type:	Vortrag;Talk
Topic:	3.12 Experimental Methods (general)
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