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Flavor changing Higgs and Z decays at FCC-ee [zoom]

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In this talk, we assess the FCC-ee reach for $Z/h \to bs, cu$ decays as a function of jet tagging performance. Recent advances in b, c, and s quark tagging coupled with novel statistical analysis techniques allow the FCC-ee to place phenomenologically relevant bounds on flavor violating Higgs and Z decays to quarks. We also update the SM predictions for the corresponding branching ratios, as well as the indirect constraints on the flavor violating Higgs and Z couplings to quarks. Using type III two Higgs doublet model as an example of beyond the standard model physics, we show that the searches for $h \to bs, cu$ decays at FCC-ee can probe new parameter space not excluded by indirect searches.

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