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Jet Substructure: Boosting the Search for New Physics at the LHC

JESSE THALER, MIT

Collisions at the Large Hadron Collider (LHC) are dominated by jets, collimated sprays of particles that are proxies for underlying quarks and gluons. With the remarkable performance of the ATLAS and CMS detectors, jets can now be characterized not just by their overall direction and energy but also by their substructure. In this talk, I highlight the ways that jet substructure has enhanced the search for new physics at the LHC, including recent excitement over a possible diboson excess. I also explain how theoretical studies of jet substructure have taught us surprising lessons about the nature of the strong force.