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Testing the top quark lifetime
AYANA HOLLOWAY, Harvard University

Experiments at the Fermilab Tevatron are collecting large and exceptionally pure samples of top quarks, and performing measurements to confirm that the particle discovered in $p\bar{p}$ collisions a decade ago is the anticipated sixth quark. One unambiguous test is a measurement of the top quark lifetime, which is constrained by the consistency of the Standard Model to be less than $10^{-24}$ s. I will describe a search for anomalous decay lengths in $t\bar{t}$-like events observed with the Collider Detector at Fermilab (CDF), and report a first direct limit on the $t$ quark lifetime.