Abstract Submitted
for the APR17 Meeting of
The American Physical Society

Hadronic flavor violation in pp -¿ t phi + X and p p -¿ t t -¿ bjjc phi +X channels at the LHC[1] RISHABH JAIN, BRENT MCCOY, CHUNG KAO, JACKSON SLOAN, Univ of Oklahoma — We present a study of flavor changing neutral Higgs interaction in $pp \to t\phi^0 + X$ and $pp \to t\bar{t} \to bjjc\phi^0 + X$, where $\phi^0 = h^0$ or H^0 , at the Large Hadron Collider(LHC). We choose a general two Higgs doublet model (2HDM) to study the g_{htc} couplings with particular emphasis on the $\phi^0 \to WW \to l\nu l\nu$ decay channel. With high top production cross section at the LHC,we expect these low background channels to provide a clean signature of flavor changing neutral current among up-type quarks in the Higgs sector and conduct detector simulations to study the visibility and significance of our signal for several values of Higgs masses and the g_{htc} couplings at the LHC. We include standard model (SM) physics background with realistic acceptance cuts at $\sqrt{s} = 13$ TeV and 14 TeV.

[1]Department of Energy and , OU Supercomputing Center for Education and Reasearch

Rishabh Jain
Univ of Oklahoma

Date submitted: 30 Sep 2016 Electronic form version 1.4