

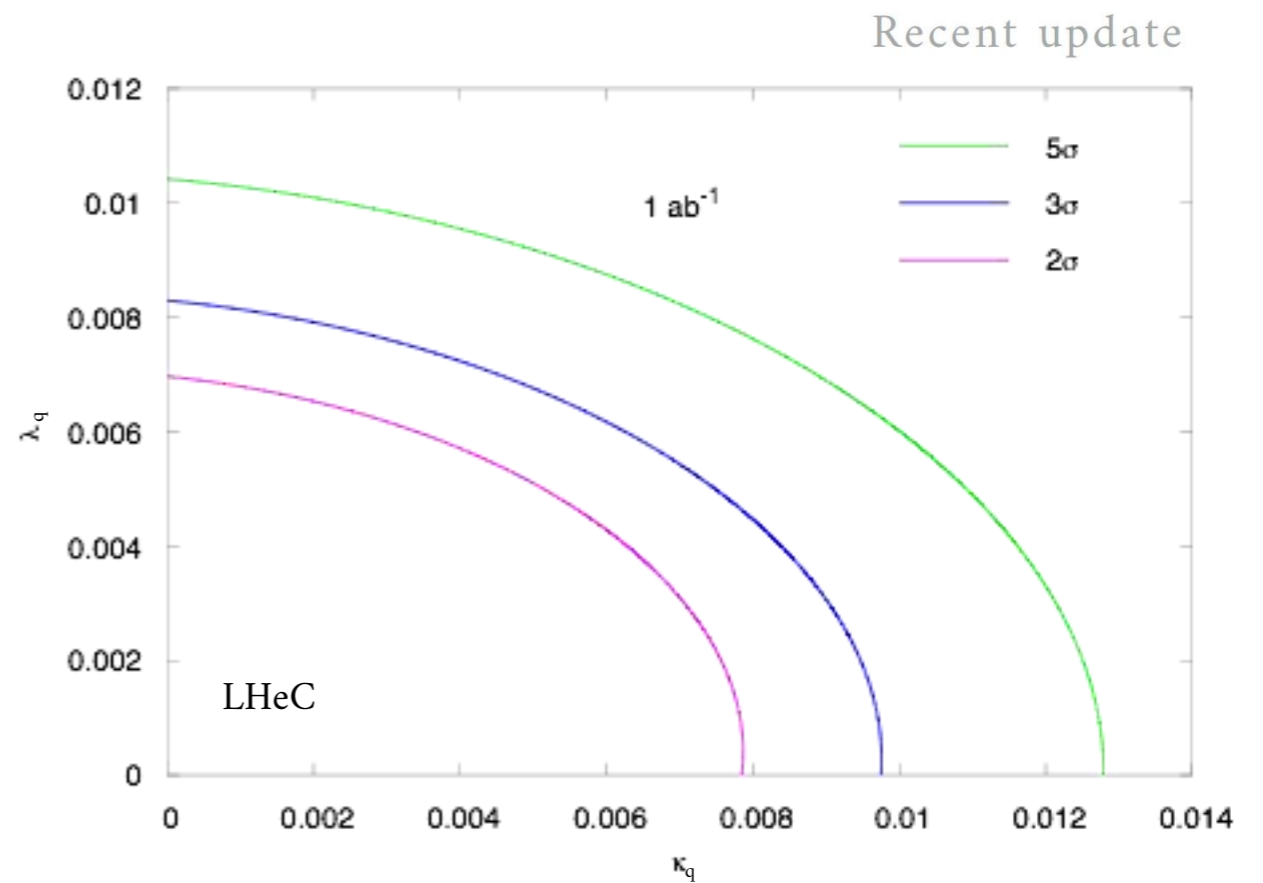
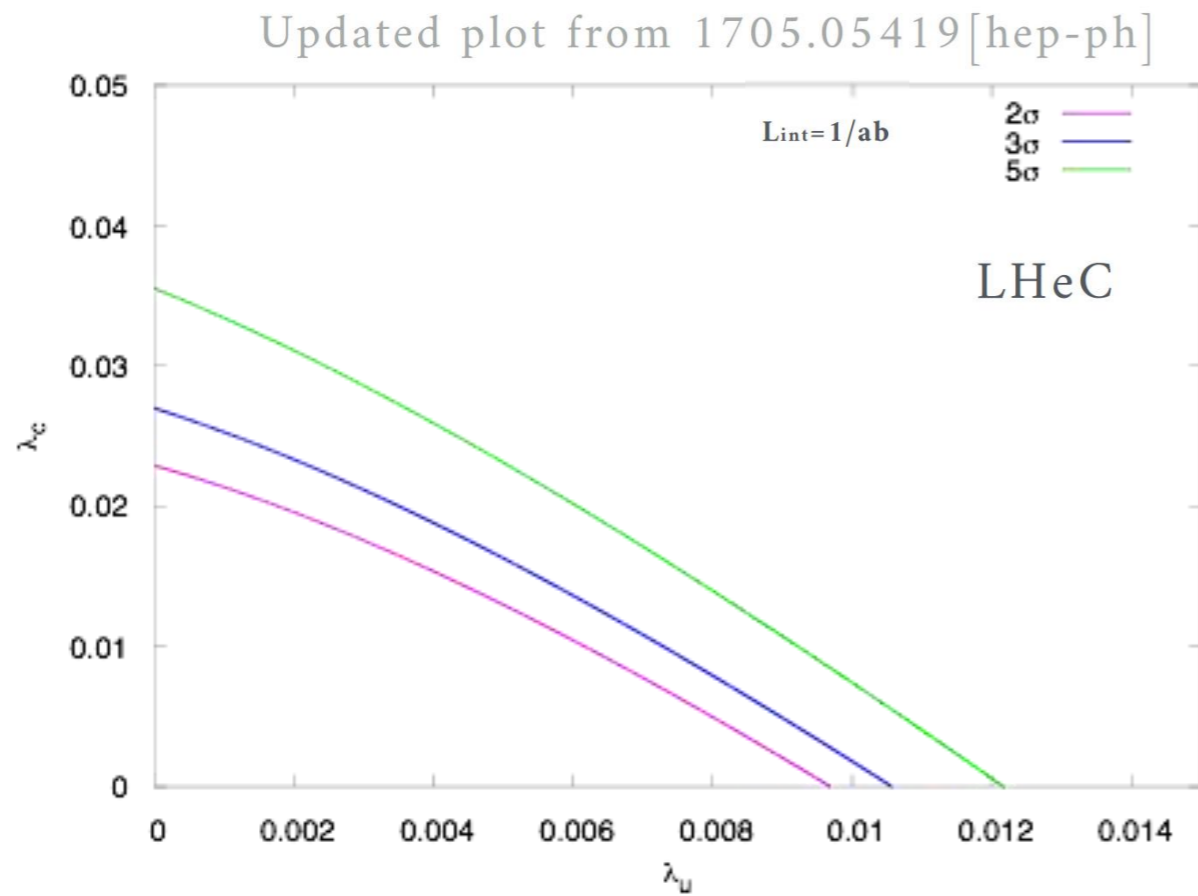
# Top FCNC at $1 \text{ ab}^{-1}$

O. Cakir (AU)

\* study based on updates from 1705.05419[hep-ph] and 1701.06932[hep-ph]

*Higgs and Top at LHeC, Vidyó meeting, 18 June 2018*

# Top FCNC Couplings

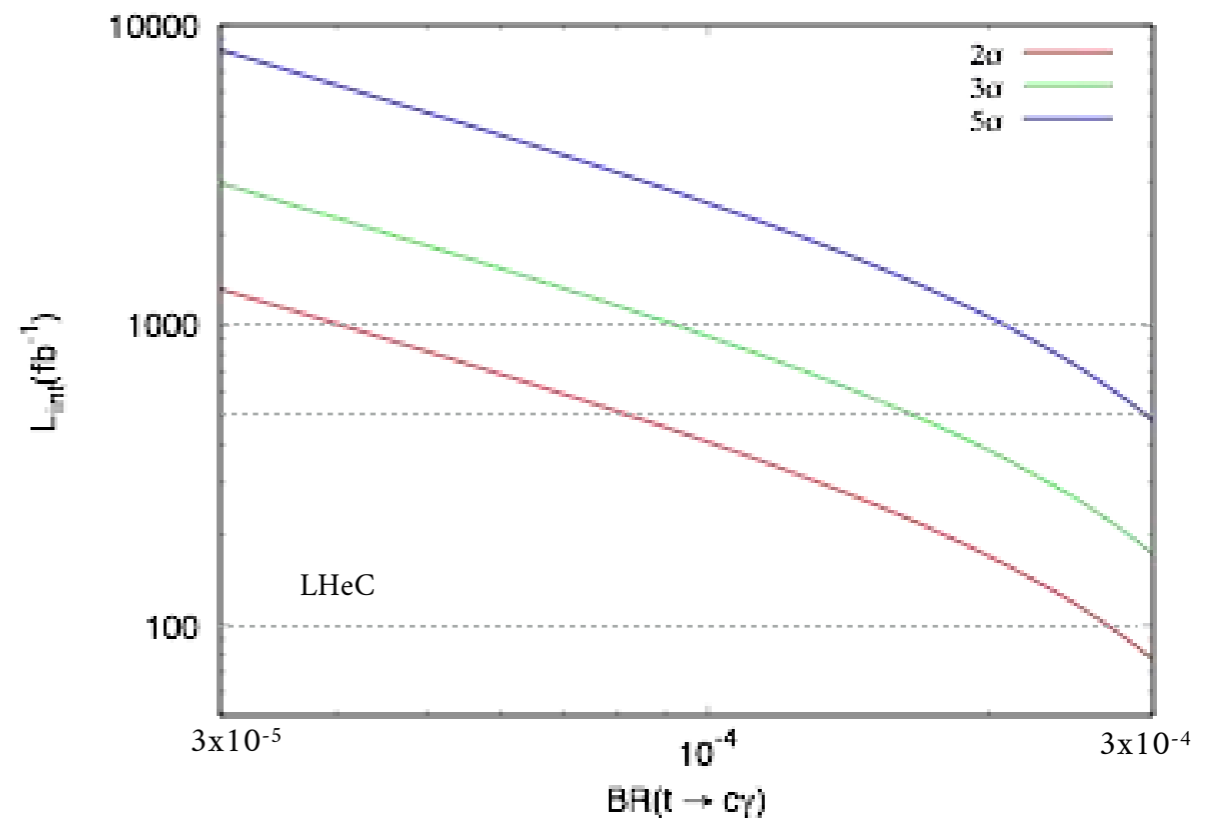
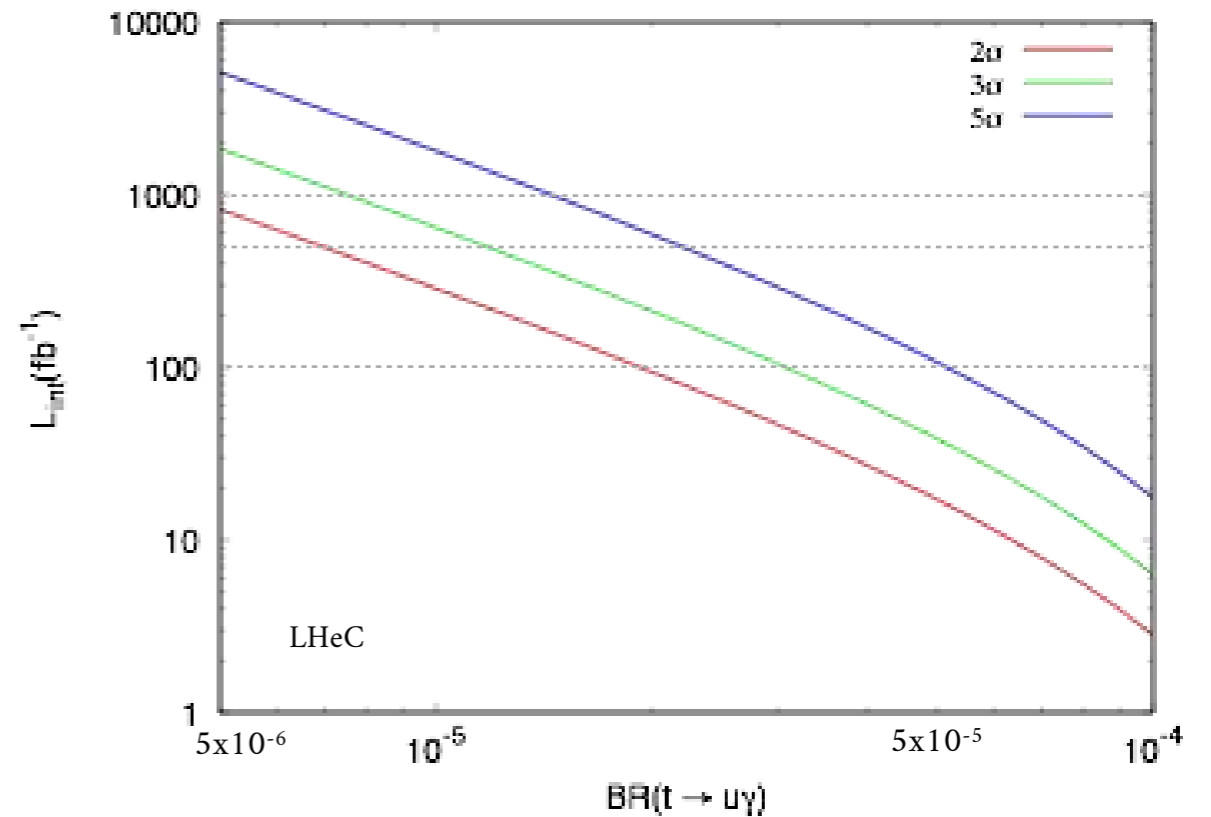


# Luminosity vs BR

Integrated luminosity versus branching ratio plot for top FCNC ( $tq\gamma$ ) at  $2\sigma$ ,  $3\sigma$  and  $5\sigma$  significance at LHeC.

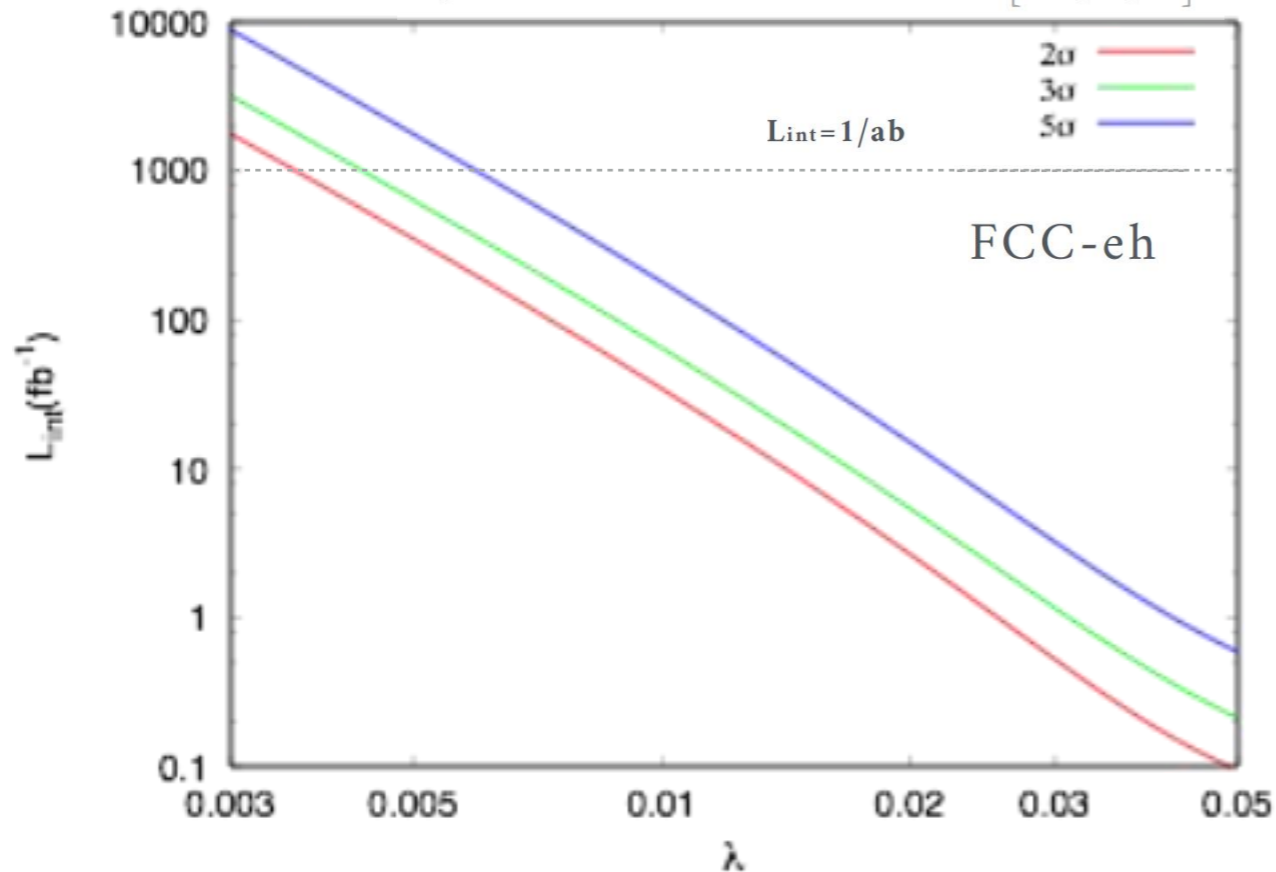
► Upper bounds on the branching ratios for  $1/\text{ab}$  are shown in Table.

LHeC $L_{\text{int}} = 1 \text{ ab}^{-1}$	$2\sigma$	$3\sigma$	$5\sigma$
$\text{BR}(t \rightarrow u\gamma)$	$4.0 \times 10^{-6}$	$7.5 \times 10^{-6}$	$1.5 \times 10^{-5}$
$\text{BR}(t \rightarrow c\gamma)$	$4.0 \times 10^{-5}$	$9.0 \times 10^{-5}$	$2.0 \times 10^{-4}$



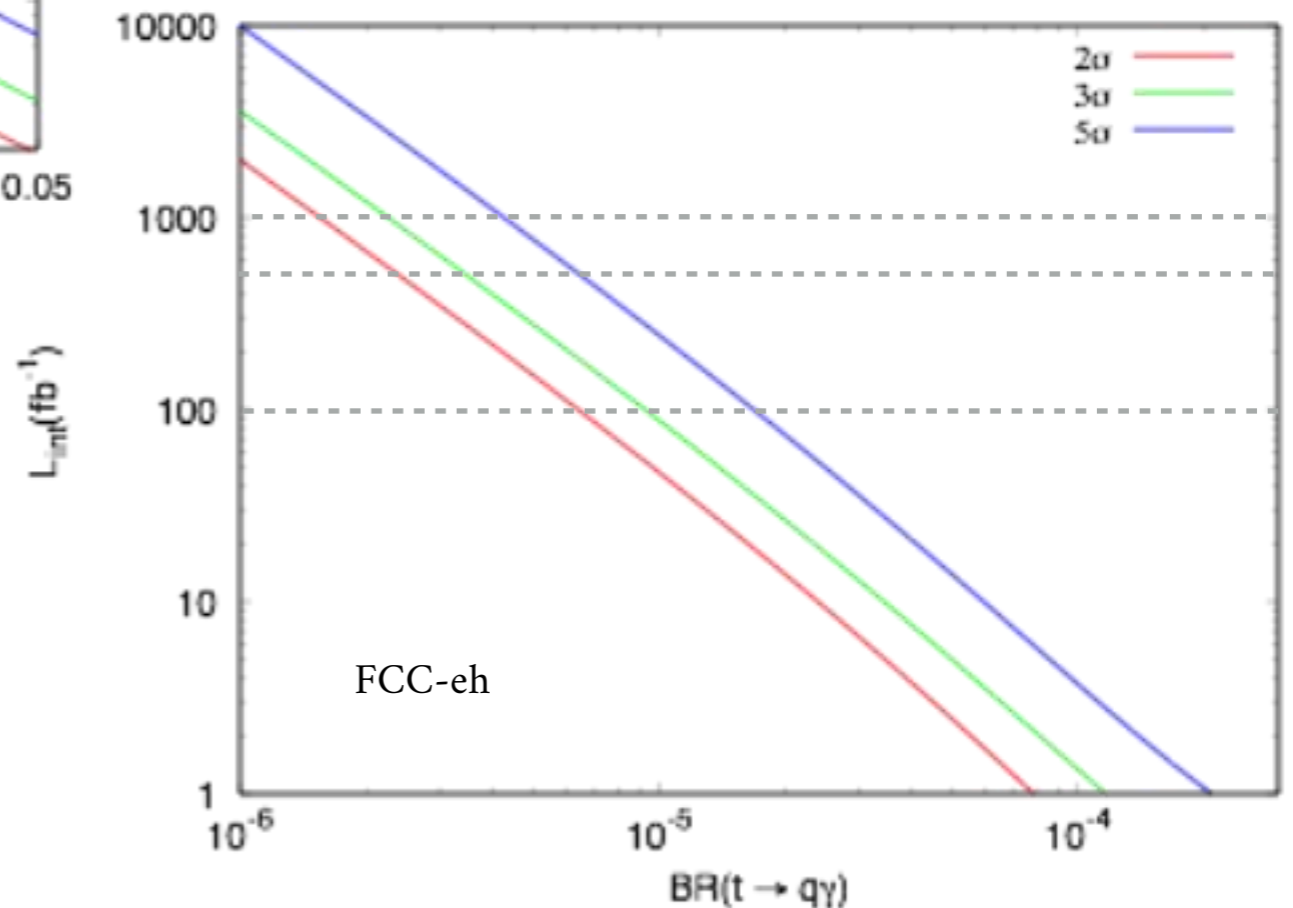
# Luminosity vs BR

Updated from 1701.06932[hep-ph]



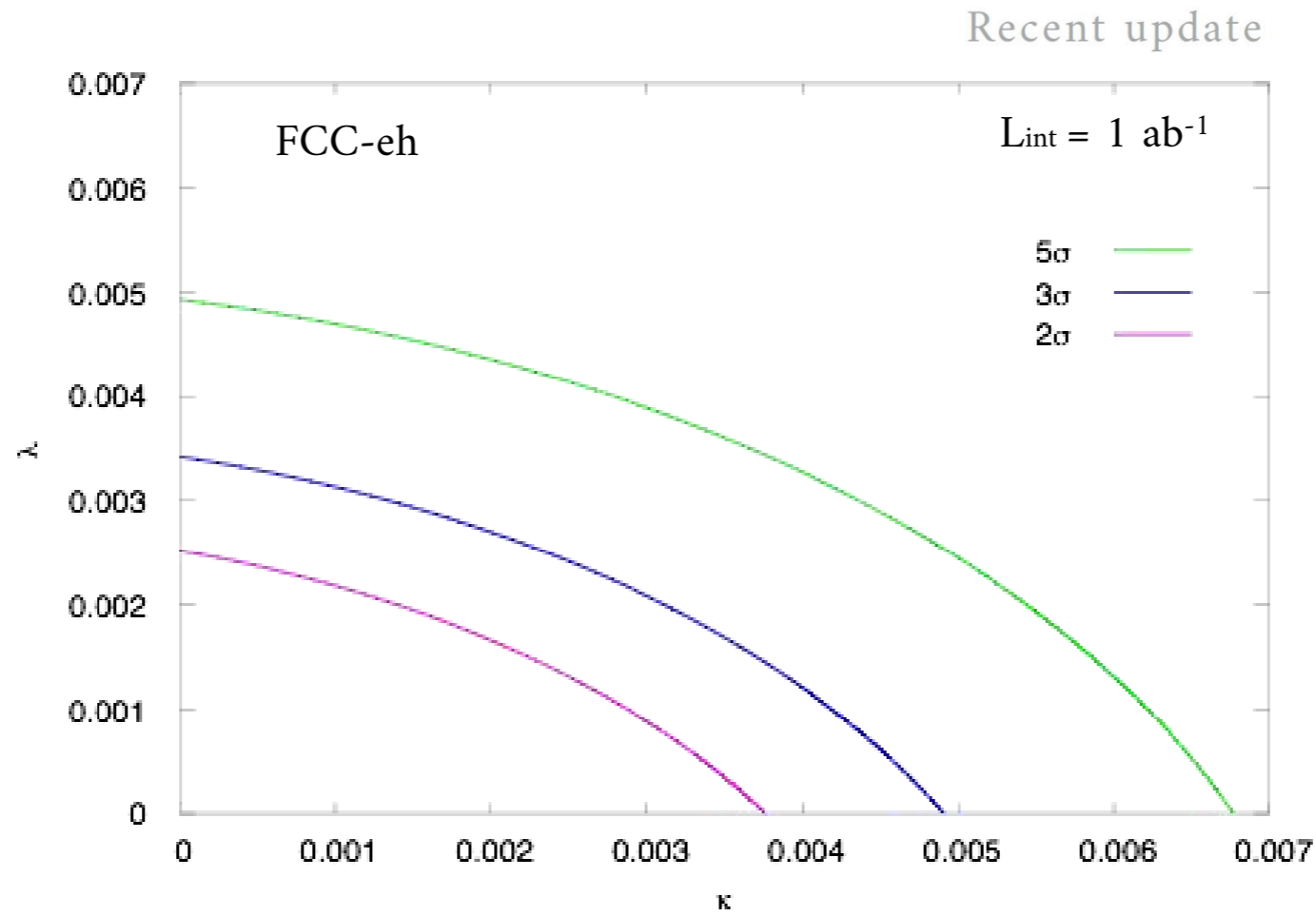
FCC-eh has the potential to discover new physics (significance  $5\sigma$ ) from anomalous FCNC  $tq\gamma$  couplings at an integrated luminosity of  $10 \text{ ab}^{-1}$ .

Recent update

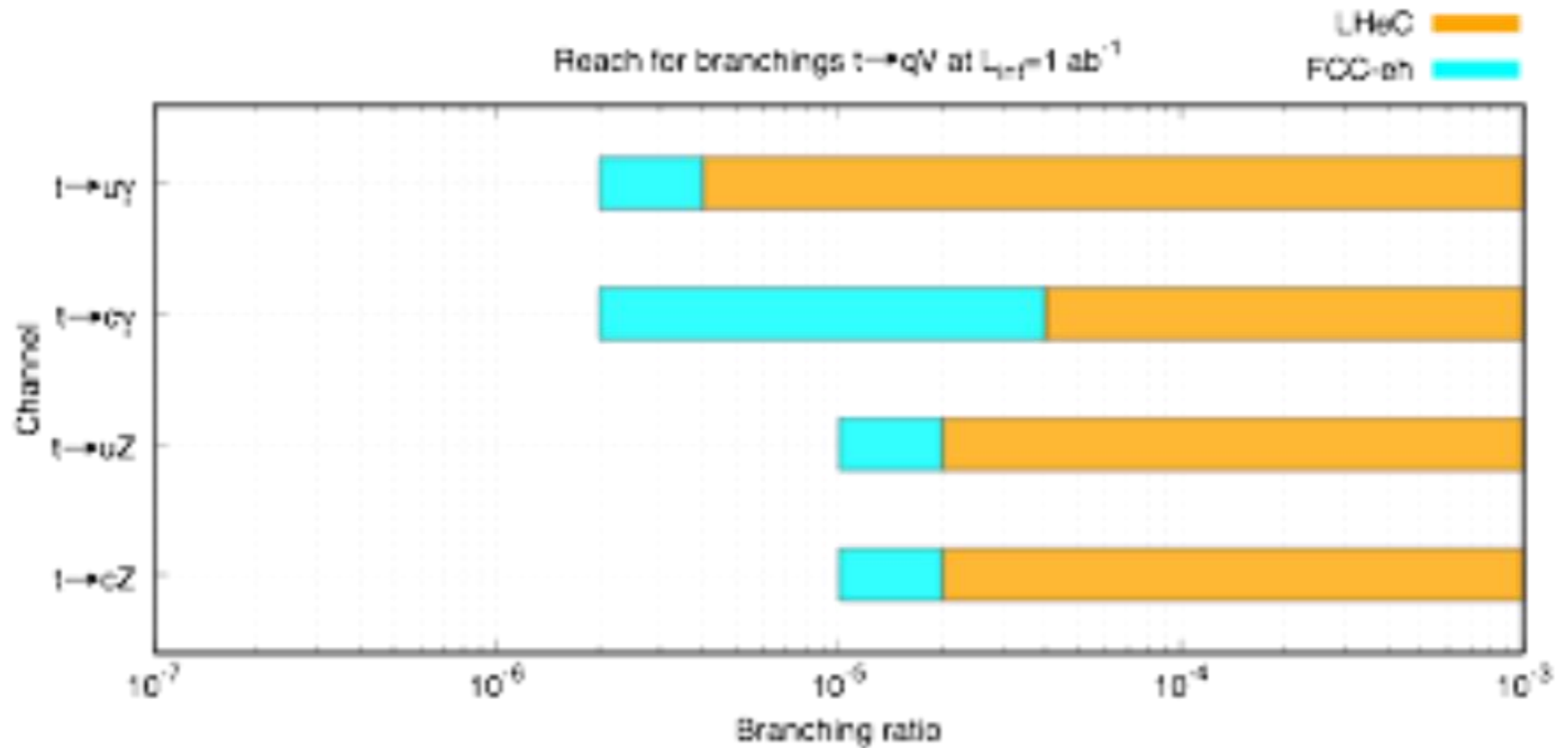


FCC-eh $L_{\text{int}}=1 \text{ ab}^{-1}$	$2\sigma$	$3\sigma$	$5\sigma$
BR( $t \rightarrow q\gamma$ )	$1.5 \times 10^{-6}$	$2.2 \times 10^{-6}$	$4.1 \times 10^{-6}$

# Top FCNC Couplings



# Top FCNC Branchings



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