

## Vtb measurement from the single top production

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The strongest constraint on  $V_{tb}$  presently comes from the  $3 \times 3$  unitarity of the CKM matrix, which fixes  $V_{tb}$  to be very close to one. If the unitarity is relaxed, current information from top production at Tevatron still leaves open the possibility that  $V_{tb}$  is sizably smaller than one. In minimal extensions of the standard model with extra heavy quarks, the unitarity constraints are much weaker and the EW precision parameters entail the strongest bounds on  $V_{tb}$ . We discuss the experimental perspectives of discovering and identifying such new physics models at the Tevatron and the LHC, through a precise measurement of  $V_{tb}$  from the single top cross sections and by the study of processes where the extra heavy quarks are produced.

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