Contribution ID: **76** Type: **Parallel Sessions**

Z' signals in polarised top-antitop final states

Friday 6 July 2012 14:30 (15 minutes)

We study the sensitivity of top-antitop samples produced at all energy stages of the Large Hadron Collider (LHC) to the nature of an underlying Z' boson, in presence of full tree level standard model (SM) background effects and relative interferences. We concentrate on differential mass spectra as well as both spatial and spin asymmetries thereby demonstrating that exploiting combinations of these observables will enable one to distinguish between sequential Z's and those pertaining to Left-Right symmetric models as well as E6 inspired ones, assuming realistic final state reconstruction efficiencies and error estimates. We go on to discuss other Z' models well suited to such searches in the top-anti top channel.

Financial Support Justification for Early-Stage Researchers

I am a PhD student in my second/third year of research in the UK and therefore have limited funds dedicated to international travel. Australia is relatively far for me to travel but I am nonetheless very keen to participate in such a major international conference.

Summary

Talk based on paper recently submitted to arXiv:1203.2542

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