

# Study of the semi-boosted topology in top anti-top pair spectra in the semi-leptonic decay channel using the hypothetical particle $Z'$ as a probe.

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The study describes effects in top anti-top pair spectra by incorporating the semi-boosted topology in the resolved and boosted analysis. Addition of this topology could improve efficiency in now often omitted range of top quark momenta. The resolution of the top anti-top system mass is also studied as function of the  $Z'$  mass, corresponding to mass of the reconstructed top anti-top system. The resolution of top anti-top system mass is also studied and present in this contribution.

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