

# Jet angular correlation in the top quark pair production

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In this talk I will discuss an azimuthal angle correlation between the two hardest jets in the top quark pair production at the LHC. The event samples are generated by merging the tree level matrix elements for the  $t\bar{t}$  plus up to 2 or 3 partons with parton showers. I show that the generated event samples reproduce a strong correlation in the azimuthal angle difference between the two hardest jets, as predicted in the analysis based on the tree level matrix elements for the  $t\bar{t}+2$  partons. The effects of merging the matrix elements for the  $t\bar{t}+3$  partons and the merging algorithm dependence on the correlation will also be discussed.

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