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## Study of interference effects in processes with top quark flavour changing neutral currents

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In the Standard Model flavour-changing neutral currents (FCNC) involving the top quark are expected to occur extremely rarely. In some extensions of Standard Model, nonetheless, the branching ratio of processes including such a current can be significantly enhanced and thus, events with such an FCNC are a powerful test of new physics effects. Both the  $tZq$  and the  $t\gamma q$  vertex can be probed in  $t\bar{t}$  events where a top quark decays via an FCNC as well as in events where a single-top quark is produced in association with a photon or a Z boson. The production processes with additional jets interfere with the decay processes, that may result in different kinematics compared to that of the sum of the production and decay mode. On this poster a study of these interference effects at the LHC will be presented.

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