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## Searching for Bino-Stop Coannihilation Region in Open Data with Displaced Tracks (12'+3')

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Light top quark superpartners are the key ingredients for supersymmetric models to solve the electroweak hierarchy problem. The compressed region of the parameter space that  $m_{\tilde{t}_1} \approx m_{\chi_1^0}$  is notoriously difficult to search. In this region, if the LSP neutralino is pure bino,  $\tilde{t}_1$  can be long-lived, which produces displaced vertices in detectors. We propose to use the monojet trigger plus the analysis of displaced vertices to cover this region. We apply this method to the 8 TeV CMS Open Data with a luminosity of  $11.6 \text{ fb}^{-1}$ , and find that using this method the  $2\sigma$  limit of  $m_{\tilde{t}}$  in the region  $m_{\tilde{t}} - m_{\chi^0} \approx 15 - 30 \text{ GeV}$  is about  $m_{\tilde{t}} > 350 \text{ GeV}$ .

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