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A search for new physics with Razor kinematic variables in proton-proton collisions at $\sqrt{s}$=8 TeV with the ATLAS detector at the LHC[1]

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The experimental signature for our search is jets and missing energy. The Razor variables are built using two mega-jets and are designed to discriminate against QCD multi-jets background. The dominant background events for this analysis are Z+jets, W+jets, $t\bar{t}$ and QCD, for each of which a dedicated control region is defined. In each control region the MC is normalized to the data. This normalization factor is applied to MC and an extrapolation is made from the control region into the signal region to estimate the background events in the data signal region. In the absence of a statistically significant excess, limits are set on the parameters of the simplified models involving the strong production of squark and gluino pairs.

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[1]On behalf of the ATLAS Collaboration.