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# Event-by-event mean p_T fluctuation and transverse size of color flux tube generated in p-p collisions

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We propose a novel phenomenological model of mean transverse momentum fluctuations based on the Geometrical Scaling hypothesis. Bose-Einstein correlations between two gluons generated from an identical color flux tube are taken into account as a source of the fluctuation. We calculate an event-by-event fluctuation measure and show that ALICE data observed 0.90 TeV for p+p collisions are reproduced. By fitting our model to the experimental data, we evaluate the transverse size of the color flux tube generated in the initial stage of p+p collisions.

## Relevant topics

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