

NEW PERSPECTIVES IN CONFORMAL FIELD THEORY AND GRAVITY

HELMHOLTZ

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Entanglement entropy and proton's structure

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I am going to discuss the results of the entanglement entropy of proton's constituents as have been obtained recently within Kharzeev-Levin approach. The proposal resolves the paradox coming from the fact that the proton is a pure state but its constituents are incoherent states of partons. The resulting entropy formula can be shown to describe measured data as well as agrees with thermodynamic entropy obtained by myself in 2011 under the assumption of saturation of gluon density.

Summary

Primary author: KUTAK, Krzysztof (Institute of Nuclear Physics Polish Academy of Sciences)

Presenter: KUTAK, Krzysztof (Institute of Nuclear Physics Polish Academy of Sciences)

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