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String Theory in Greater Paris

Rencontres Théoriciennes

“Supergravité, théorie des cordes et théorie M”

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String theory of supertubes

In string theory, black hole microstates at finite coupling give rise to horizon-scale structures that play an important role in addressing the information paradox. These are based on configurations of branes puffed up by the supertube effect. I will show that such supertubes admit an exact worldsheet treatment as gauged Wess-Zumino-Witten models. This description includes both BPS and non-BPS three-charge microstates. These constructions reveal stringy structures that support precursors of the long strings which hold most of the entropy in the dual CFT.

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