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Large number of cusps in high-harmonic loops

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There has been significant progress in recent years on modelling the evolution of cosmic string and cosmic superstring networks. As we are targeting gravitational wave signals from strings, attention is shifting to the closed string (loop) component of those networks. The predicted signal depends on a number of parameters, some of which are assumed/argued to be of order unity. I will focus on one of these parameters, namely the number of cusps per period of oscillation of the loop and will present evidence, based on the study of high-harmonic loops, that this can be significantly larger than unity. This could potentially lead to an enhancement of the predicted gravitational wave signal; to quantify this effect one needs to model the loop distribution in the string network.

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