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Signals from cosmic strings with gravitational backreaction

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We present results of gravitational backreaction applied to a realistic population of cosmic strings. Backreaction smooths strings and reduces the rate of energy loss, Γ . This smoothing does not give rise to strong cusps, with cusp-like behavior subdominant until at least modes $n \sim 10^6$. Backreaction generally causes strings to self-intersect, but the intersections typically involve only a small fraction of the loop's length; however, we discuss this as a mechanism to possibly unbind loops from galaxies. We close with a discussion of the impact of backreaction on the cosmic string gravitational wave background.

Author: WACHTER, Jeremy (Wentworth Institute of Technology)

Co-authors: Prof. BLANCO-PILLADO, Jose Juan (IKERBASQUE & UPV/EHU); Prof. OLUM, Ken D. (Institute of Cosmology, Tufts University)

Presenter: WACHTER, Jeremy (Wentworth Institute of Technology)

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