

Abstract Submitted  
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**Shape of DNA in a box**<sup>1</sup> YA LIU, BULBUL CHAKRABORTY, JANE' KONDEV, Brandeis University — The statistical and mechanical properties of DNA are known to change dramatically when the persistence length of DNA is comparable to the linear dimensions of the viral capsid and DNA is strongly bent. Based on modeling semiflexible DNA by worm-like chain model, we make use of the Bond Fluctuation Algorithm to study the behavior of DNA in confinement. The effective persistence length is extracted from tangent-tangent correlation function. We will present results for (a) the dependence of effective persistence length on the bare persistence length and (b) a shape transition accompanying increasing confinement.

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