



Fig. 3. (A) Force versus extension data for four different λ -dimer molecules (\bullet , \square , $+$, and \circ) in 5 mM Na_2HPO_4 buffer (10 mM Na^+ , pH 8.3). Inset: expanded vertical scale (0 to 0.5 pN). Continuous curves are from Eq. 2 assuming $L = 32.7 \mu\text{m}$ and $b = 500 \text{ \AA}$ (top), 1000 \AA (middle), and

2000 \AA (lower). $L = 32.7 \mu\text{m}$ was chosen to agree with the accepted value of 3.37 \AA rise per base pair (30), not to fit the data. (B) The same data compared with a Langevin curve $L = 26 \mu\text{m}$ and $b = 1400 \text{ \AA}$. These values were chosen to match the low-force slope.

Marko, Siggia (1994)

Fig. 1. Squares are experimental force versus extension data for 97 kb λ -DNA dimers from figure 3 of (2); solid line is a fit of the entropic force required to extend a worm-like polymer. The fit parameters are the DNA length ($L = 32.80 \pm 0.10 \mu\text{m}$) and the persistence length ($A = 53.4 \pm 2.3 \text{ nm}$). Shown for comparison (dashed curve) is the freely jointed chain model (2) with $L = 32.7 \mu\text{m}$ and a segment length $b = 100 \text{ nm}$ chosen to fit the small- x data.

