Mechanical Detection of a Long-Range Actin Network Emanating from a Biomimetic Cortex

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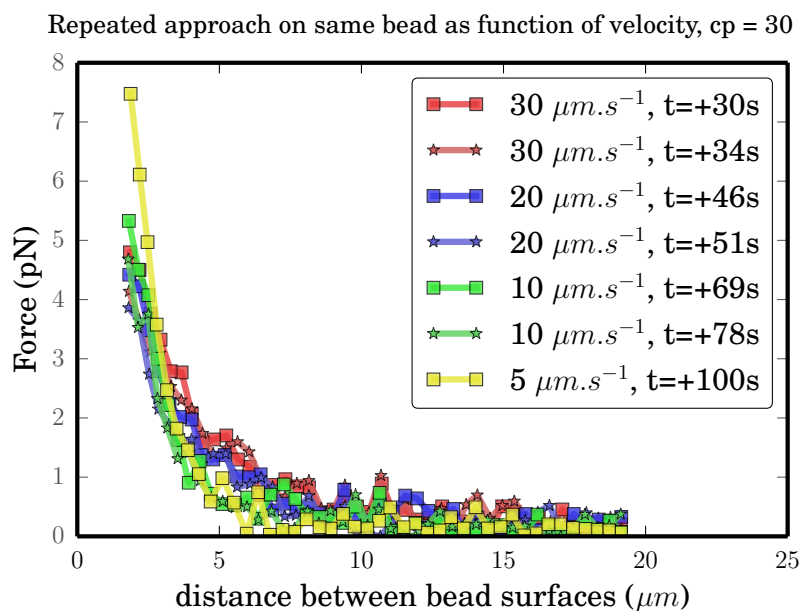# Supplementary Information

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Figure 1: S1: Repeated approach curves at difference speeds (30, 20, 10 and 5µm/s) on the same bead, by decreasing velocity. Indentation time t represents the instant at which the probe-bead started approaching the actin-bead, where t=0 corresponds to the time at which both beads were trapped. Starting distance and minimal approach distance where kept the same across all speed. The difference of maximum force between the first indentation (30µm/s) and the last indentation (5µm/s) can be explained by the fact that the actin is still growing on the bead surface.
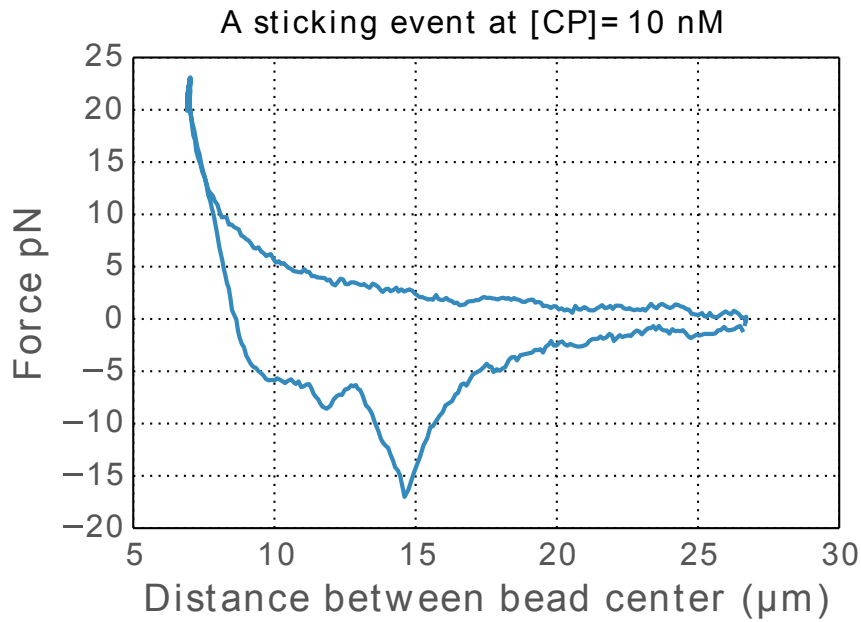
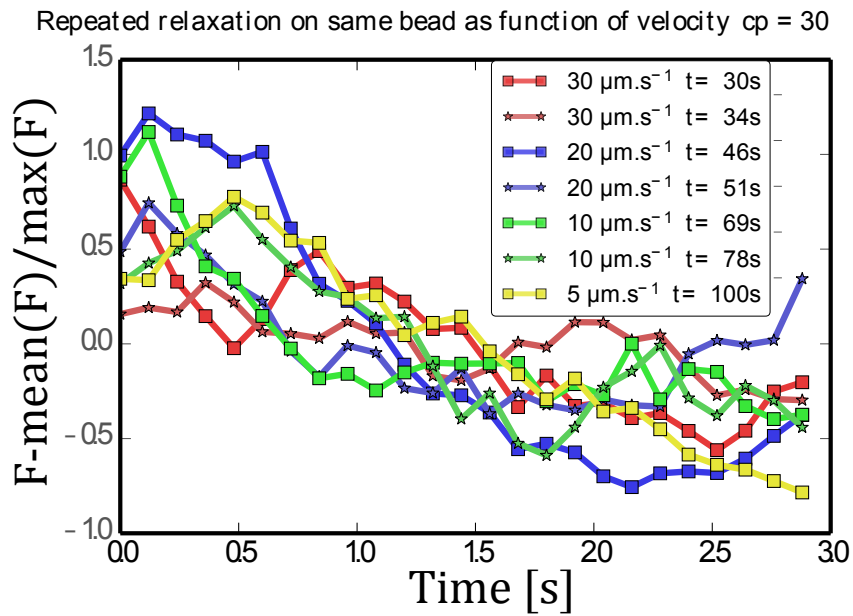Figure 2: S2: Sawtooth like sticking events as observed for ≈25% of experiments.

Figure 3: S3: Renormalized relaxation at different speeds for the same experiment as presented in Fig. S1.
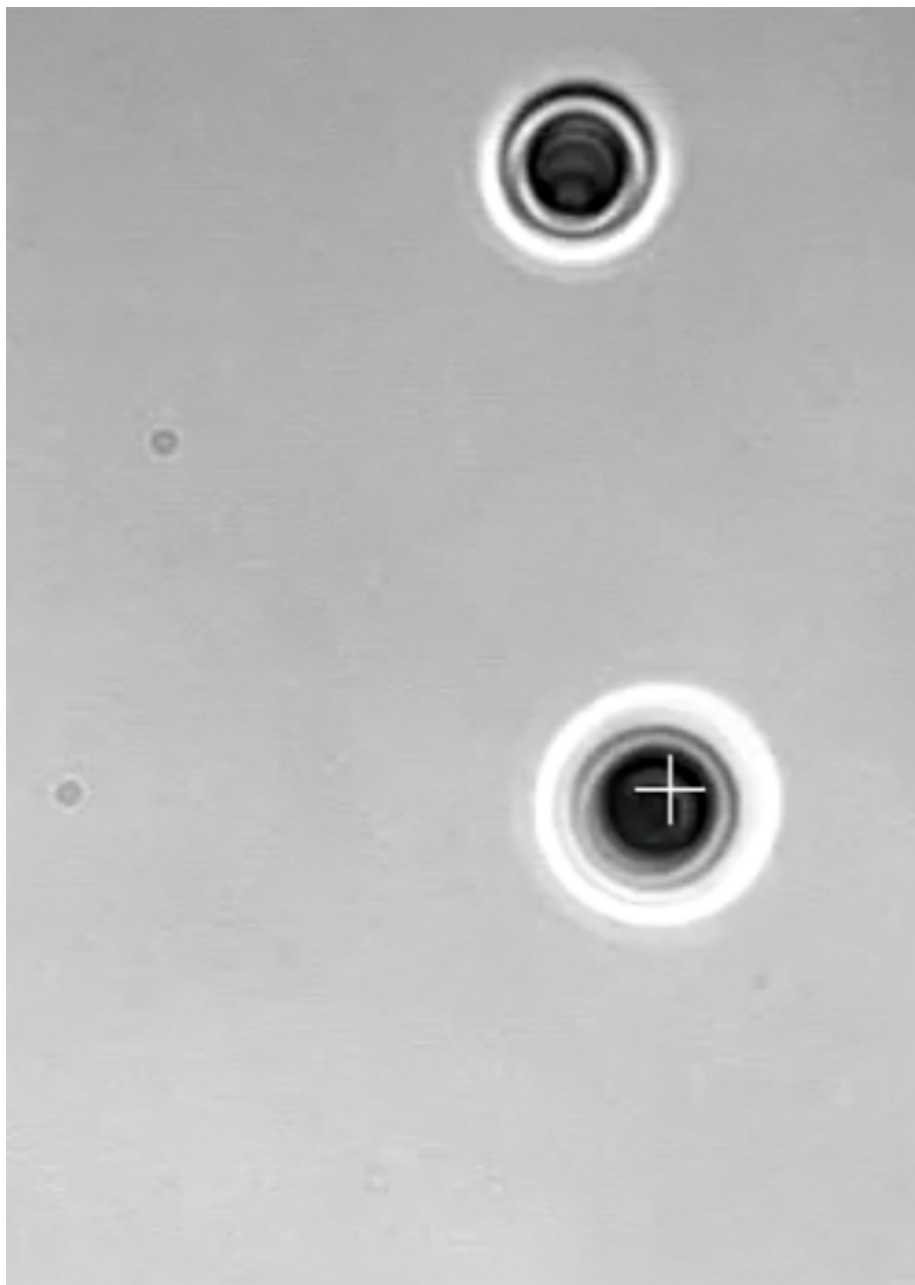
Figure 4: Video S4 : Actin bead trapped by an optical tweezer (white cross). When the stage is displaced. neighbouring particles experience a repulsive force. Timescale is realtime.
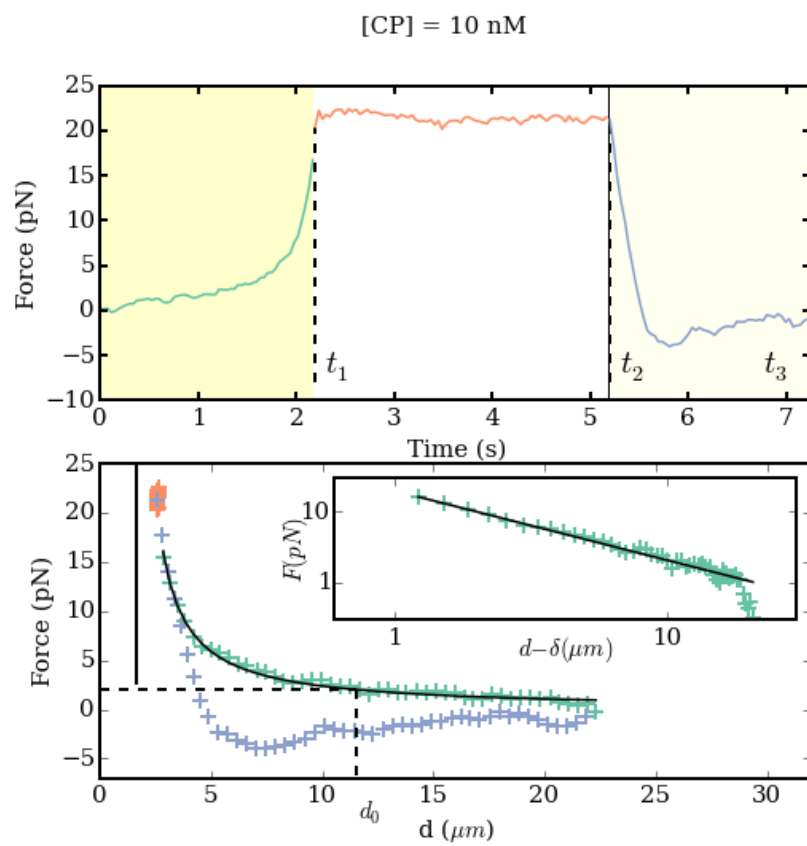
Figure 5: S5:One sample of the approach-retraction curves shown both as a function of time and distance for concentration of capping protein of 10nM.
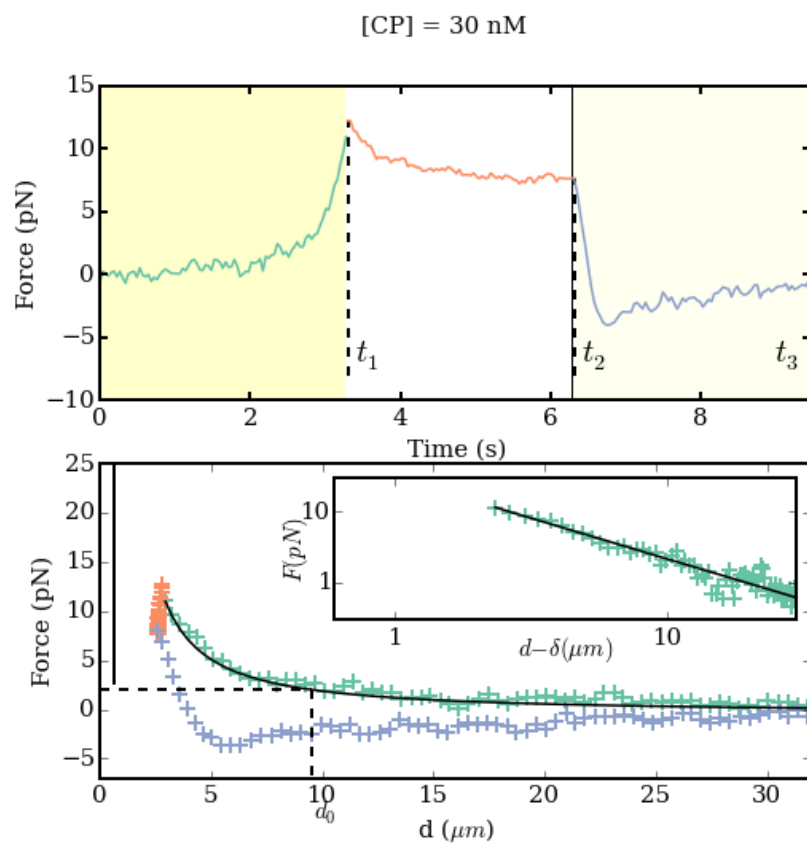
Figure 6: S6:One sample of the approach-retraction curves shown both as a function of time and distance for concentration of capping protein of 30nM.
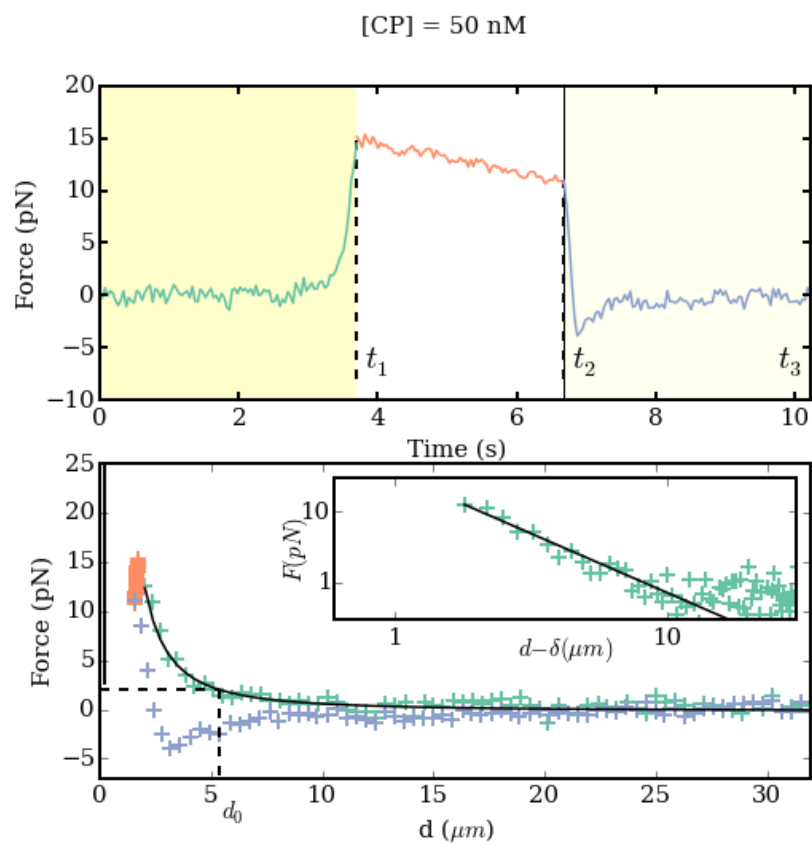
Figure 7: S7:One sample of the approach-retraction curves shown both as a function of time and distance for concentration of capping protein of 50.