Shuttle and Electrode Displacement Output Voltage x_1 (Shuttle) x_2 (Electrode) 7.5 0.02 5.0 Displacement (μm) Voltage V_{out} (mV) 0.01 2.5 0.0 0.00 -2.5-0.01-5.0-7.5-0.020.30 0.32 0.34 0.36 0.28 0.30 0.32 0.34 0.36 0.28 Collision Force Damping Force 0.050 0.050 0.025 0.025 Force F_c (μ N) Force F_d (μ N) 0.000 0.000-0.025-0.025-0.050-0.050 $\begin{array}{c}
0.32 \\
\text{Time } t \text{ (s)}
\end{array}$ $\begin{array}{c}
0.32 \\
\text{Time } t \text{ (s)}
\end{array}$ 0.34 0.34 0.28 0.30 0.36 0.28 0.30 0.36