

Video 1 shows the motion of a cilium in its plane of oscillation (x-y) for counter-clockwise rotation of the magnet, as viewed through the microscope. The cilium exhibits a distinct asymmetric beating with a slow forward stroke following the magnet rotation and a fast recovery stroke due to the elastic forces. The experimental parameters are $L=480\mu\text{m}$, $W=10\mu\text{m}$, $\omega=0.3\text{Hz}$, $B=600\text{Gauss}$, $\mu=1\text{cP}$