Figure 1. An animated version of figure 4 of the main text, showing a cross-section along the line $y = 0$ of the surface perturbation $\eta$ (thin line) for the initial top-hat profile of figure 3. As in figure 4, the bold line gives the steady adjusted solution $\eta_S$. There is no Kelvin wave in the evolution and the Poincaré waves have amplitudes, wavelengths and non-dimensional periods of order $a$. The average surface displacement over the interval $0 \leq t \leq 10$ is graphically indistinguishable from $\eta_S$.

Figure 2. An animated version of figure 7 of the main text, showing cross-sections along the lines $y = 0$ (upper) and $x = 0$ (lower) of the surface perturbation $\eta$ (thin line) for the $n = 1$ profile of figure 6. As in figure 7, the bold line gives the steady adjusted solution $\eta_S$. The dashed line gives the sum of the steady solution and the single Kelvin wave mode, with period of order $2\pi$ and confined to within a distance of order the Rossby radius of the boundary. The Poincaré waves have amplitudes, wavelengths and non-dimensional periods of order $a$. 