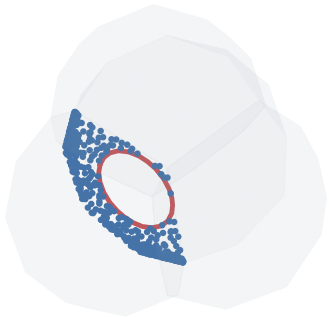
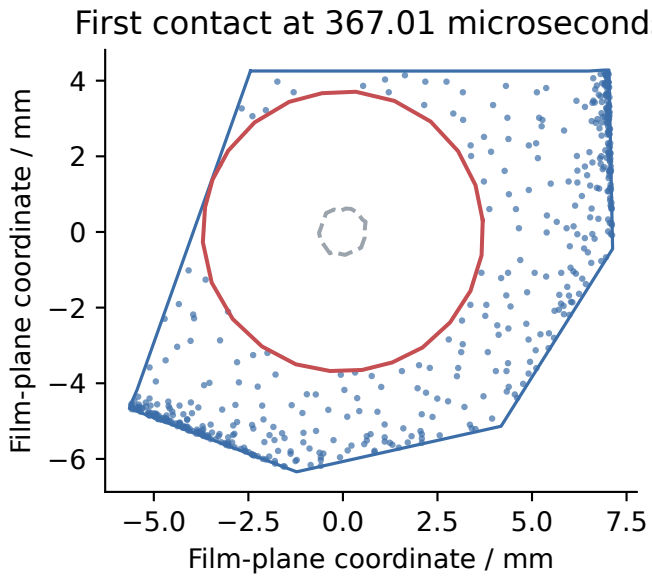
Finite-speed rim -> finite liquid recipient -> neighbour response

Four-bubble reference + actual rim

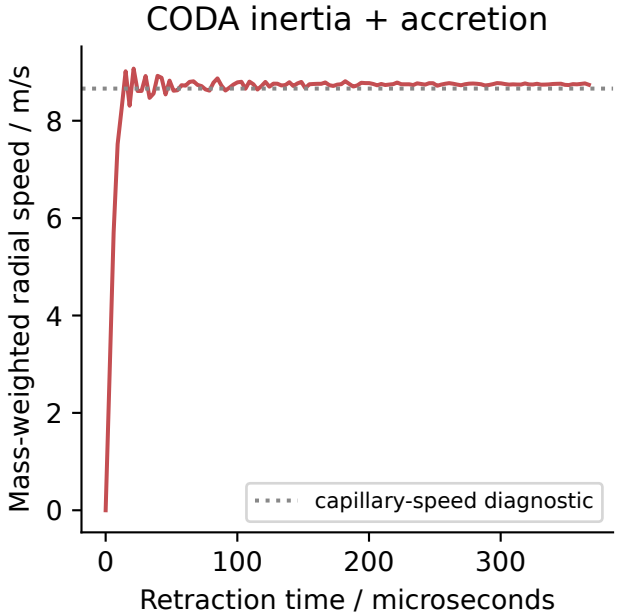


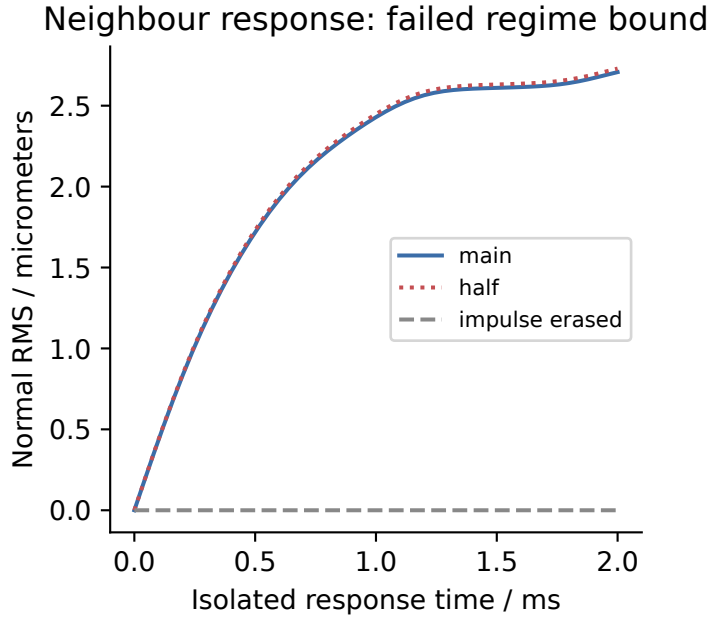


Actual incoming parcel

Mass: 1.121 micrograms
Tagged S: 2.802 pmol
Speed: 8.652 m/s

Half-step impulse difference: 0.82%
Mass/tag/P balances < 1.8e-13





A handoff, not a cascade prediction

Full relative gradient: 0.334 > 0.01
Normal gradient diagnostic: 0.00254
Highest response dt*omega: 3.60

Rigid whole-liquid recipient limit
Retraction stops at first contact
No drainage/gas/surfactant feedback

Actual native footprint, planar approximation (max projection 2.385 um). No deformation magnification; passive tagged S, not adsorption closure.