Spreading fronts in sedimentation of dilute suspension of spheres
JOHN HINCH, DAMTP, Cambridge University, DANIEL CHEHATA, LAURENCE BERGOUGNOUX, ELISABETH GUAZZELLI, IUSTI, Polytech’Marseille — When very dilute suspensions settle, a wide diffuse front can form between the clear fluid above and the uniform suspension below. The width of this front grows through two mechanisms - hydrodynamic interactions and polydispersity in the size of the spheres. We explore experimentally and by numerical simulations how these two effects combine.