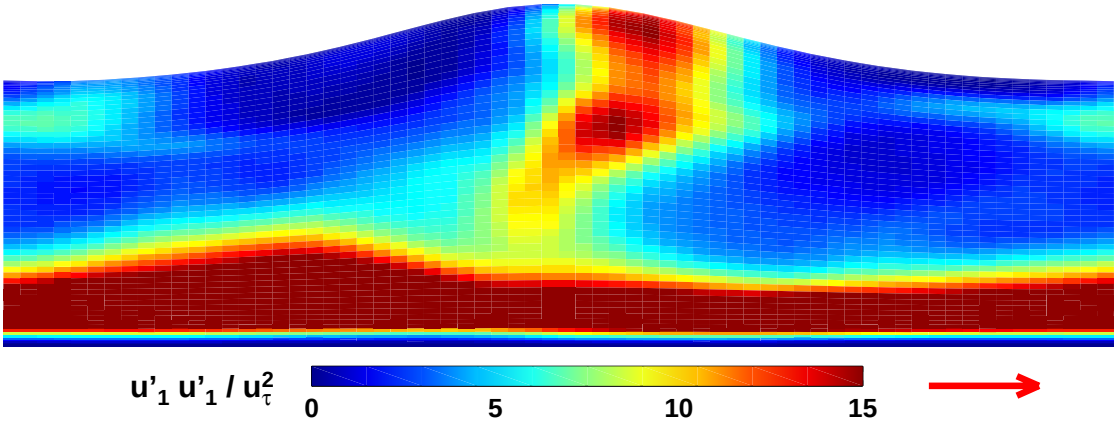
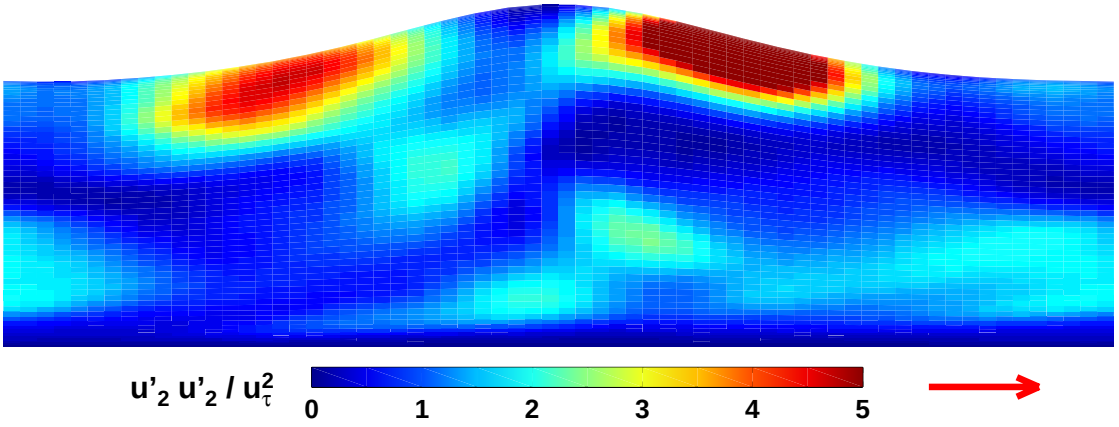
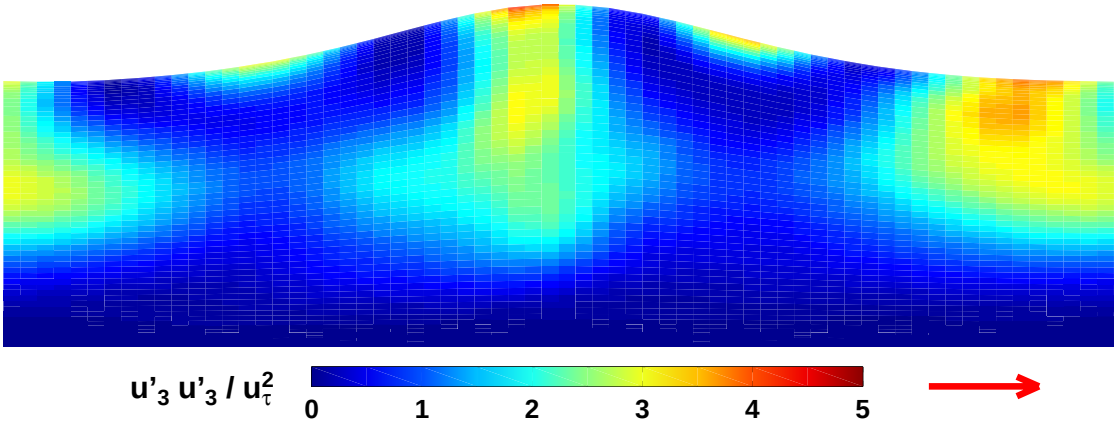


(a) streamwise turbulence intensity

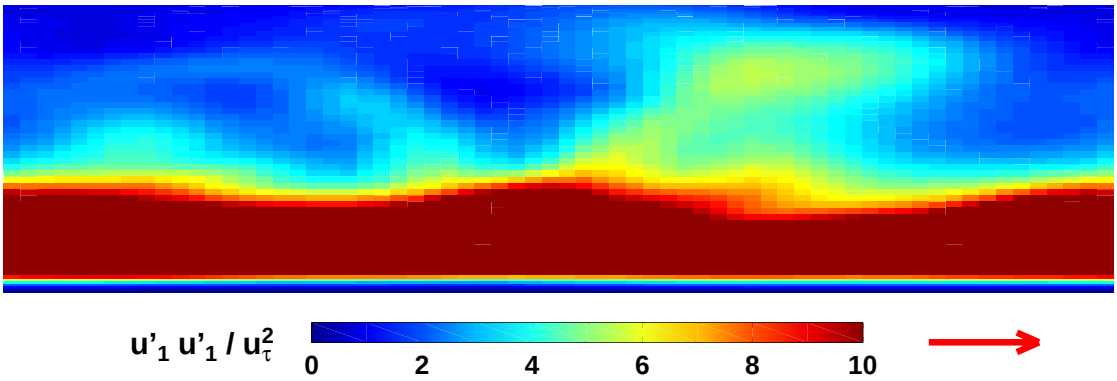


(b) spanwise turbulence intensity

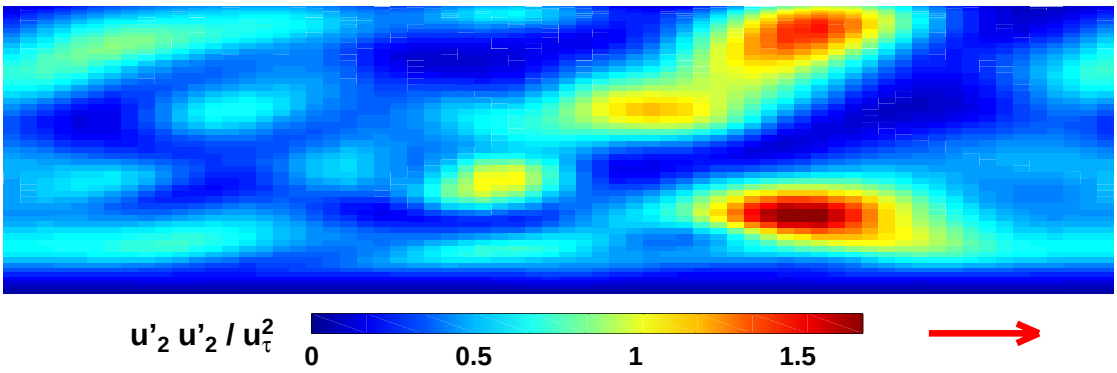


(c) vertical turbulence intensity

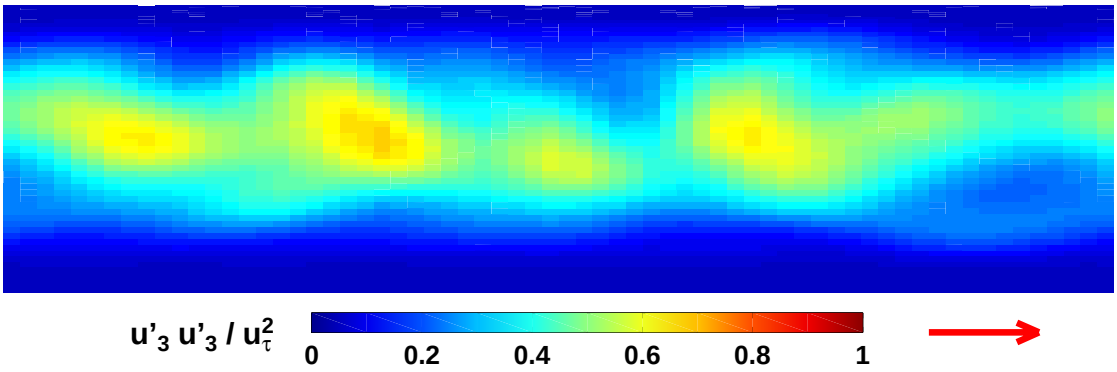
Figure 7.1: Instantaneous turbulence intensities for wave/current flow; case W2, t/T = 13.4



(a) streamwise turbulence intensity

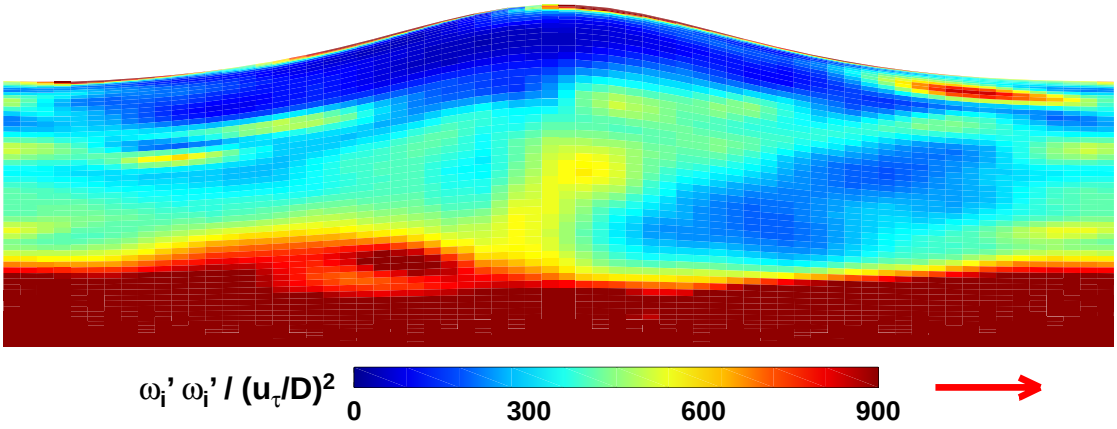


(b) spanwise turbulence intensity

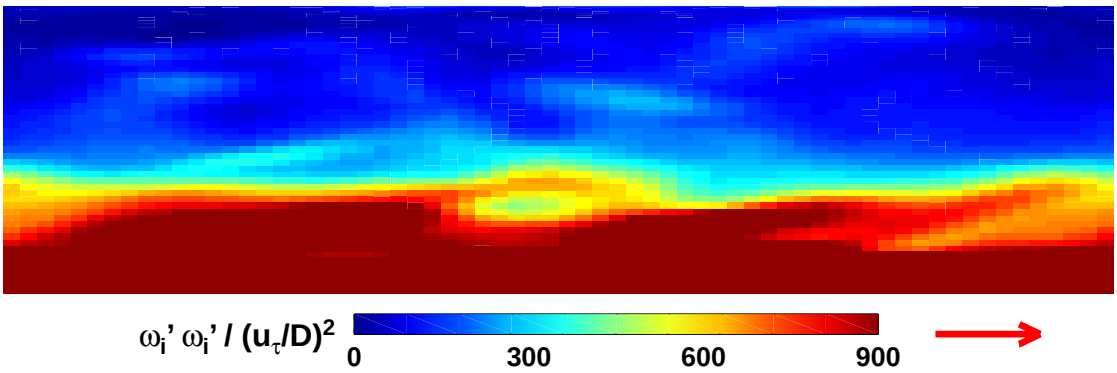


(c) vertical turbulence intensity

Figure 7.2: Instantaneous turbulence intensity for current-only flow; case C, t/T = 13.4

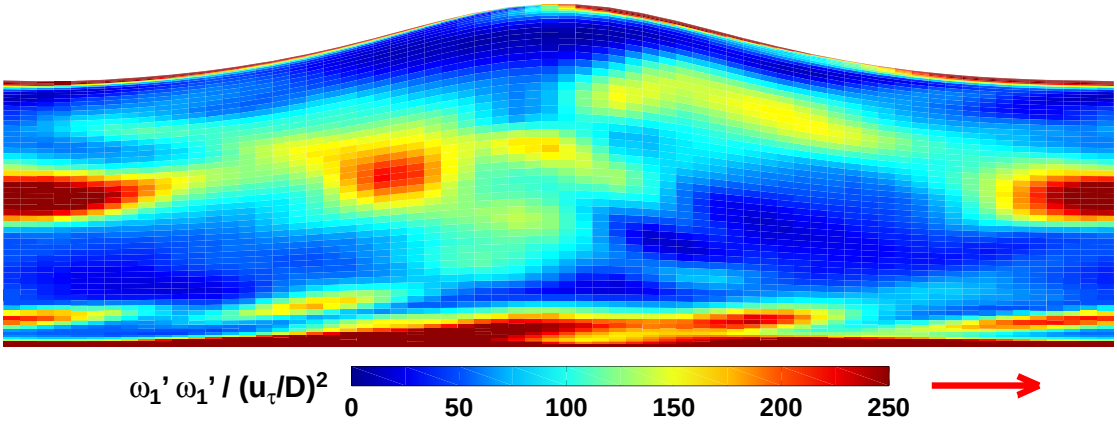


(a) wave/current flow, case W2

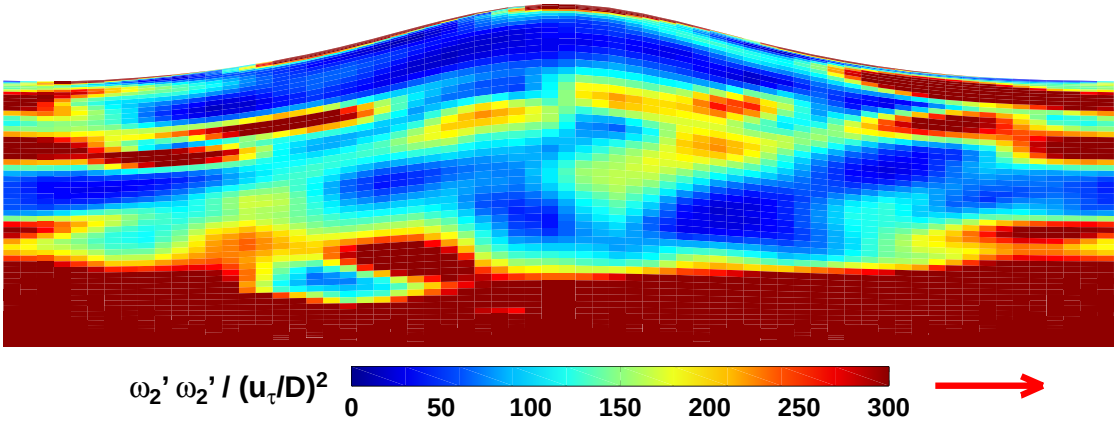


(b) current-only flow, case C

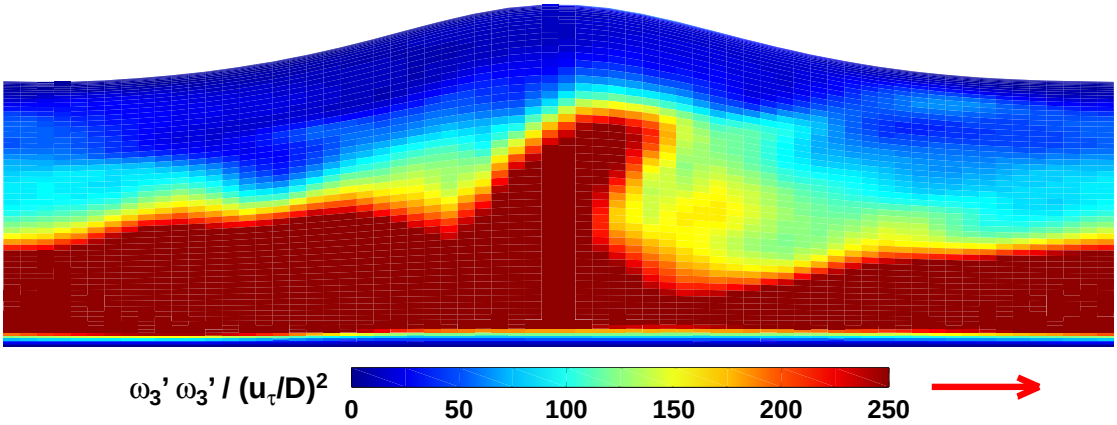
Figure 7.3: Instantaneous enstrophy, t/T = 13.4



(a) streamwise enstrophy component

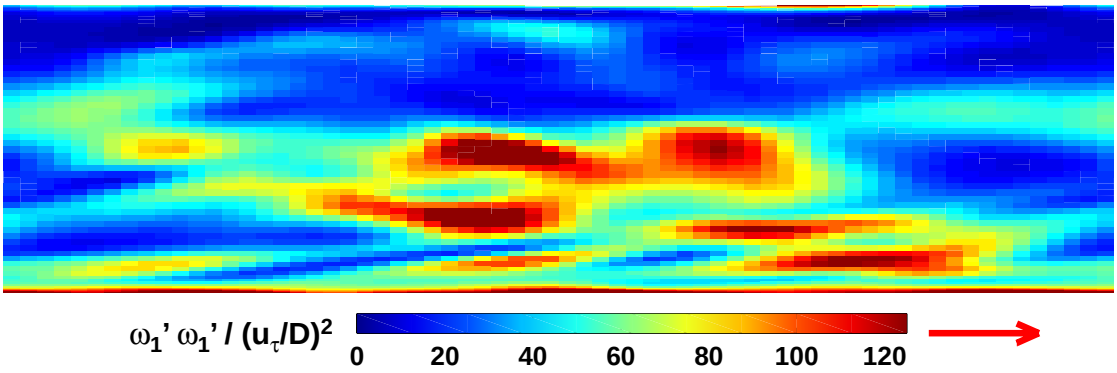


(b) spanwise enstrophy component

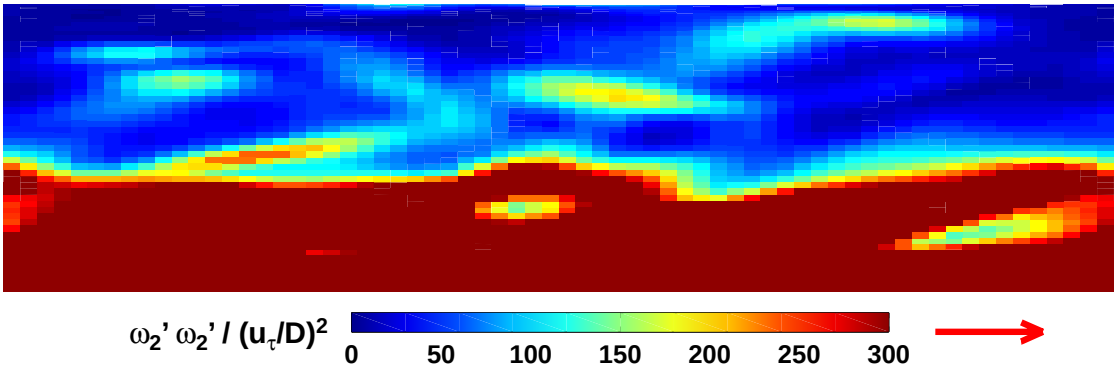


(c) vertical enstrophy component

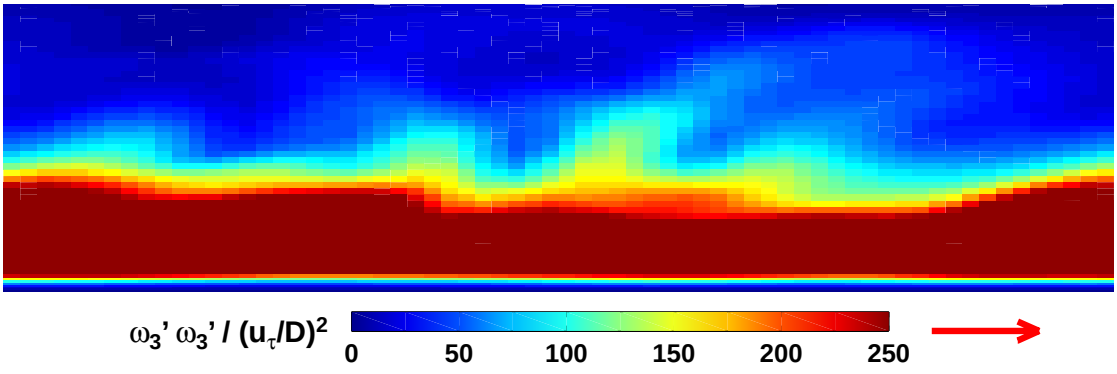
Figure 7.4: Instantaneous enstrophy components for wave/current flow; case W2, t/T = 13.4



(a) streamwise enstrophy component

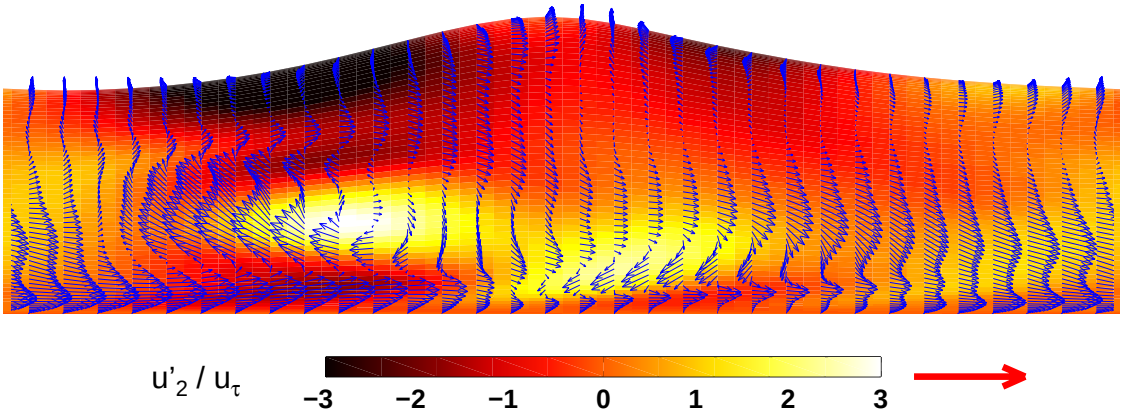


(b) spanwise enstrophy component

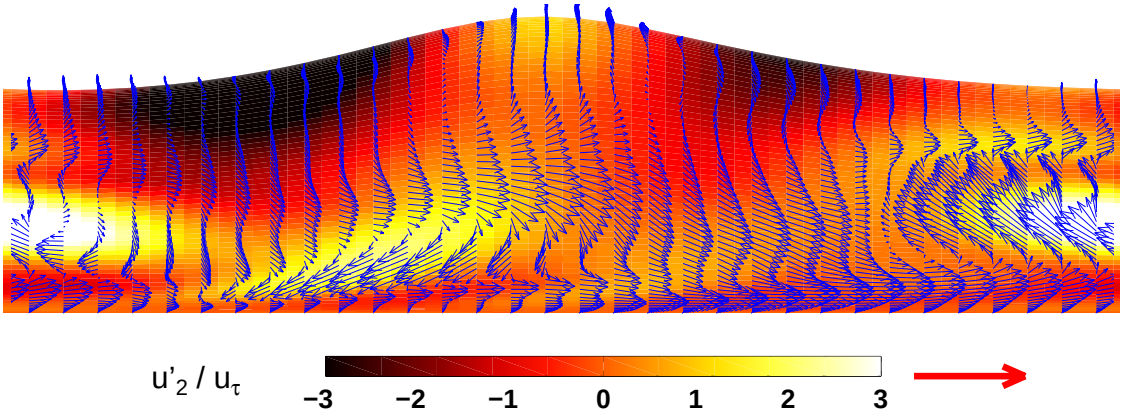


(c) vertical enstrophy component

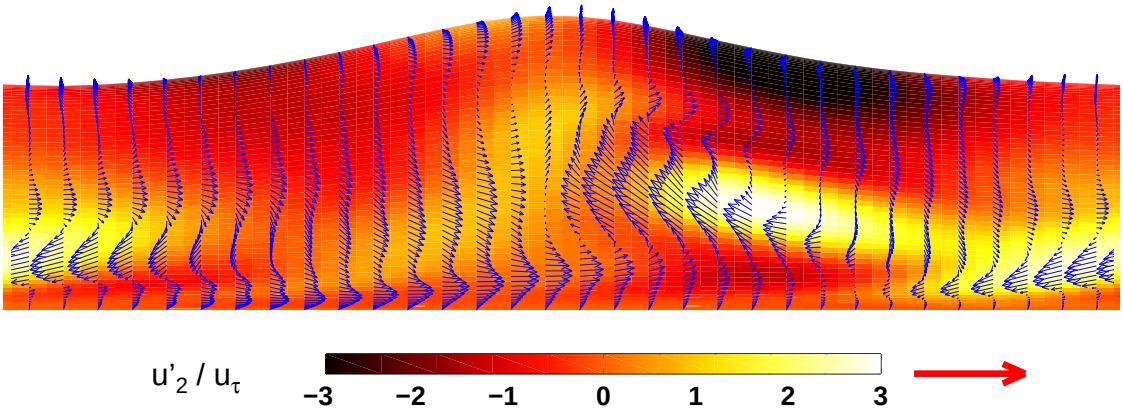
Figure 7.5: Instantaneous enstrophy components for current-only flow; case C, t/T = 13.4



(a) t/T = 9.9

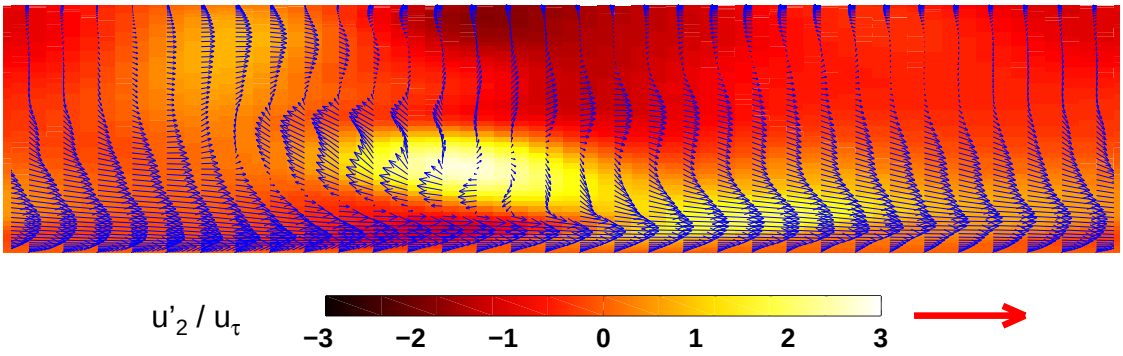


(b) t/T = 10.4

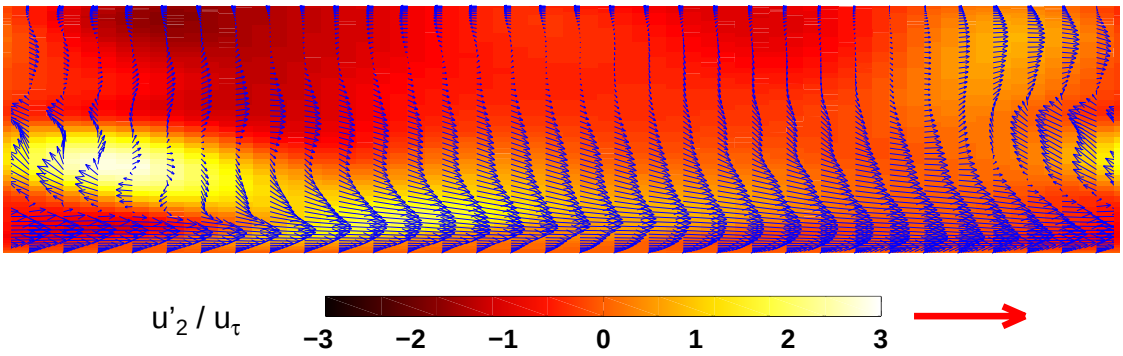


(b) t/T = 11.1

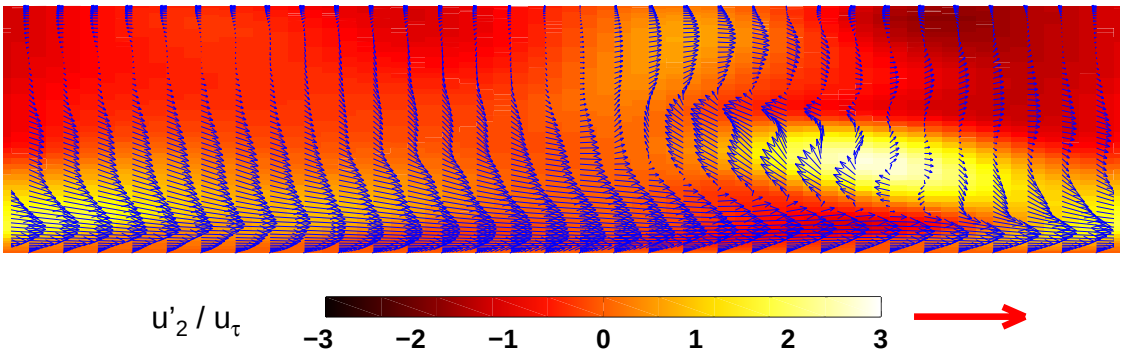
Figure 7.6: Instantaneous plots of velocity variation in vertical plane (with color scale showing spanwise velocity component variation); $x : z$ streamwise mid-plane for wave/current, case W2.



(a) t/T = 9.9

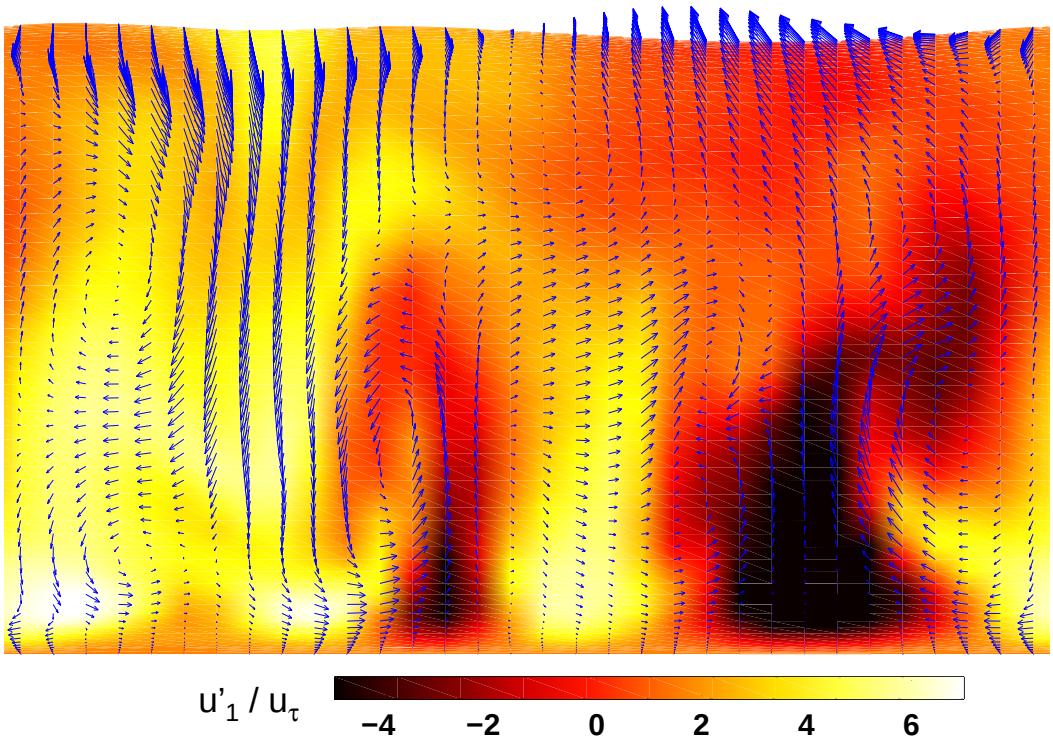


(b) t/T = 10.4

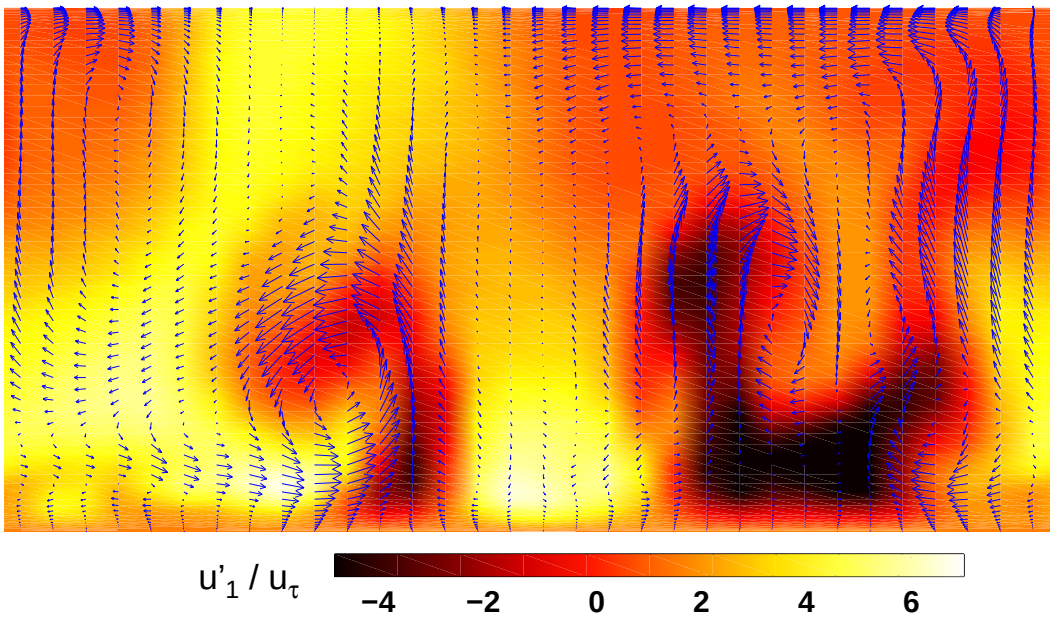


(b) t/T = 11.1

Figure 7.7: Instantaneous plots of velocity variation in vertical plane (with color scale showing spanwise velocity component variation); $x : z$ streamwise mid-plane for current-only, case C.

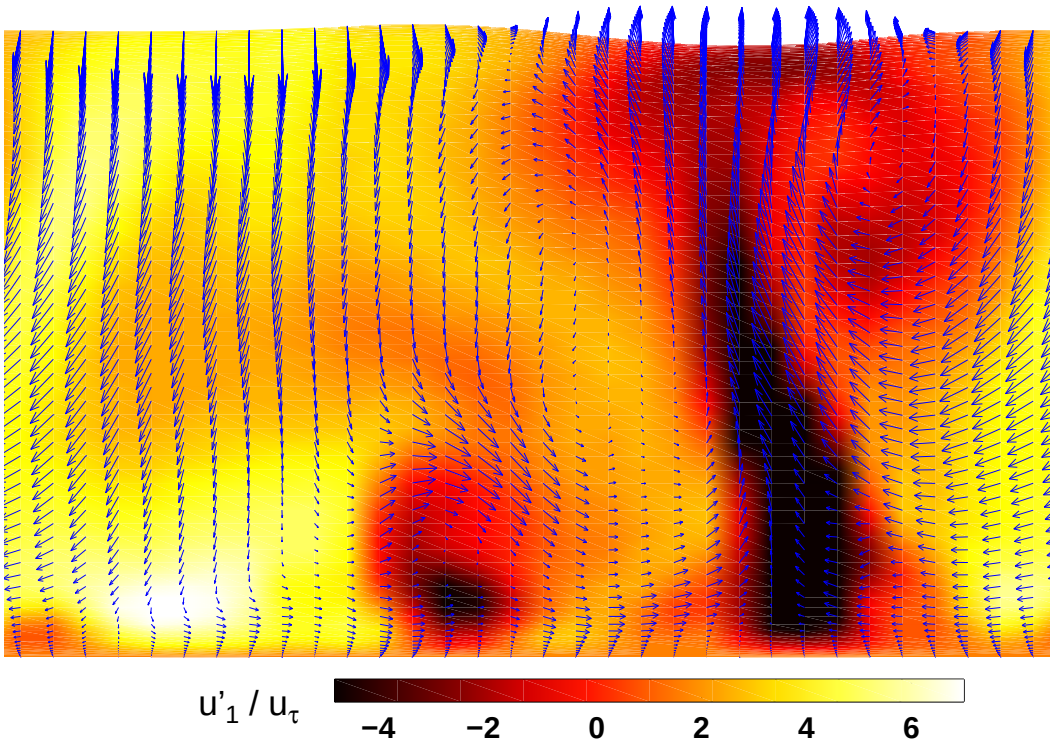


(a) wave/current flow, case W2

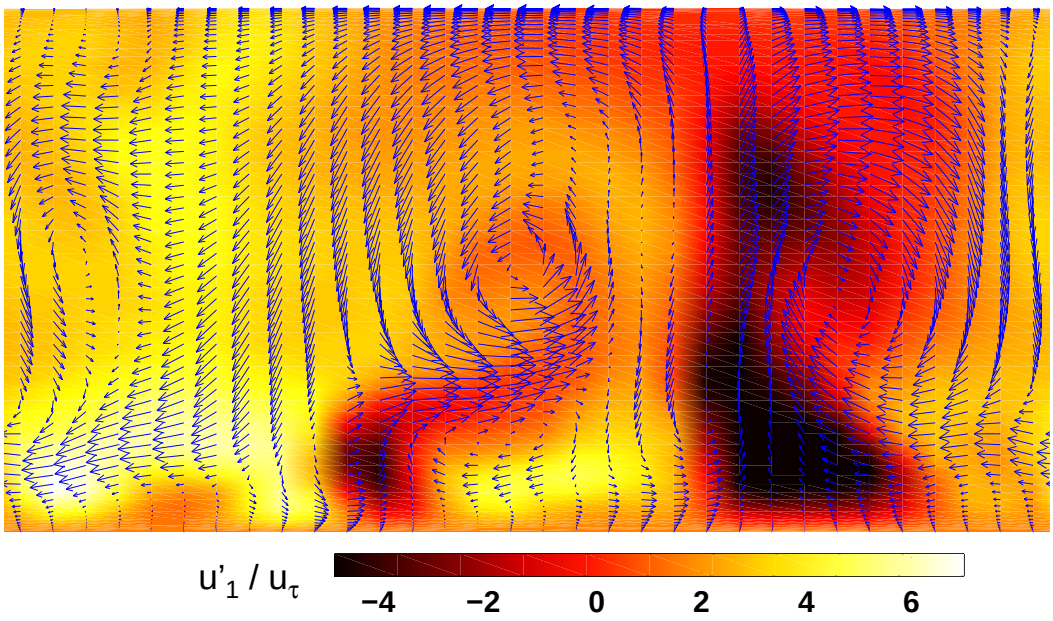


(b) current-only flow, case C

Figure 7.8: Instantaneous plots of velocity variation in vertical plane (with color scale showing streamwise velocity component variation); y:z cross-plane, t/T = 11.1



(a) wave/current flow, case W2



(b) current-only flow, case C

Figure 7.9: Instantaneous plots of velocity variation in vertical plane (with color scale showing streamwise velocity component variation); $y:z$ cross-plane, t/T = 11.6