Movie 1. Numerical simulations showing the time evolution of the vorticity field $\hat{\zeta}_T(x, y, t)$ with initial conditions at $t_0 = 0$

$$\tilde{\zeta}_T(x, y, t_0) \equiv \tilde{\zeta}_{DR}(x, y) + \tilde{\zeta}_{DL}(x, y) \,. \tag{1}$$

The vorticity amplitudes of the C-L dipoles are $\zeta_0 = \zeta_1 = 1/2$. The numerical domain is a square with a side length $L = 30$ discretized in 1024^2 grid points. Time step $\delta_t = 0.01$ and time save $\Delta_t = 5$. The movie comprises only a reduced area of the numerical domain and the time interval $t = [0, 280 \times 5] = [0, 1400]$. Vorticity contour intervals are $\Delta_\zeta = 0.015$ for $\zeta < 0$ (white contour lines), and $\Delta_\zeta = 0.2$ for $\zeta > 0$ (black contour lines). The red thick contour corresponds to $\zeta = 0$.