Interactions between 2 valves

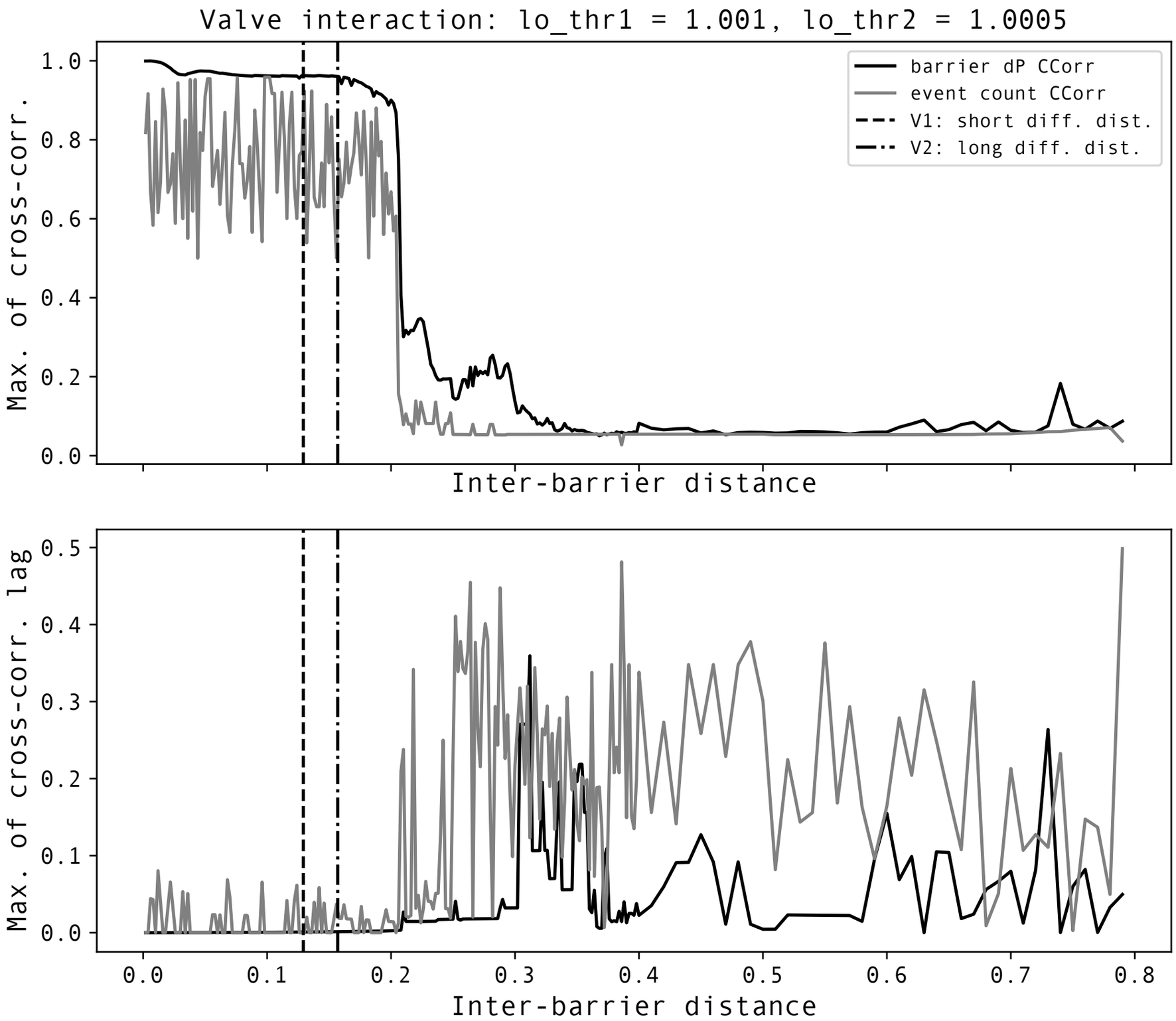
We would like to measure at which distance 2 valves defined by a given set of parameters start interacting.

As a measure of interaction, we use:
1/ The maximum of the cross-correlation of the pressure differential across each barriers
2/ The maximum of the cross correlation of the activity rate (rate of openings per given time bin). This measure is closely related to the one that could be used on real data (*cf Frank et al., 2016*)

We also measure the lag corresponding to the maximum of cross-correlation. Ideally, this could be linked to a delay between both active patches.

Interactions between 2 valves

Diffusive distance = sqrt(D*T_cycle)



Diffusive distance gives an idea, but imprecise, int. distance must depend on the l/ul dominance.

A few artifacts: lags are useless for now, interactions do not seem very consistent with what we observe.

We need to review the measure we use for interactions.