Research Progress 2

12/4

Previous Work

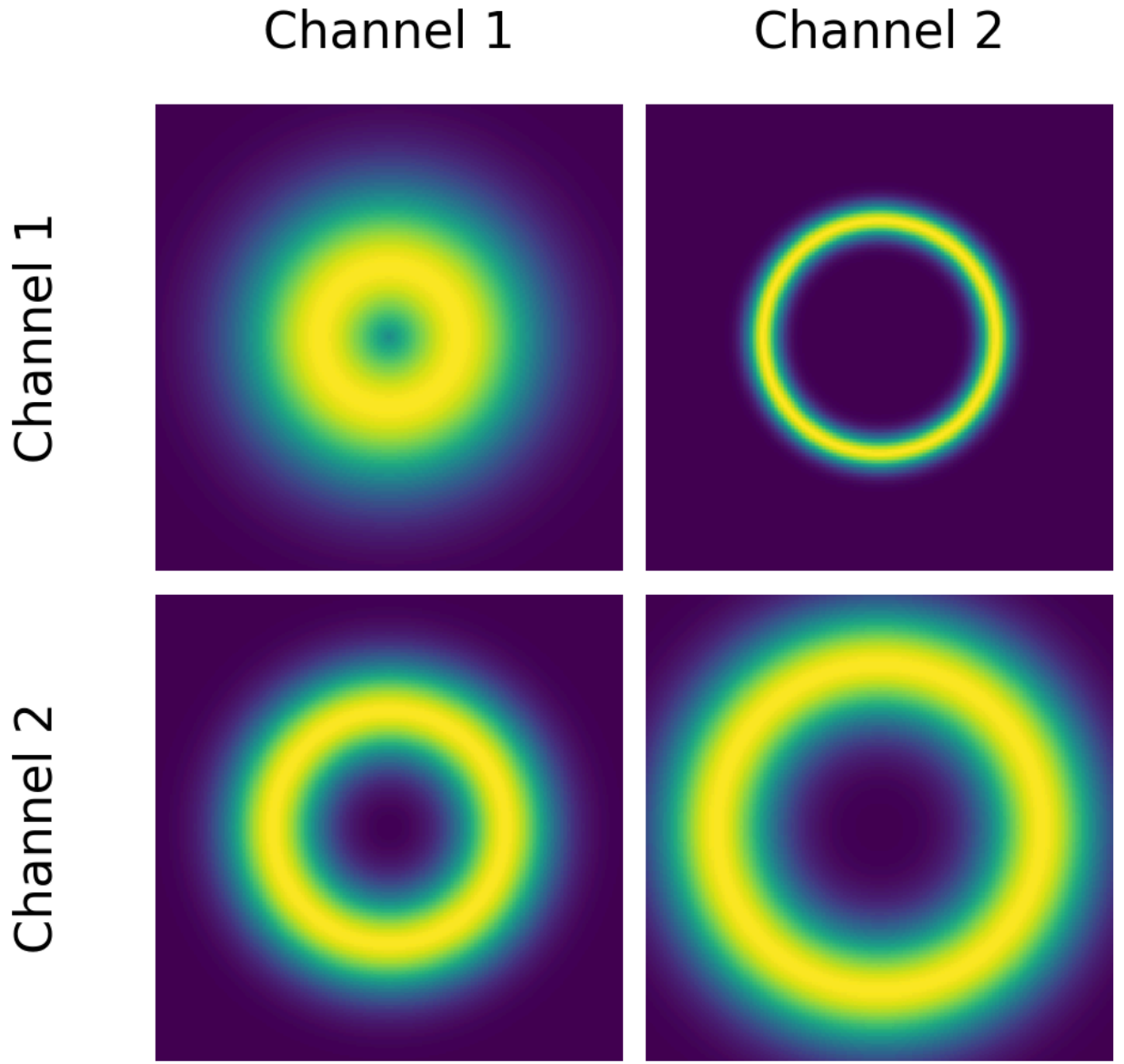
Integrate boid simulation with lenia kernel.

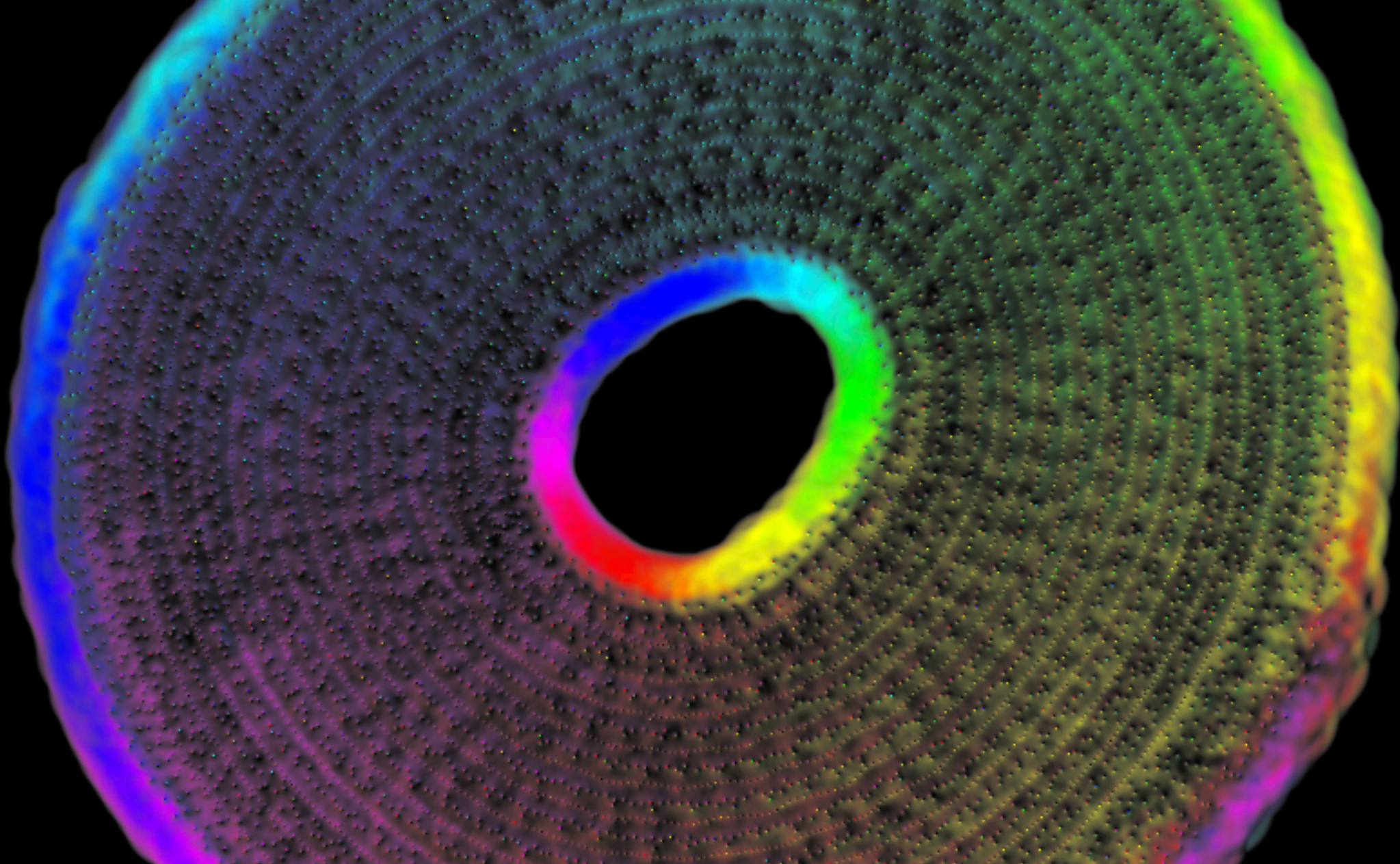
- separation
- alignment
- cohesion

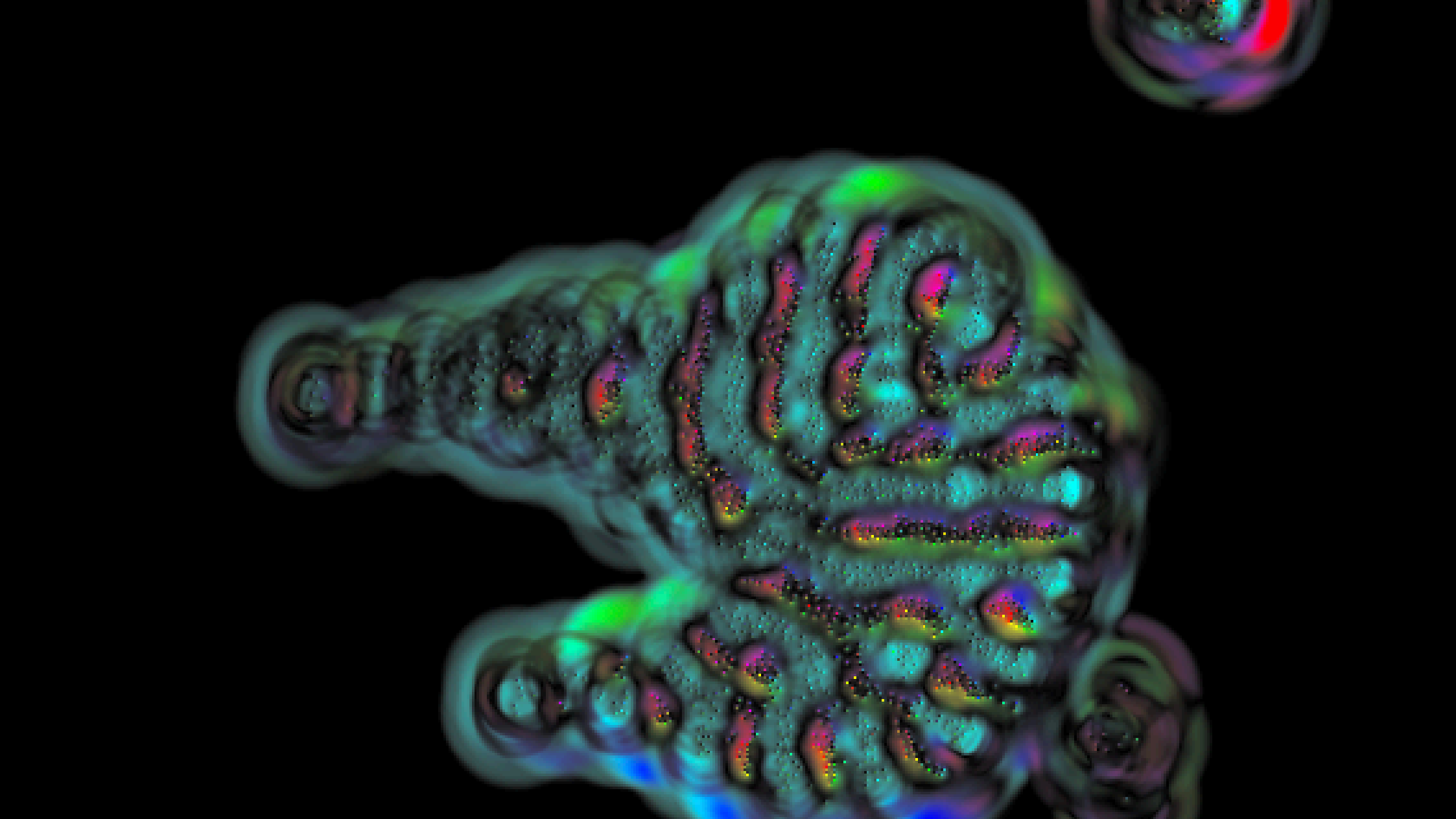
Multi-Channel Kernels

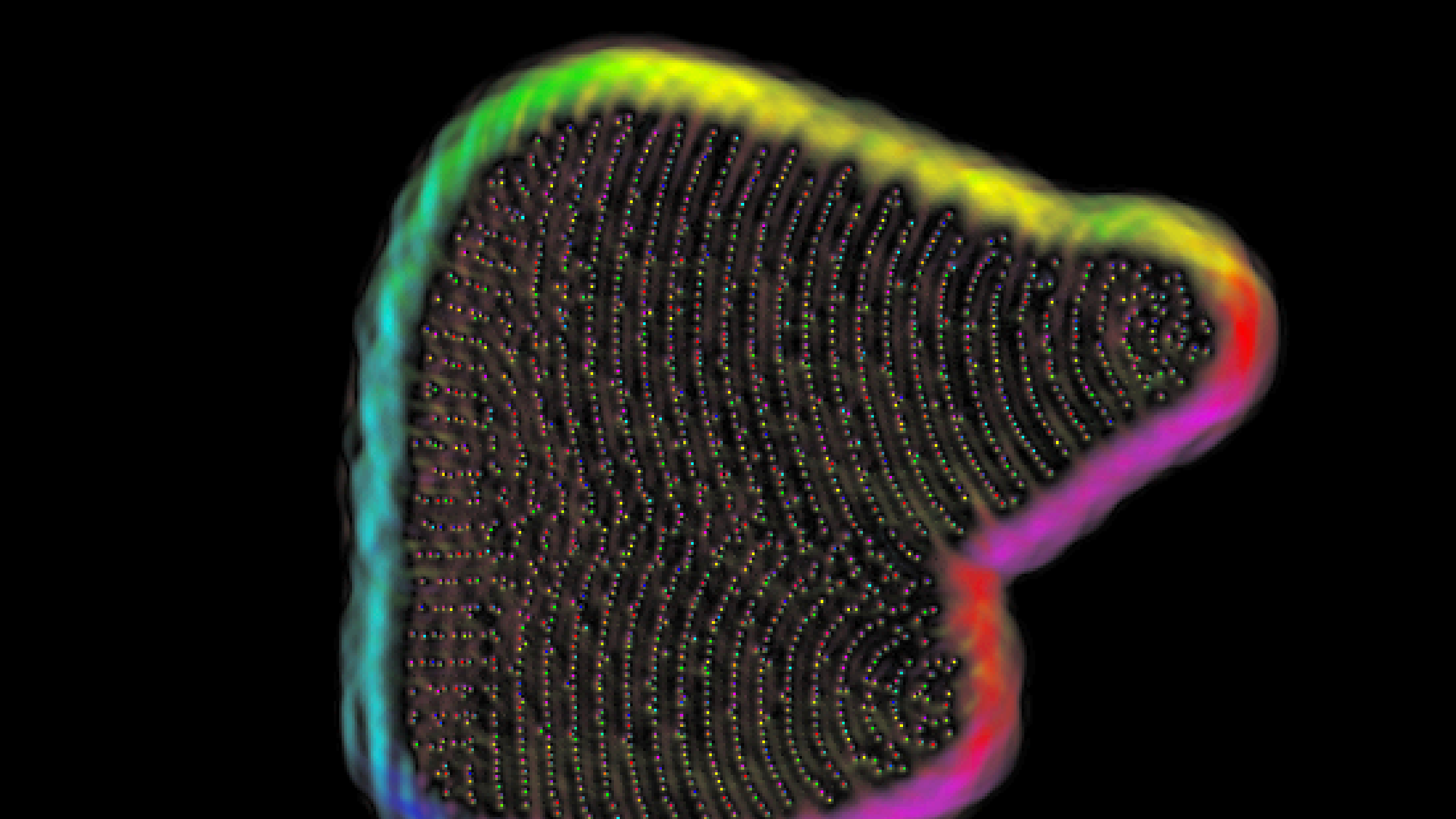
The particles for simulation is assigned to 2 channels
Each channel has its own kernel (force field rules)

- Channel 1: 5000 particles
- Channel 2: 5000 particles


Channel 1
Channel 2
Channel 1
Channel 2

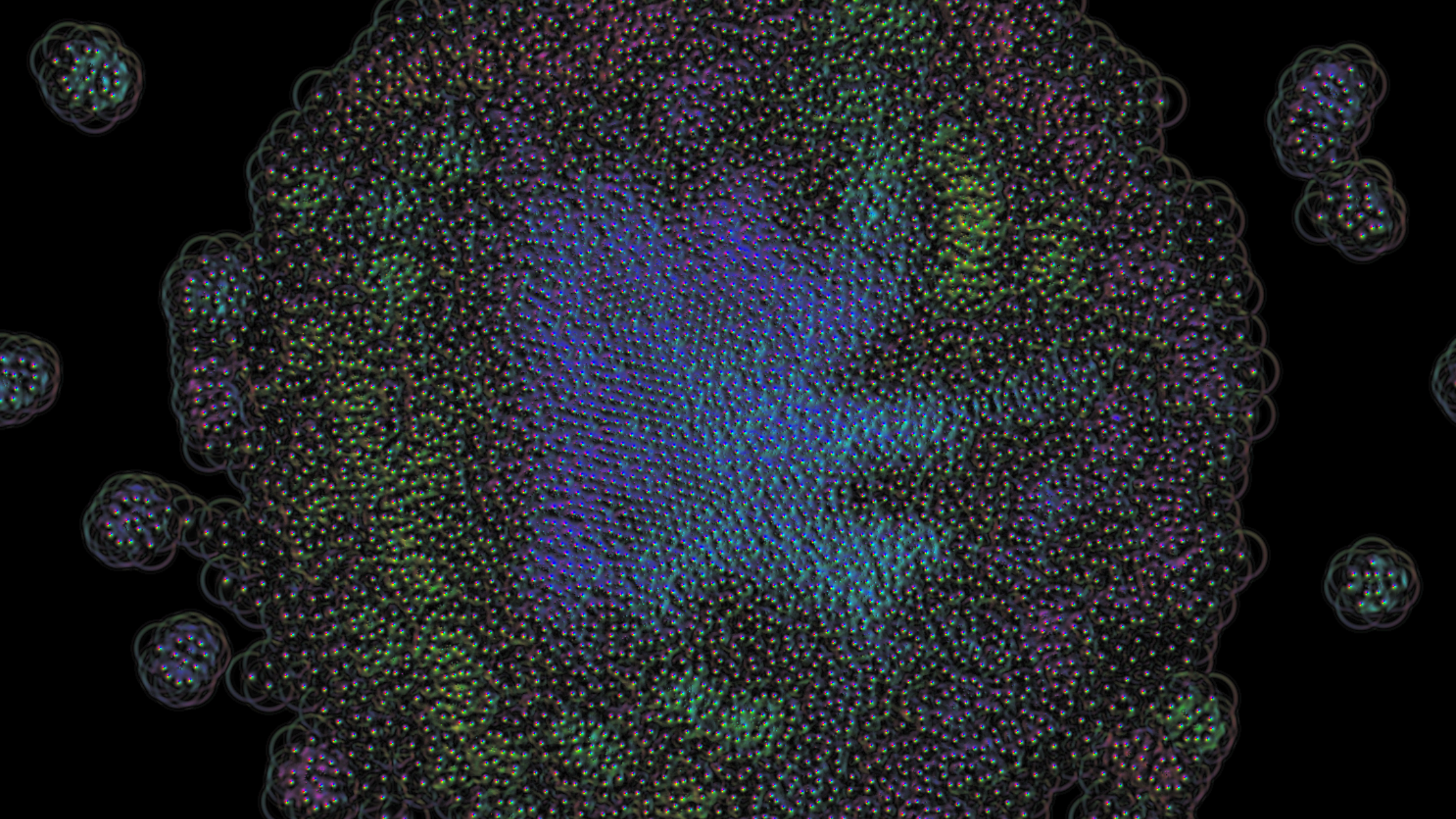


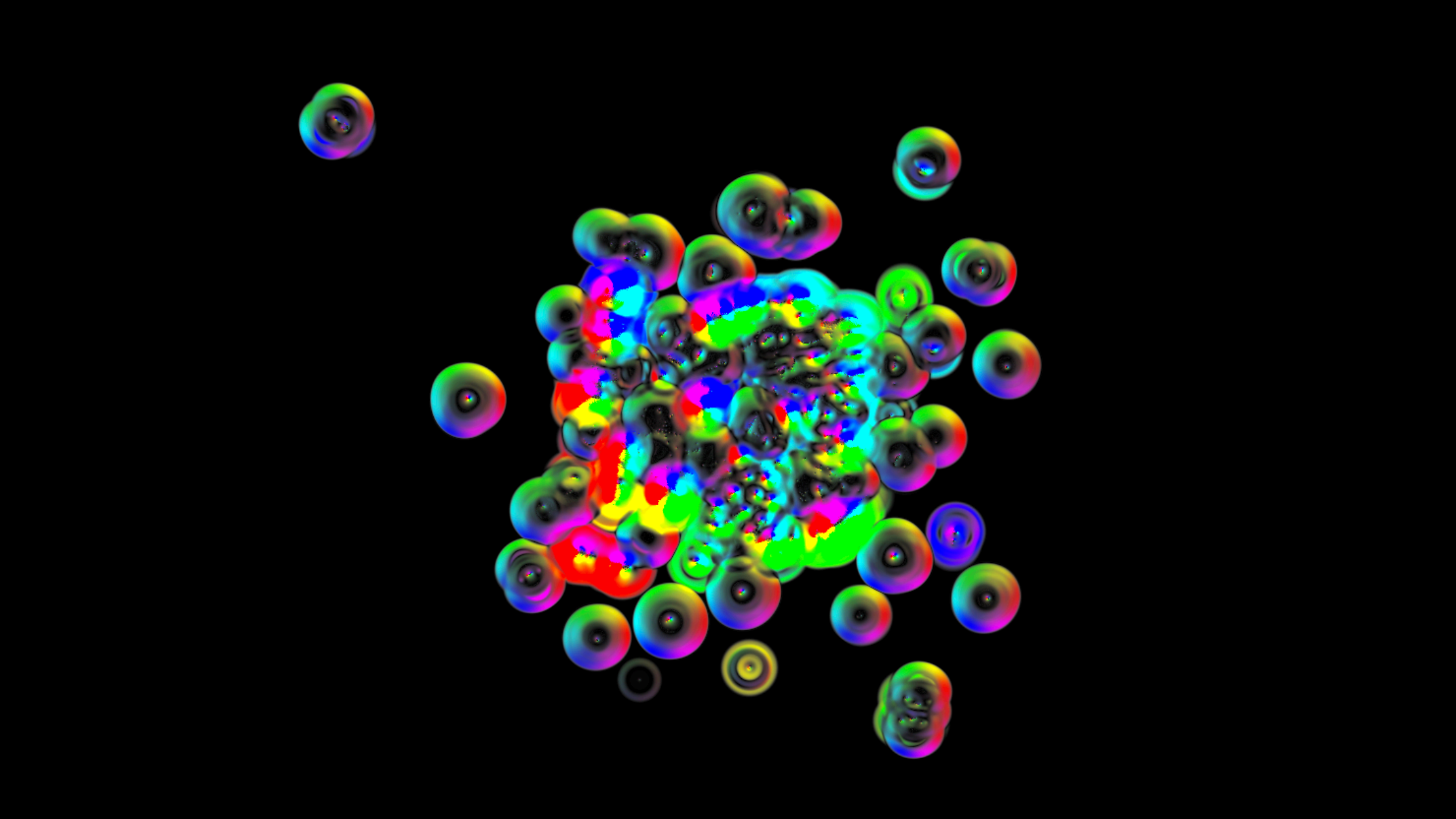




Features of the parameter

- Variance -> **nessesary**
- Velocity of whole mass -> **optional**
- Velocity variance inside cluster -> **optional**

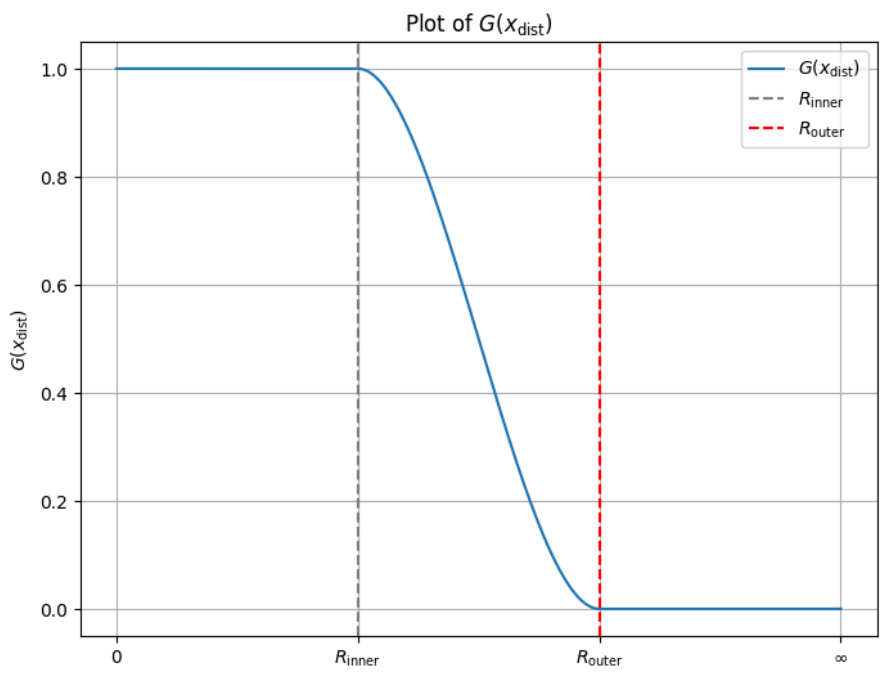


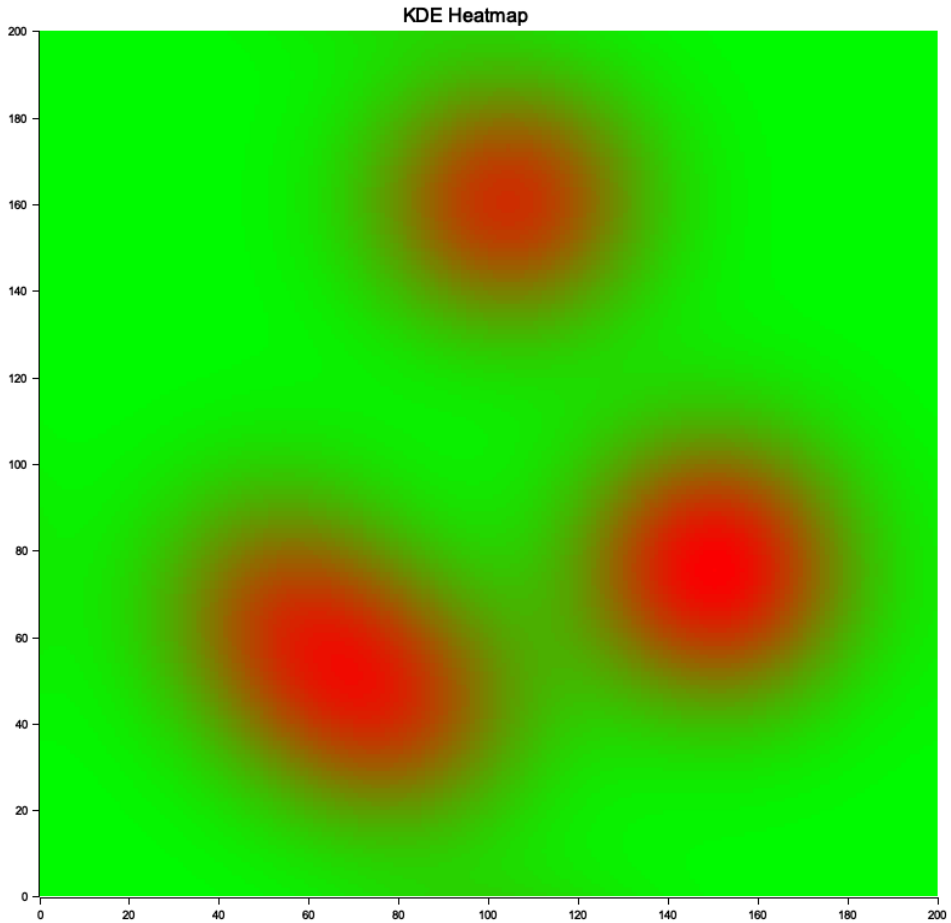


Evaluation Method

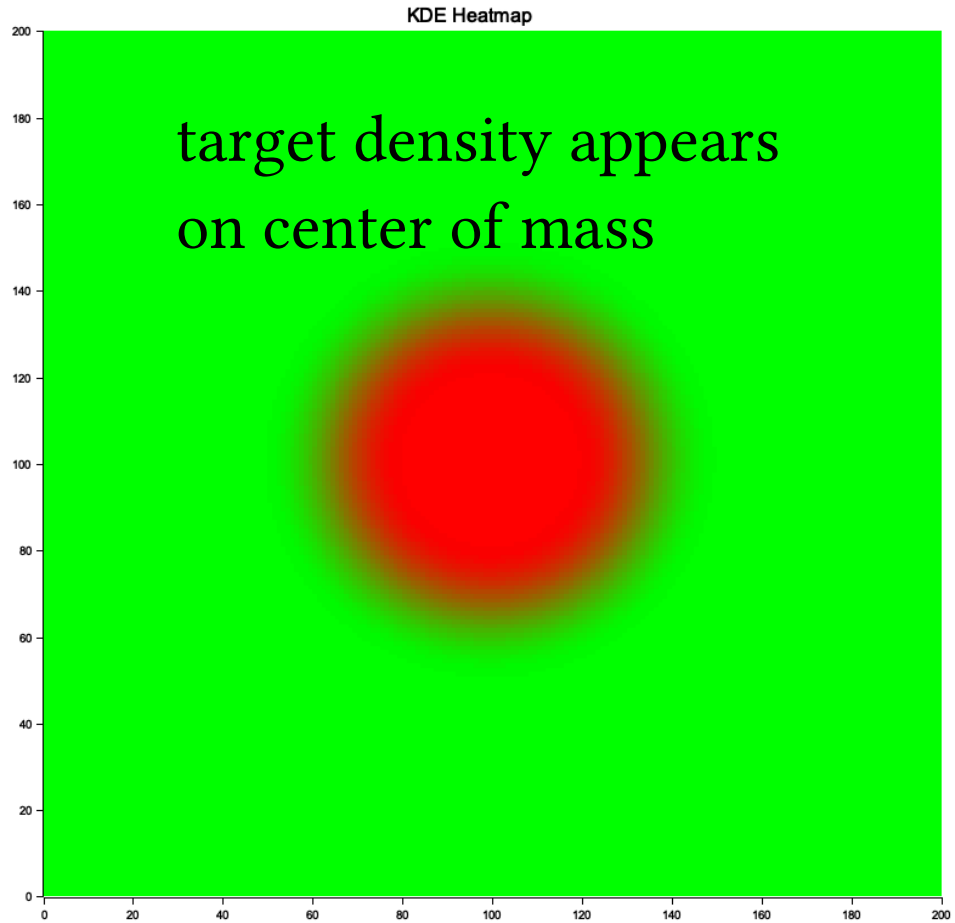
KL divergence

calculate simularity between particle distribution and target distribution



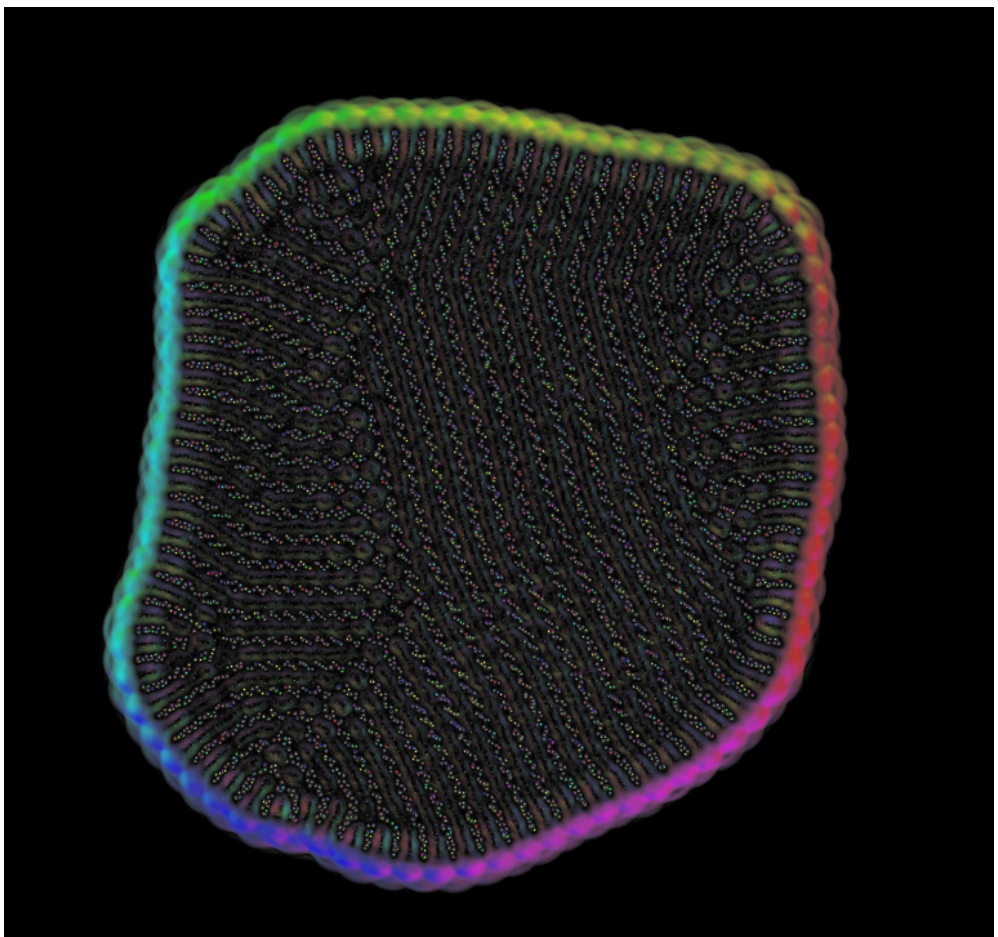


a) particle KDE



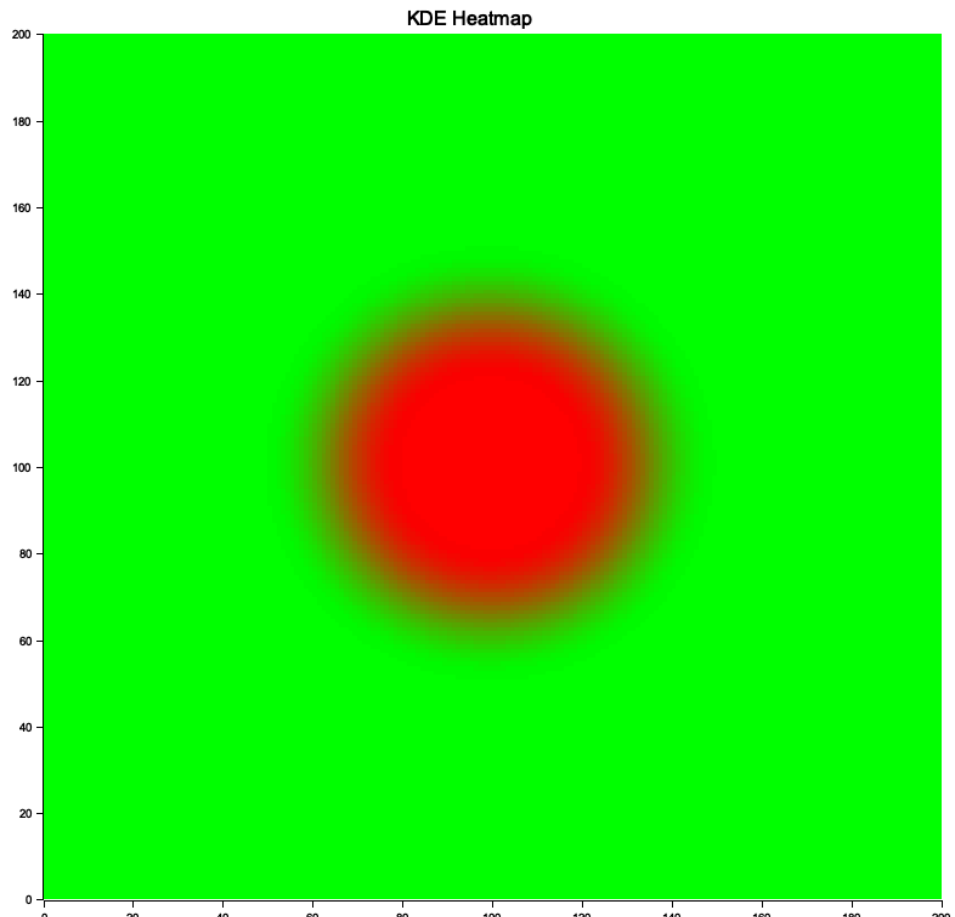
b) target density

Training Result

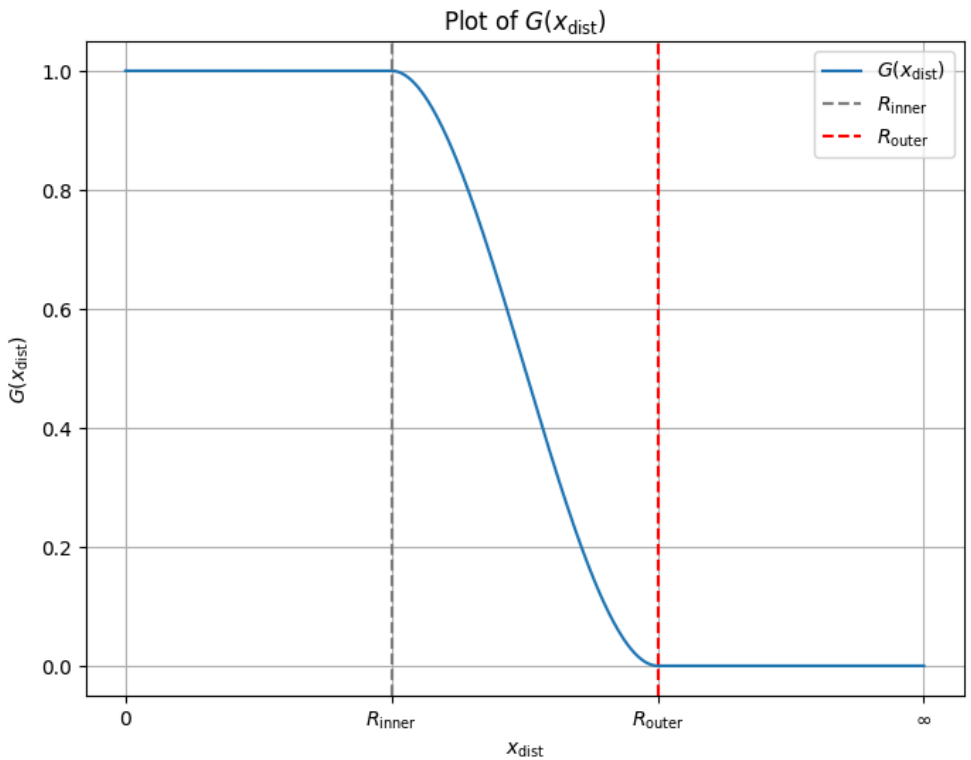


Problem of this evaluation

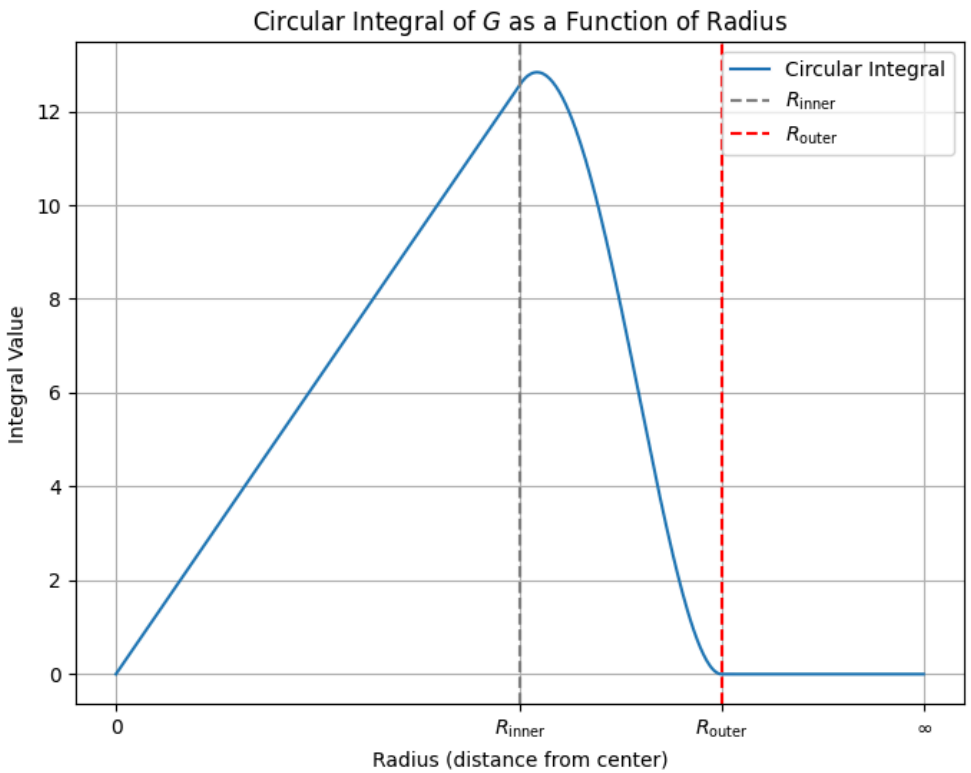
The boid shape lacks flexibility



Next step: distance distribution



a) KDE



b) target density

Figure 2: Density Heatmap

Thank you for your attention