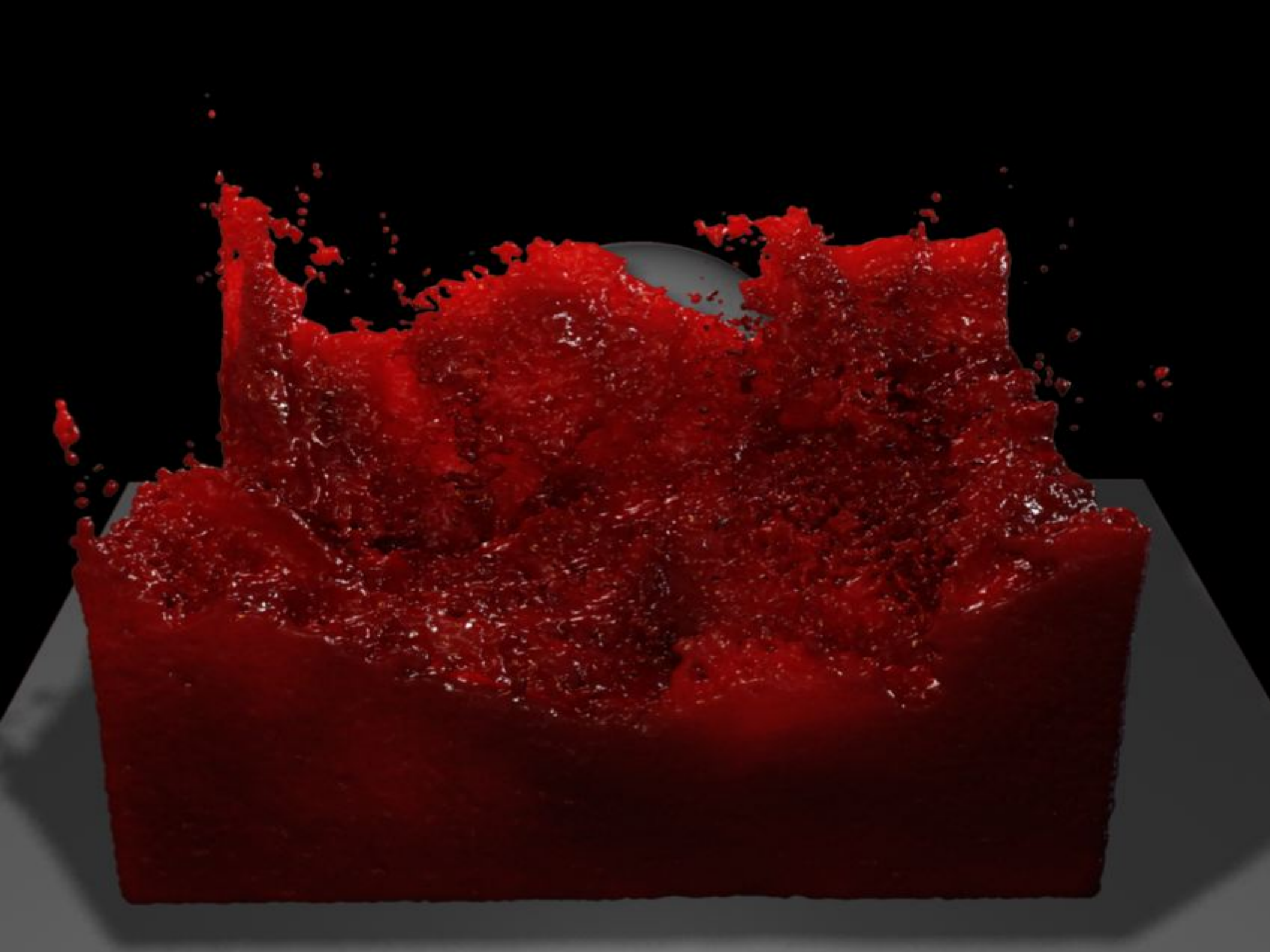
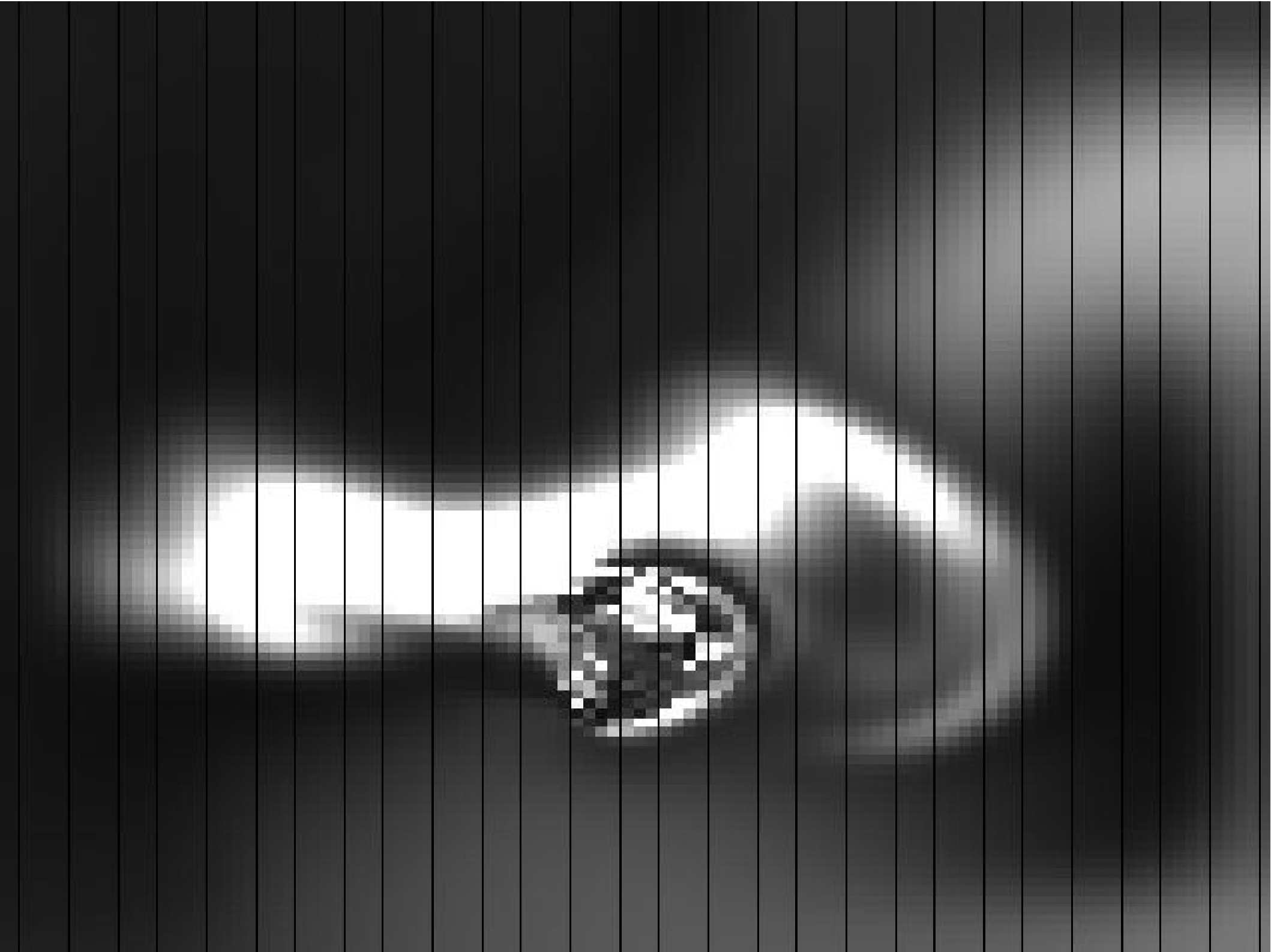


Performance auto-tuning of a fluid simulation on heterogeneous devices

Presentation 2

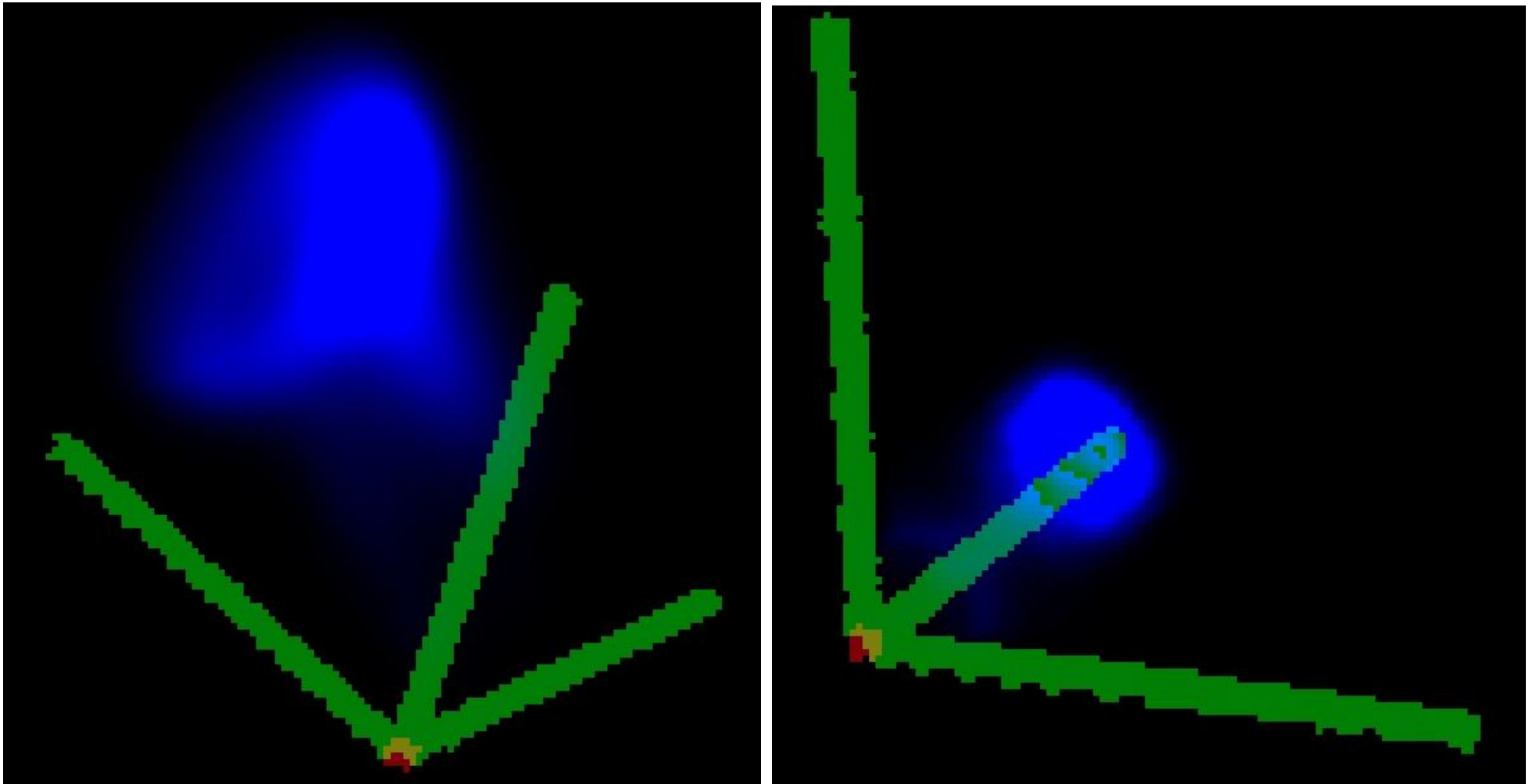
Olafs Vandans, s1139243



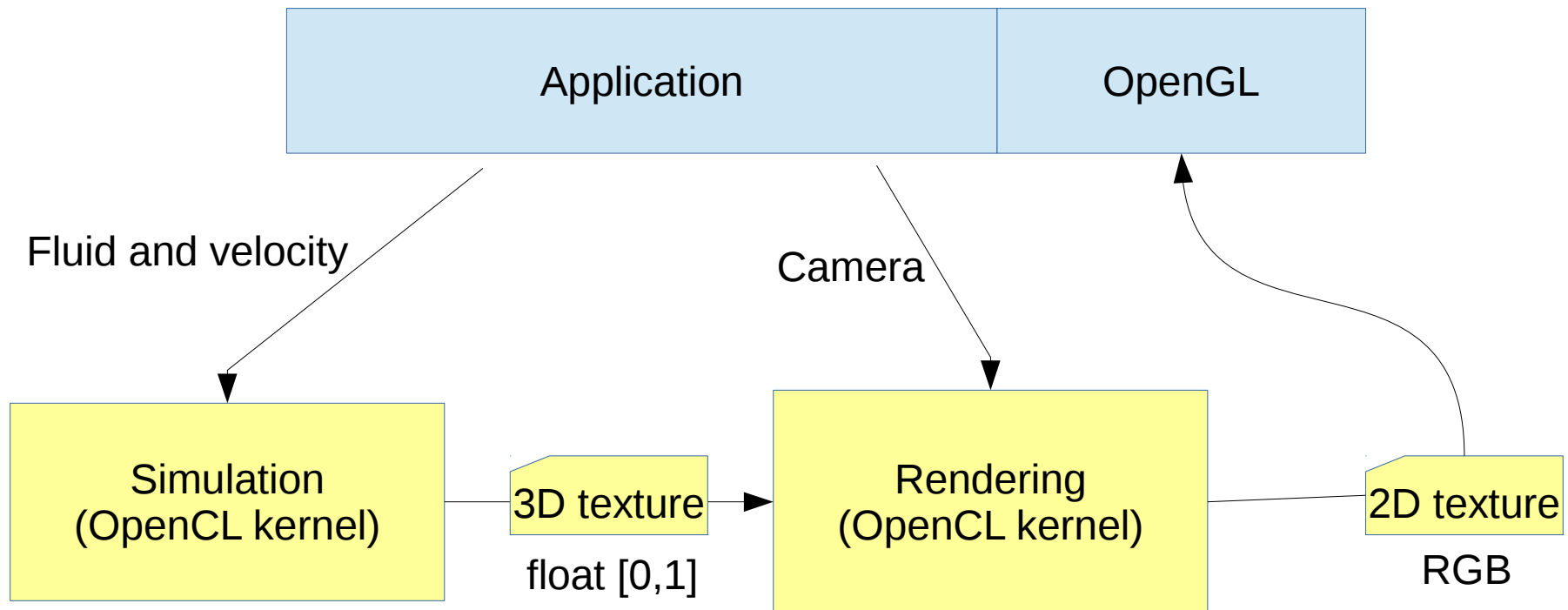


Current progress

- Simulation and rendering parts are done



Current progress



Simulation part

- Uses buffers persistent in the GPU memory
- Runs on OpenCL, single thread
- Will require some more research to parallelize

Rendering part

- Raycaster
- Takes a 3D texture, scans it, returns a 2D texture
- Runs on OpenCL, many threads
- Embarrassingly parallel
- Not dependent on OpenGL

Parameter changing

- Most significant: resolution
- Difficult to change smoothly
- Needs to reallocate buffers and resample the existing simulation matter
- Could reset the volume or use image scaling algorithms
- Could be done in background

Roadmap

