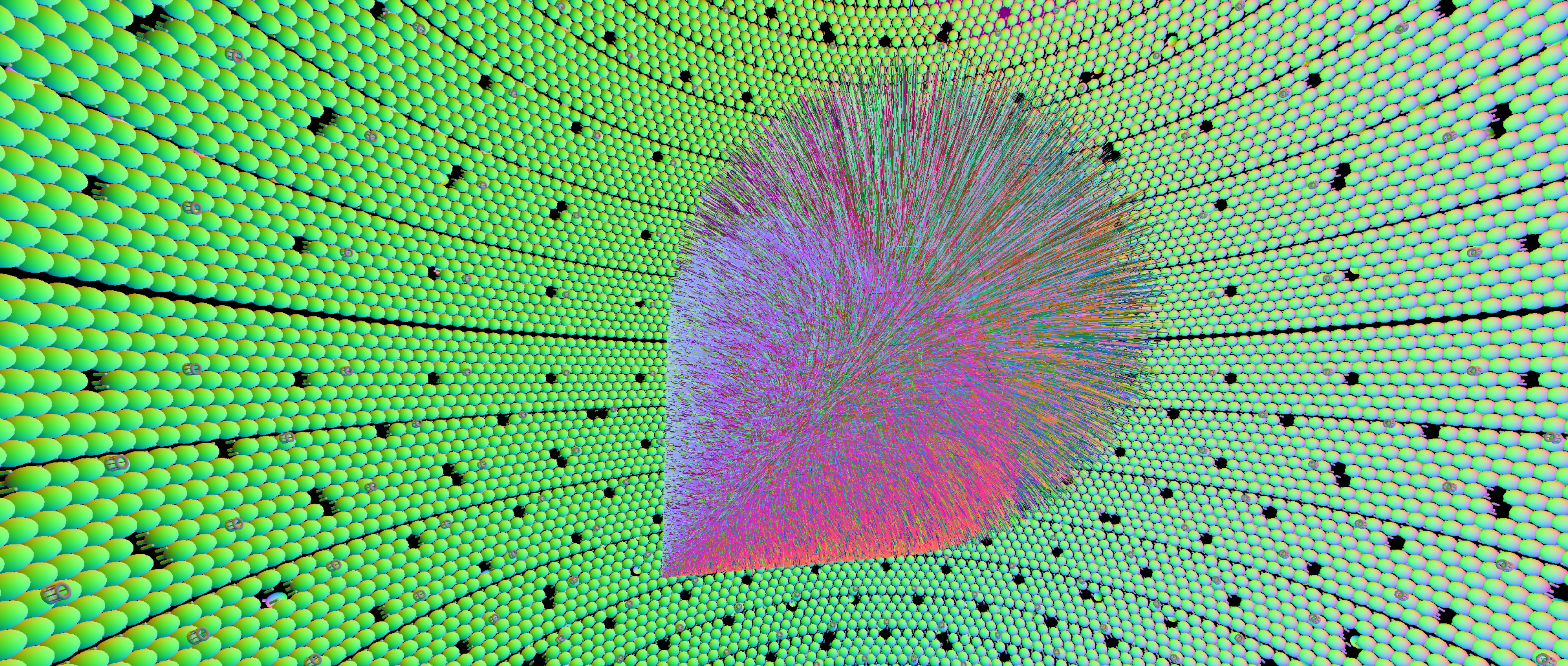
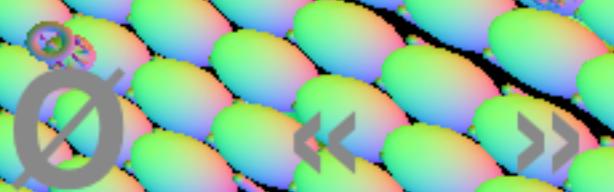


# *Opticks* : GPU Optical Photon Simulation for Particle Physics with NVIDIA® OptiX™



Simon C Blyth, National Taiwan University – <https://bitbucket.org/simoncblyth/opticks> – Oct 2016, CHEP



# Opticks > 1000x Geant4 (\*)

GPU massive parallelism **eliminates bottleneck**.

- optical photon simulation time --> zero
- optical photon CPU memory --> zero

[zero: effectively, compared to rest of simulation]

**More Photons -> More Benefit**

- Neutrino detectors can benefit the most, eg JUNO and Dayabay

<http://bitbucket.org/simoncblyth/opticks> □

(\*) core extrapolated from mobile GPU speed