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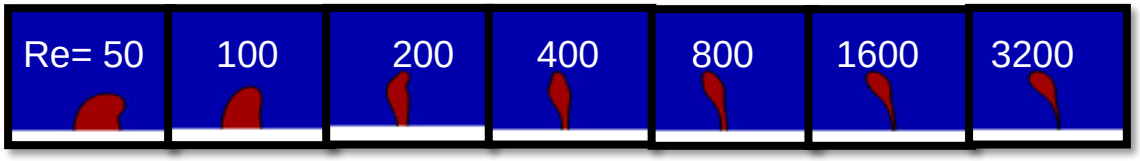
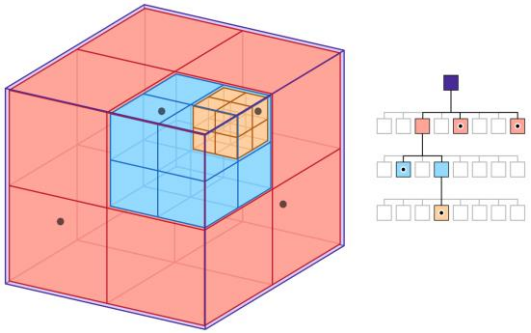
Effects of Reynolds number on aero-breakup of liquid drop

- Secondary breakup
- Make Simulation set-up, Run Simulation, Analyze Data
- *Basilisk:* Open-source multiphase flow solver
- Quadtree: Maxlevel 11
- Stampede2, TACC
- Parallelization: MPI

768 cores,
10 days





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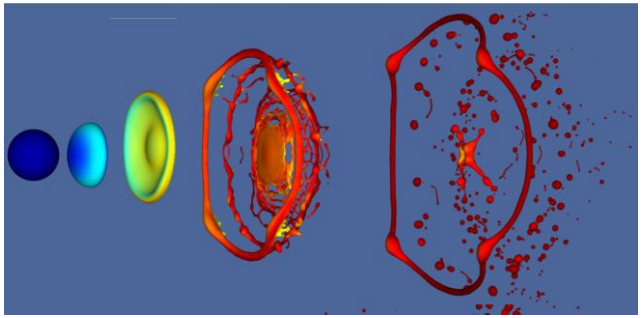

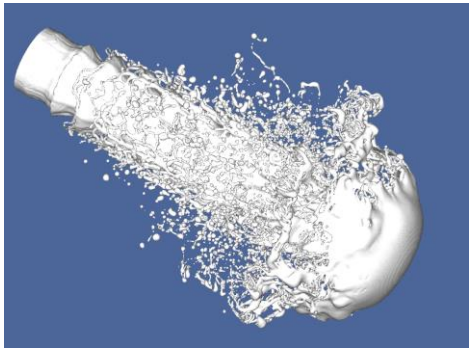

CTF Lab

(S.Popinete ,basilisk.fr)

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Computational Challenges:

- Writing Code in a memory efficient way
- Running code in HPC clusters
- Keep track of all modification made to the code
- Organizing simulation data
- Development of data-driven model

Expected Accomplishment from Summer Institute:

- Parallelization of code and using HPC
- Optimizing code to save run time
- Version control
- Deep learning