ADDA Tutorial

What is ADDA?

- University of Amsterdam implementation of discrete dipole approximation (Yurkin and Hoekstra 2007).

- Relatively well maintained and documented compared to other DDA implementations (e.g., DDAscat; Driane and Flatau 1994).

- Seems well optimized and has modern computational features (e.g., parallelization with mpi + GPU).

Tutorial Outline

- How DDA works
- Scattering geometry
- Particle orientation
- Generating custom shapes
- Demonstration of compiling and using ADDA

Links

- ADDA documentation
  - https://github.com/adda-team/adda
  - https://github.com/adda-team/adda/wiki/CompilingADDA
  - https://github.com/adda-team/adda/blob/master/doc/manual.pdf
- Branched planar crystal geometry code
  - https://github.com/rskschrom/crystal_dda
- FFTW
  - http://www.fftw.org/
- Will send out/post tutorial files