

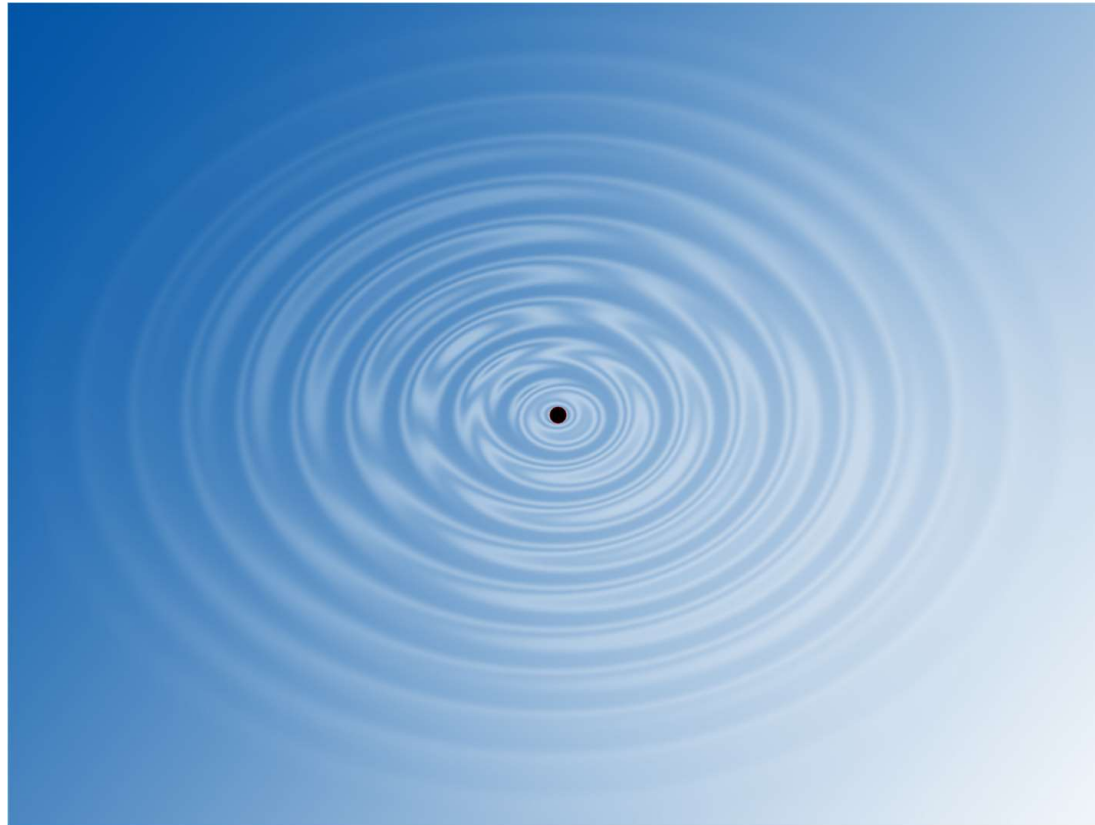


P&S COMSOL® Design Tool

Week 2: EM Introduction & Introduction to COMSOL

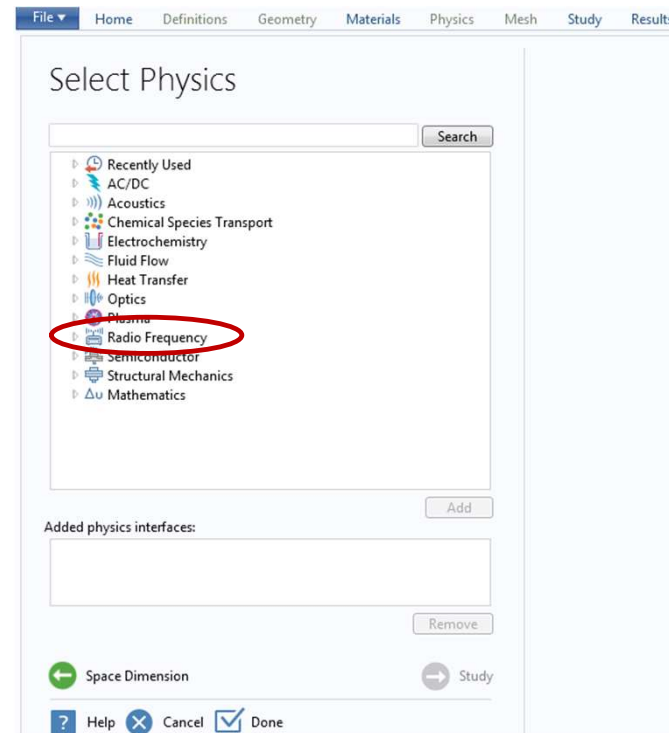
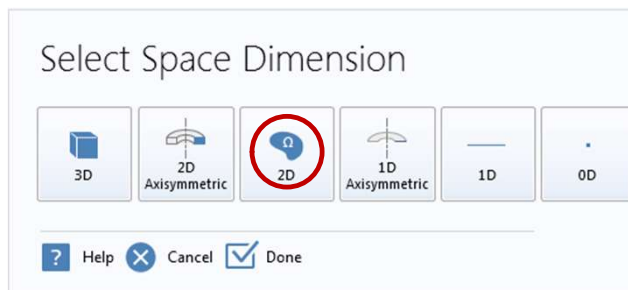
Manuel Kohli, Raphael Schwanninger

COMSOL: Last Time – Point Source Field

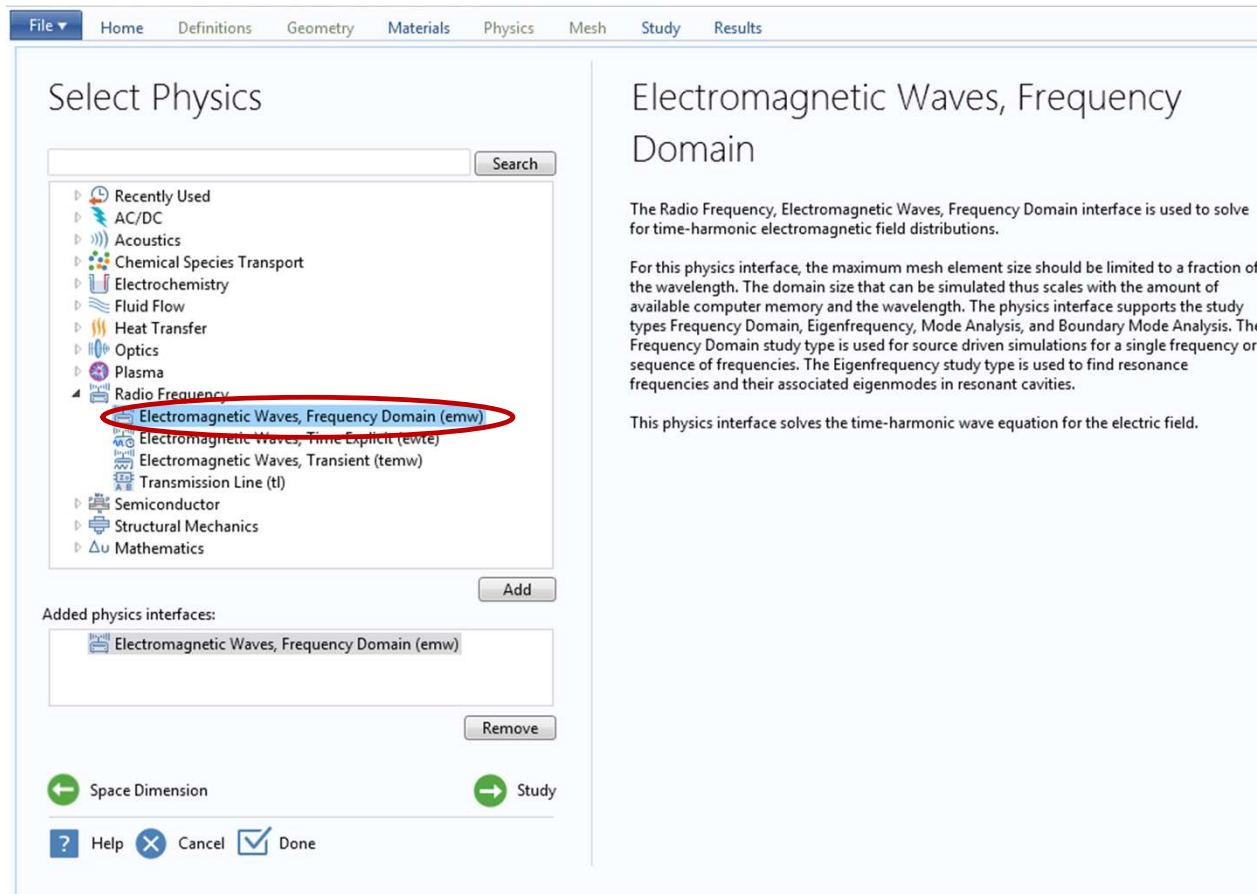


COMSOL: Last Time

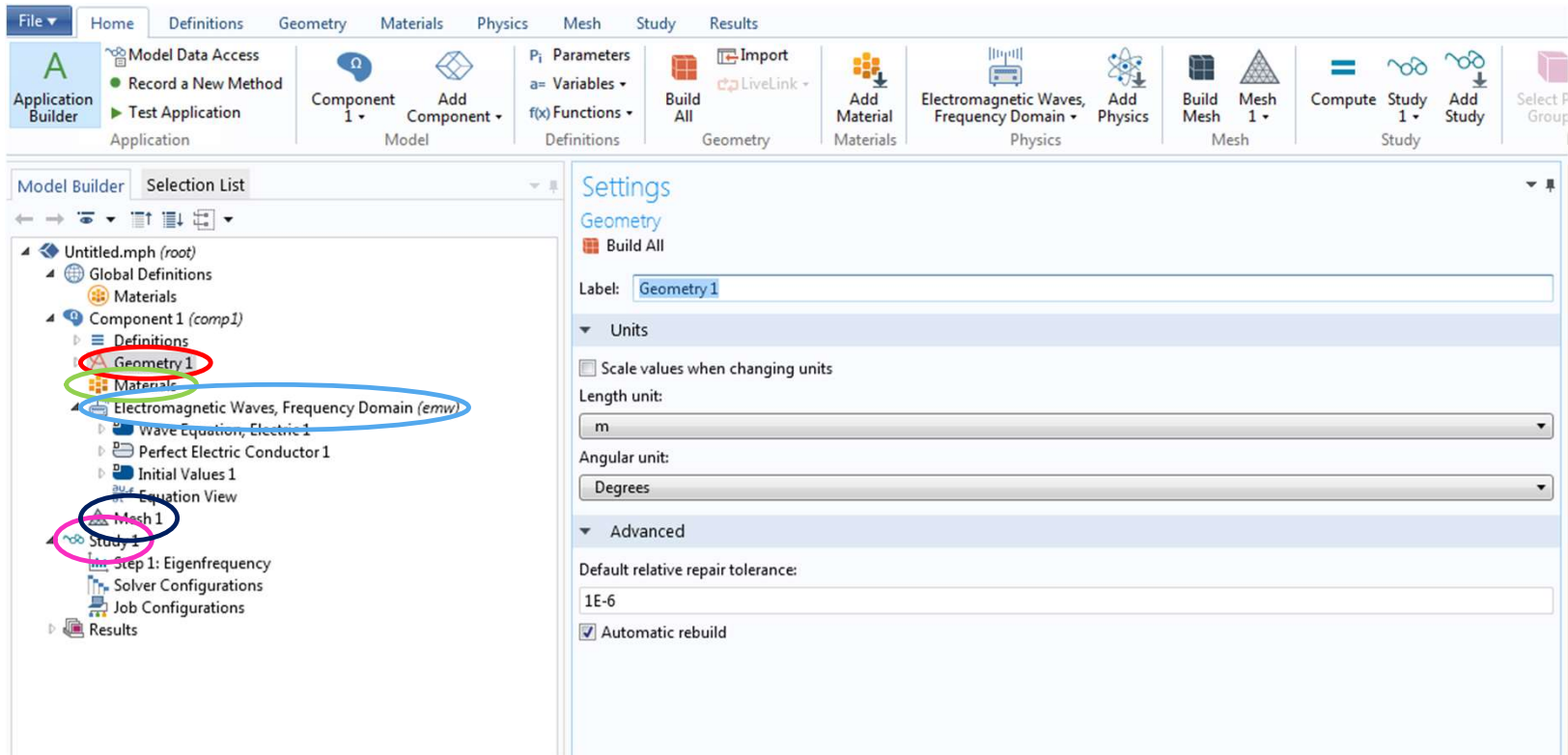
Command to start Comsol: **comsol**



COMSOL: Last Time

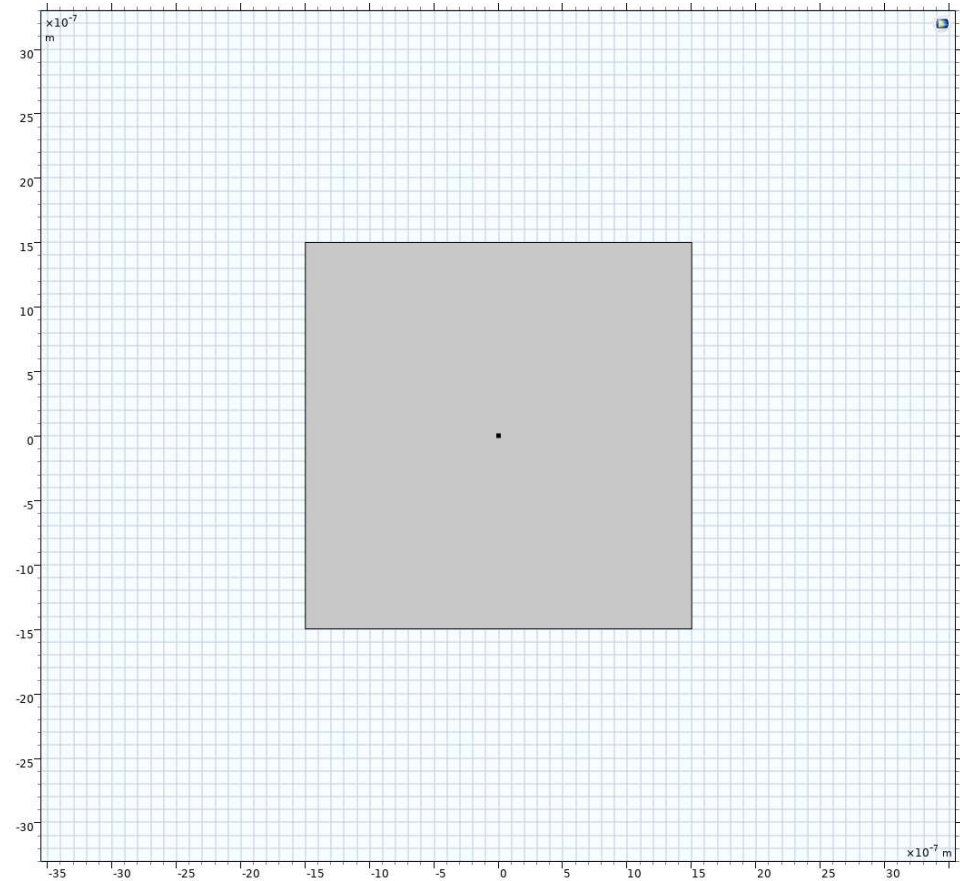


COMSOL: Last Time



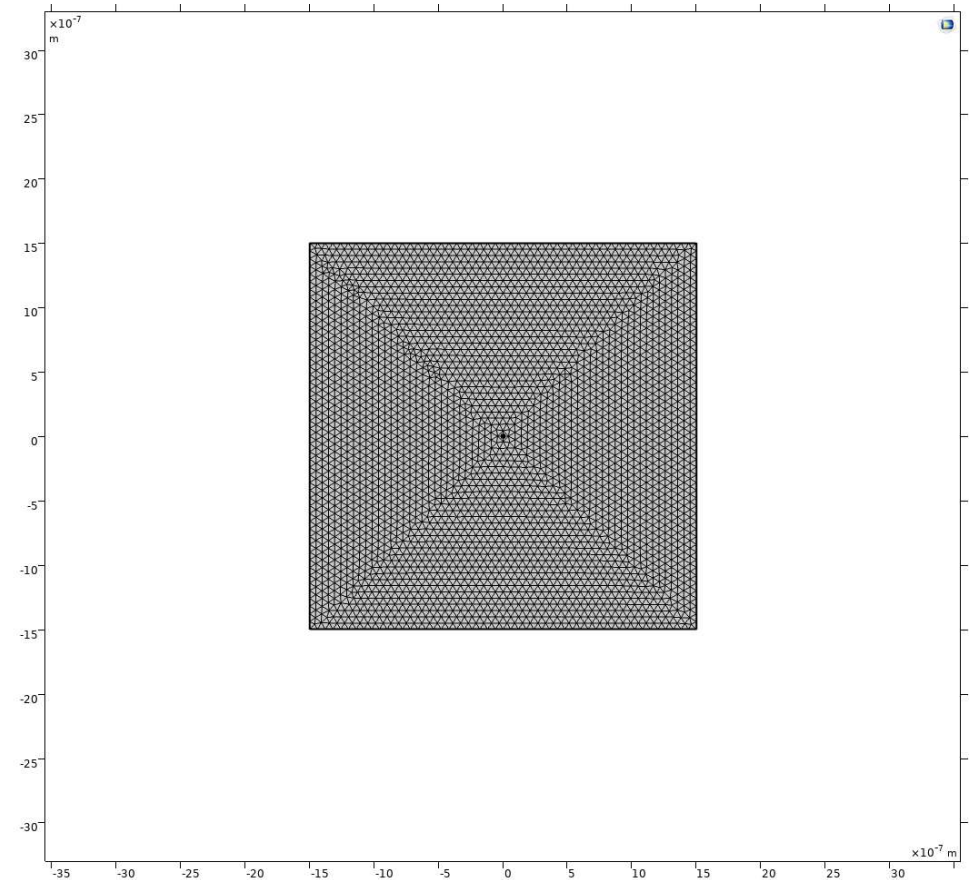
COMSOL: Last Time

- Define simulation domain
- Build geometry

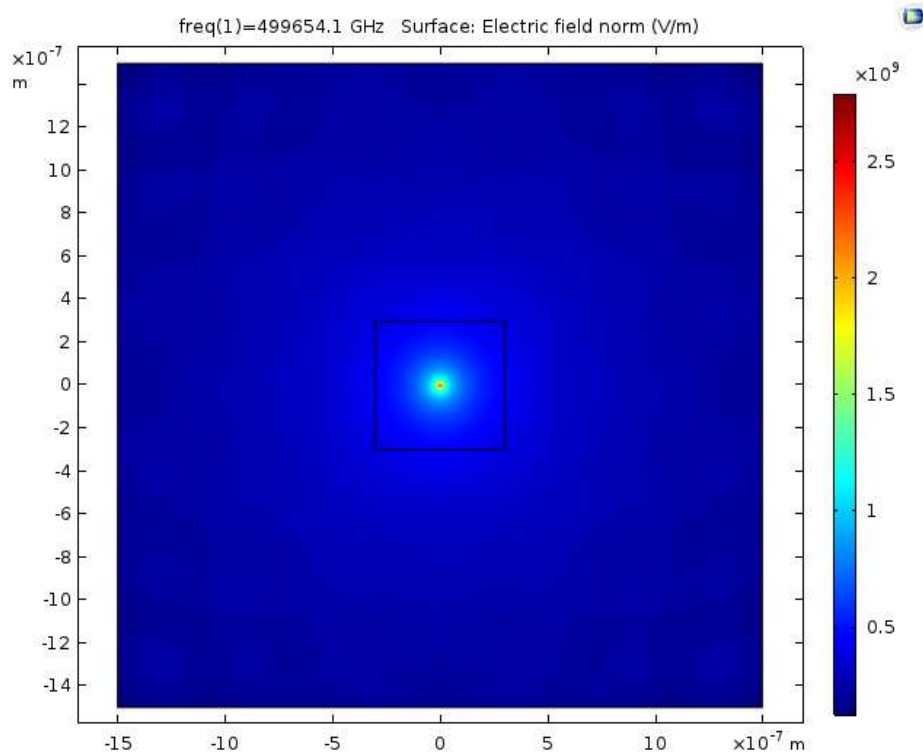


COMSOL: Last Time

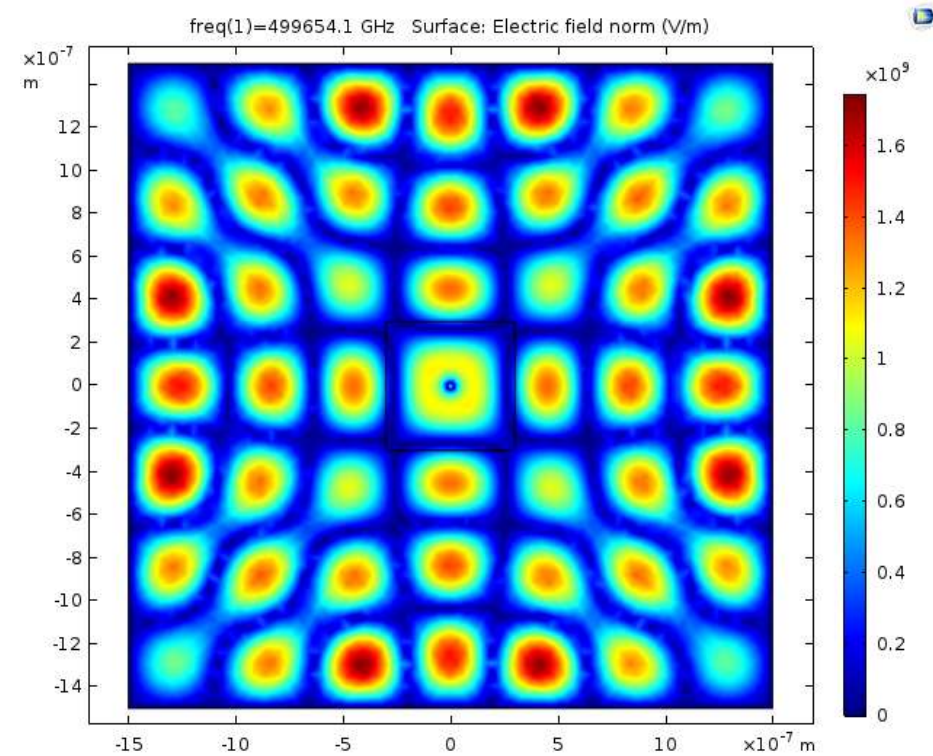
- Discretization of simulation domain
 - Build mesh
- Mesh size determines accuracy of solution
 - Too large mesh $\Rightarrow$ wrong results
- Accuracy vs. simulation time
 - **Today:** Optimization by manual refinement



COMSOL: Last Time



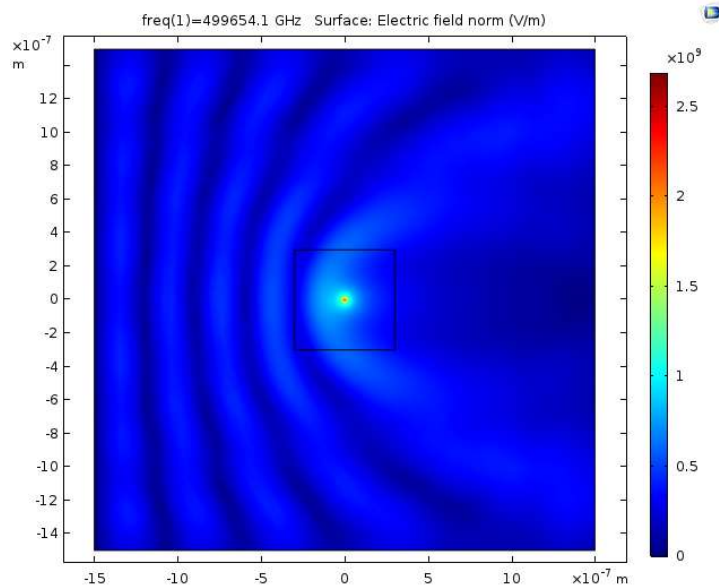
Scattering Boundaries



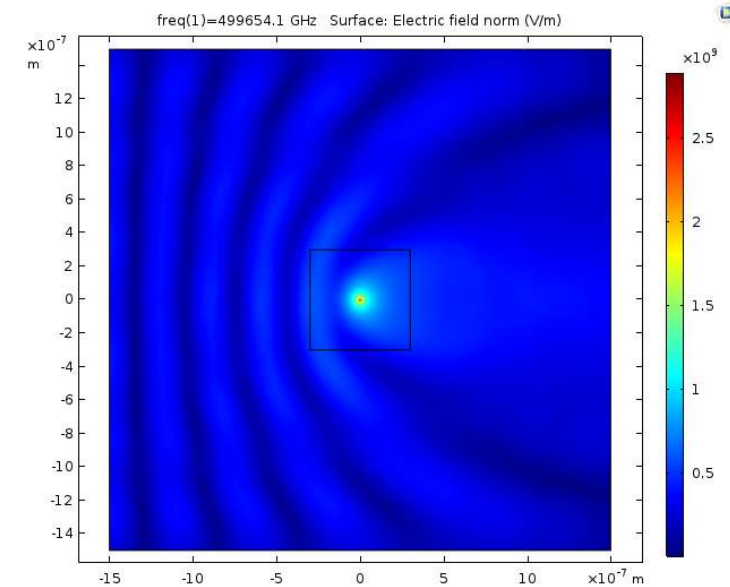
PEC Boundaries

COMSOL: Today

- Mirror effect by using different boundary conditions

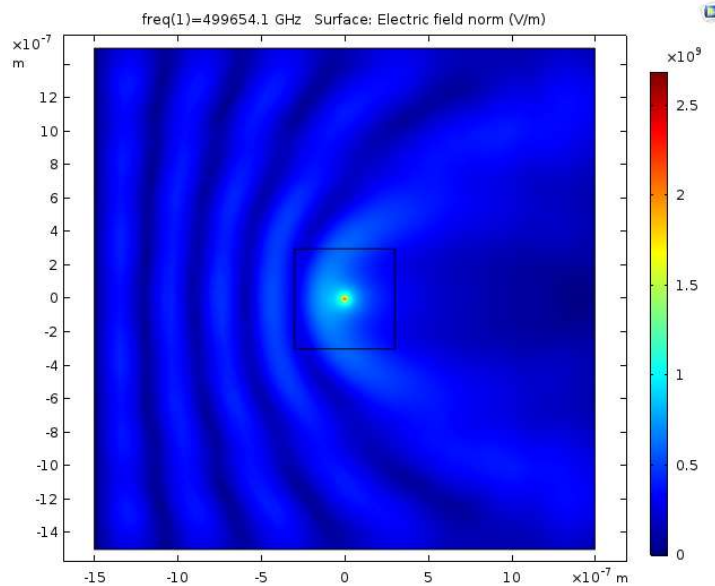


Can you see the difference?
Can you guess the boundary conditions?

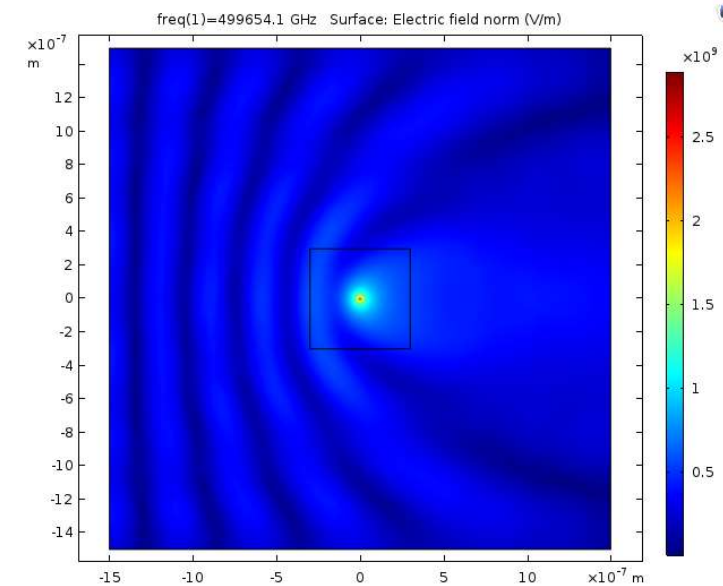
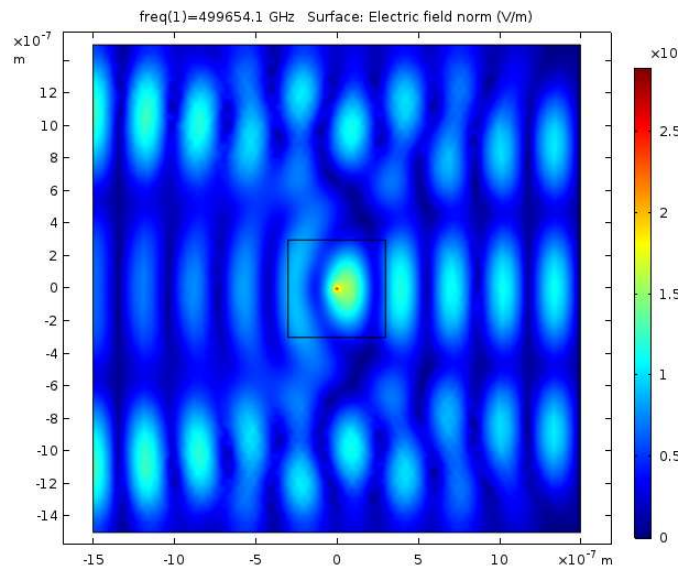


COMSOL: Today

- Mirror effect by using different boundary conditions



Can you see the difference?
Can you guess the boundary conditions?



COMSOL: Today

- Mirror effect by using boundary conditions
- Double Source

