

12.c Non-Ideal Grids

- Problem: Non-Ideal grid simulations can require extremely large arrays
 - Grid wires are usually very small and closely spaced
 - Remaining volume usually very large relative to grid wire dimensions
- Solution: Use ideal grids in main array and jump ions into and out of a non-ideal grid repeating volume to simulate the non-ideal grid effects.



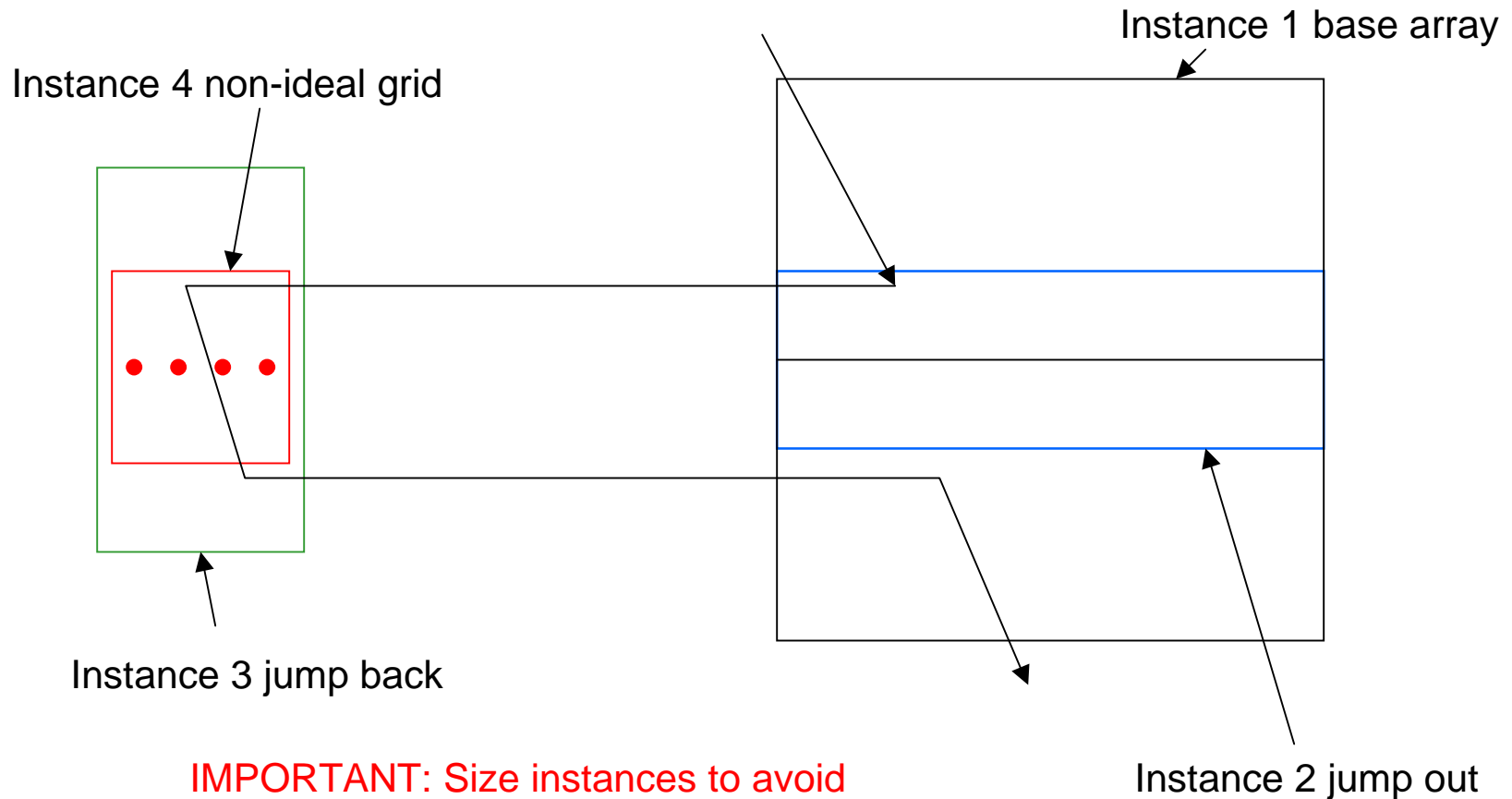
The Tricks



- Use a small repeating non-ideal grid pattern to simulate an arbitrarily large non-ideal grid.
- It is important that the boundary conditions match at jump in and out points
- Jump instances are used to control action (field free instances with other_actions)



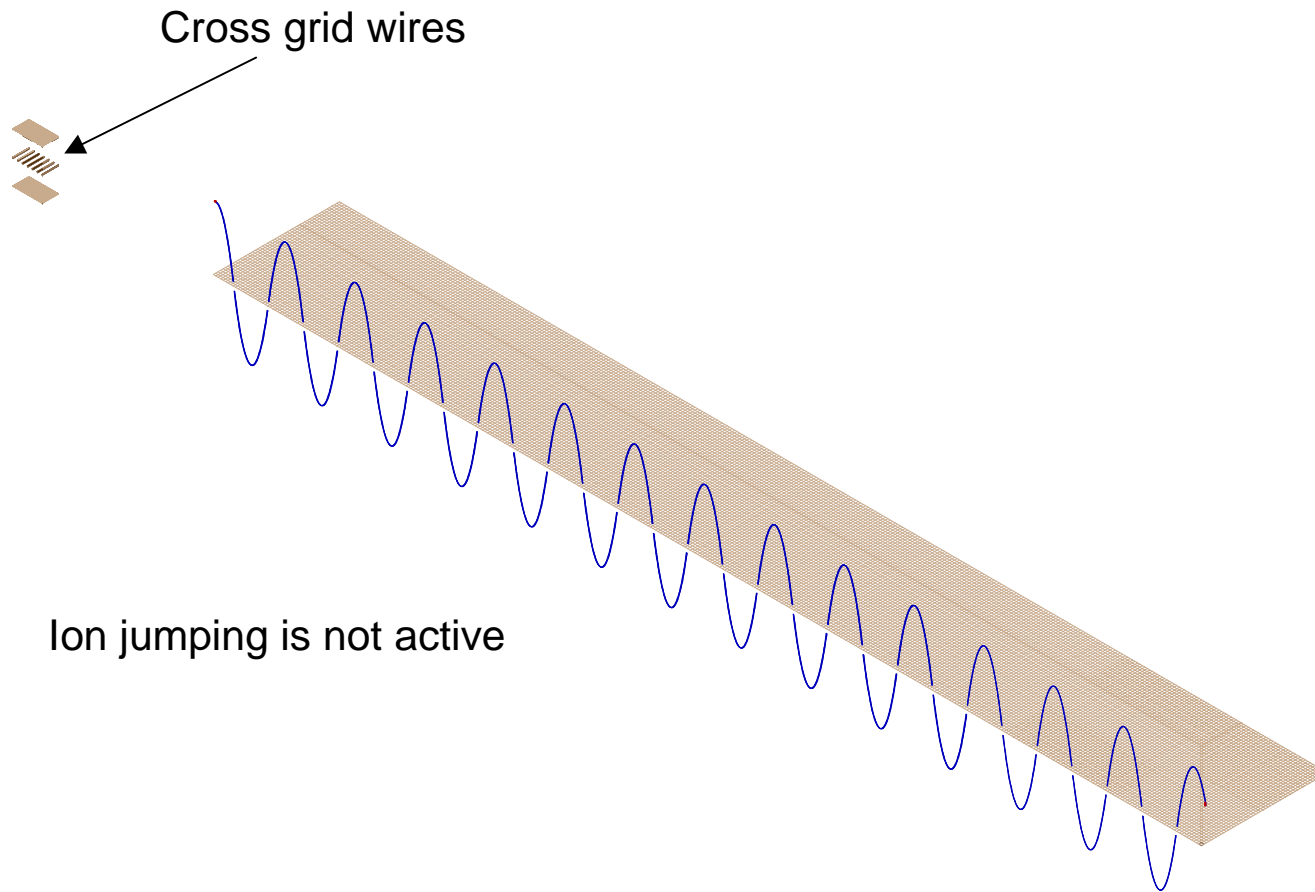
The Use of Jump Instances



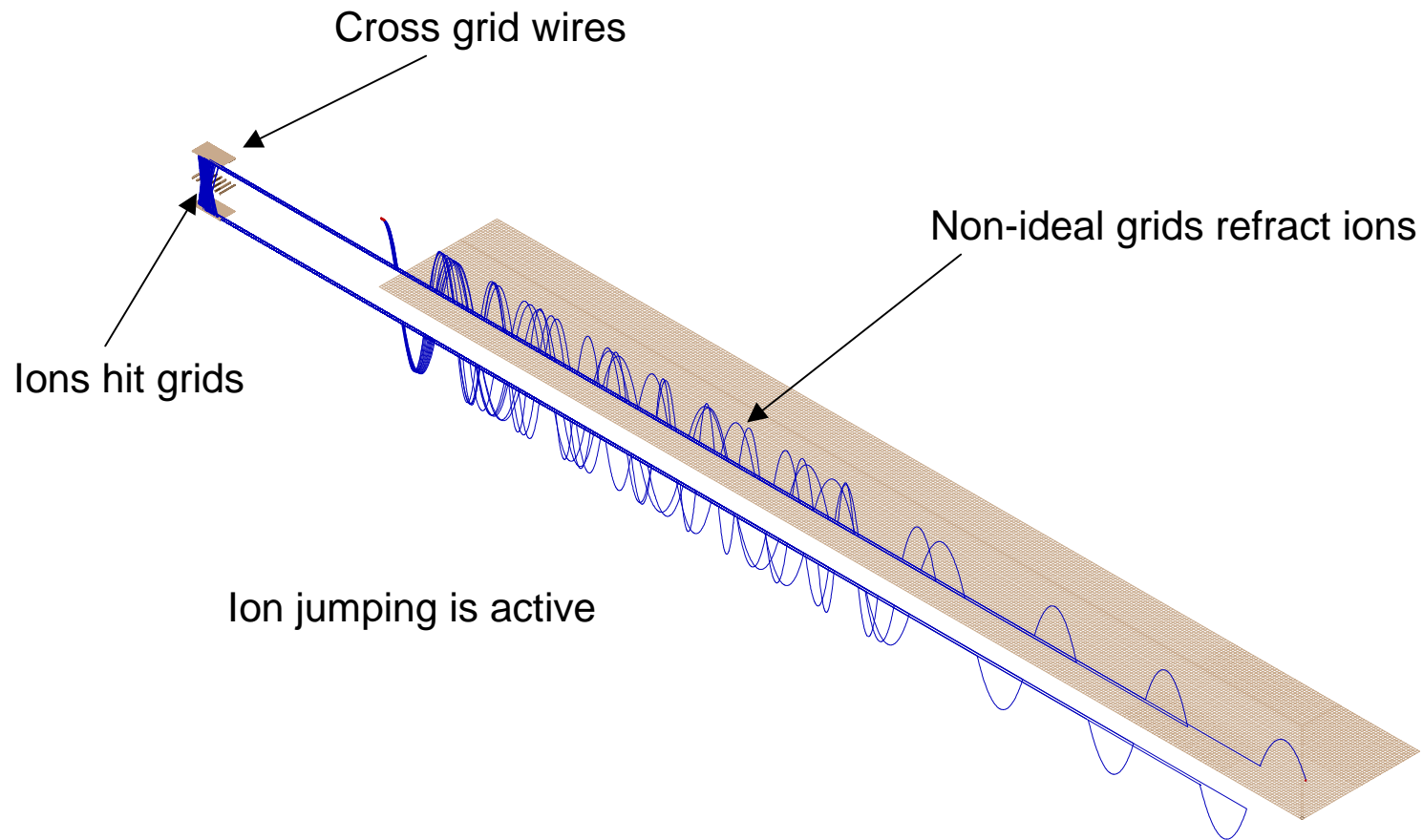
IMPORTANT: Size instances to avoid jumping onto edges



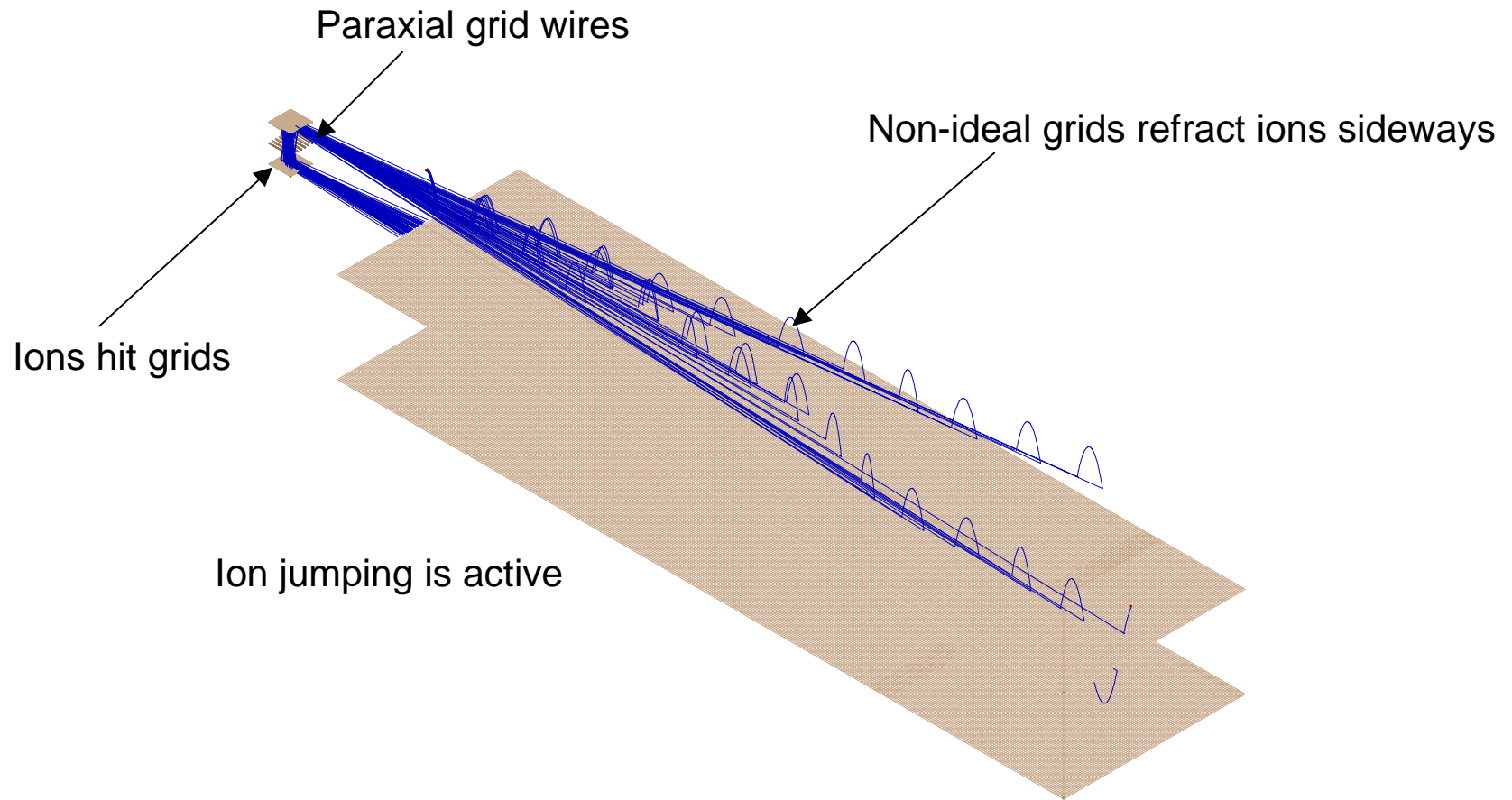
Ideal Grid Trajectories



Non-Ideal Grid Trajectories



Non-Ideal Grid Trajectories



For More Information



- See Non-Ideal grid demo in user program reference section
- Demo includes 3D square grid simulations also

