

N-Body Mechanics in MPI - Suggested assessment problems:

- If a problem gets too small, it will stop scaling earlier. Take the existing MPI code, how does it scale for a problem that is only $1/10^{\text{th}}$ the size (total number of bodies)
- How does the code scale for a problem 10 times larger?
- Rewrite the IO section such that all the data for a particular time is gathered to process 0 and then written with the usual C++ fwrite command. Is the IO faster or slower than MPI collective routines? By how much?