

Initialize MPI and
read run parameters.

Create initial power
spectrum/transfer
function

Calculate ZA/2LPT
displacements

Loop over timesteps

Calculate particle
overdensity using Cloud-
in-cell method

Fourier transform density
to calculate gravitational
force at each grid point
(in k-space)

Inverse Fourier
transform the force and
obtain particle
acceleration

Move particles to
correct processors

Update particle velocity
again to end of
timestep

Update particle
position based on new
velocity

Update particle velocity
to timestep midpoint

Generate initial particle
positions and velocities
(remove ZA/2LPT
velocities first)

Add ZA/2LPT
velocities back on

Output particles

