PEPC User Guide

Paul Gibbon

John von Neumann Institute for Computing, ZAM,
Forschungszentrum Jülich GmbH, D–52425 Jülich, Germany

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Contents

r o c ior

PEPC | Pretty E cient Parallel Coulomb-solver | is a parallel tree-code for rapid computation of long-range Coulomb forces, based on the original Barnes-Hut

```
> make cleanlib
> make lpepc
> make cleanapp
> make pepcb
```

The library should always be compiled rst because header les are needed by `pepcb`**, and this step ensures that these are copied over (or freshly linked) from the** `lpepcsrc` **directory.**

At this point there may well be linker errors because of missing libraries, such as MPI or from

```
                plasma_config = 1
                target_geometry = 1
                theta = 0.5
                Te_keV = 0.5
                Ti_keV =0.
                mass_ratio = 500.
                q_factor = 1.
                coulomb = .true.
                lenjones 46.9619 0 Td (=)Tj 10.5502 0 Td (1.).false.
     bond_const = 2.e-3
     r_sphere 46.9619 0 Td (=)Tj 10.5502 0 Td (1.)4
ma = 1.
ma = 2.
ma = 2.



onfig_in=0
 0.1
= 0.5
= 6.
 = 20.
 = 1.0

l
0
.3
```

r [illegible] ees r s ices

P r c e d

Particle data is output independently by each CPU to avoid memory and MPI

These and other .gle les can be viewed using the graphics program GLE (Graphics Layout Engine), currently available from:

```
http://glx.sourceforge.net
```

[illegible] , ow velocity and tem-
perature

Graphical output from PEPC can be created using the postprocessor `slicer`, which converts the particle data into ' uid' quantities such as mass densit

```
                 ymin= 200.0          box ymin
                 ymax= 700.0          box ymax
                ytick= 100.0          interval
        zmin= -50.0          box zmin
        zmax= 150.0          box zmax
       ztick= 100.0          interval

xmin= -5.0           box vxmin for phase space plots
xmax= 5.0            box vymax
tick= 2.5            interval
ymin= -5.0           box vymin
```

```
xbox= 2.
```

Then:

```
   > make_snaps disc1 runpp plot
```

will perform the postprocessing and produce plots at timesteps 100, 200 and 300. The rst parameter is an arbitary run label which will get stamp ed on the corner of the plots