Particle pusher interface

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Contents

1 Setup

Note: you must have particle_post_pusher compiled:

```
cd ~/vlasiator
make particle_post_pusher
```

2 Using the particle pusher interface

Ipython example:
Starting up the particle pusher (Use VlasiatorReader, not VlsvReader):

```
ipython

In [2]: import pytools as pt

In [3]: f = pt.vlsvfile.VlasiatorReader('bulk.0001480.vlsv')

In [4]: grid = pt.grid.Particlepusherinterface(f, 'rho',
"/home/otto/vlasiator/particle_post/pusher")
```

3 Using the particle pusher options

The particle pusher reads the file from the vlsv file and constructs a logical file for the particle pusher e.g. 'bulk.0001480.vlsv' becomes 'bulk.%07i.vlsv'.

For the args options, additional particle pusher options can be fed. The first argument must be the analysator argument. For instance, in the case of velocity sampling args could look like this:

```
30 --particles.mode analysator --particles.start_time 1002 --particles.end_time
1004 --particles.input_dt 0.5 --particles.dt 0.004
```

where 30 means we insert 30 particles into the clicked spot.

Note: The first argument follows the logic introduced in the outdated Section 3.1.

3.1 Outdated: Using the particle pusher options

The usage is illustrated in the Figures 1 and 2.

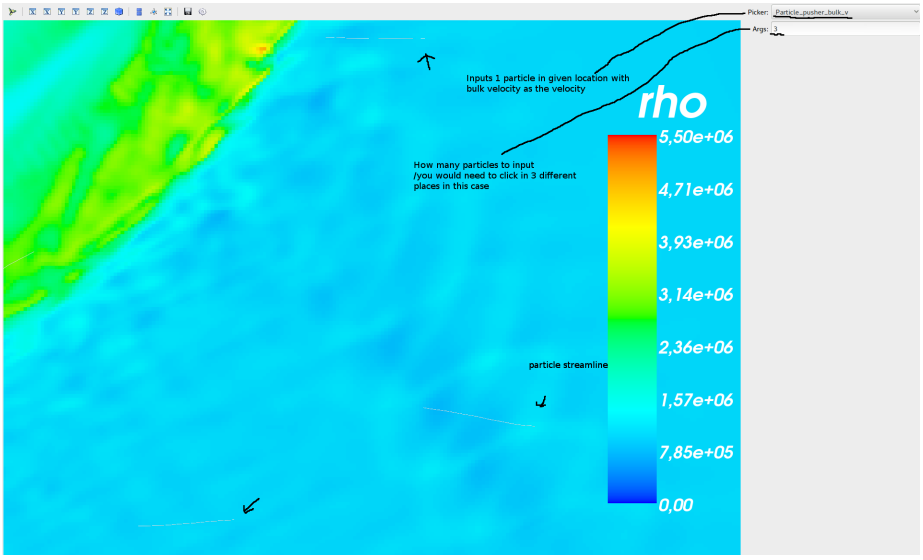

Figure 1: Particle pusher usage for bulk velocity sampling

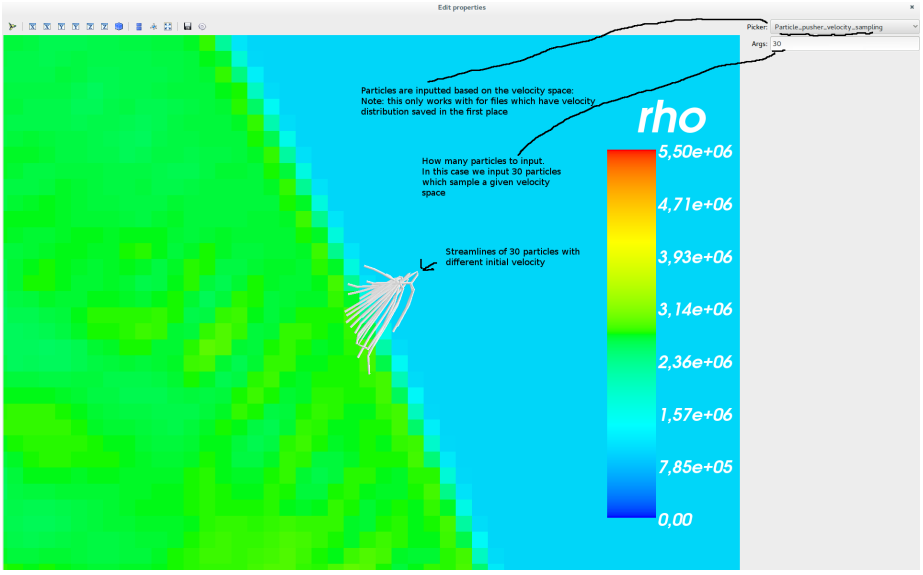

Figure 2: Particle pusher usage for velocity space sampling