

Monte Carlo Movies

Phy 246 Lab

March 22nd, 2006

In this lab we will visualize our Monte Carlo configurations in “Monte Carlo Time.” We will use Matlab to do this. Because we will be displaying graphics, you’ll find it better to run everything on your lab machine instead of connecting to physics.

1 Data Output

In order to view the data, we will have to modify the output of our code. Comment all `printf` statements except the following:

```
printf("Lattice Size = %d X %d \n",Nlin,Nlin);  
printf("Jising = %lf\n",Jising);
```

Place a `print_conf()` statment after each `updt_ising_conf()` statement. Be sure that `print_conf()` prints 0 and 1 and leaves a space between each number it prints.

Now when you run your program, store the output in a file, like this:

```
./ising < ising.para > ising.movie
```

2 Viewing data in Matlab

From the webpage (www.phy.duke.edu/~marts/comp) get the file `show_movie.m`. Place it in the same directory as your movie file. Open matlab and use the following command: `show_movie('filename')`; To see other options for the `show_movie` command, type `help show_movie`.