This is analysis.txt

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Copy/paste the output of your simulation when using planets.txt, running the simulation for 1,000,000 (one million) seconds, and with a time-step/dt value of 25,000

```
5
2.50e+11
 1.4657e+11  2.9604e+10 -5.8931e+03  2.9226e+04  5.9740e+24    earth.gif
 2.2659e+11  2.4055e+10 -2.5502e+03  2.3968e+04  6.4190e+23     mars.gif
 3.8636e+10  4.2569e+10 -3.5575e+04  3.2587e+04  3.3020e+23  mercury.gif
 2.6827e+04  2.9792e+03  5.1739e-02  8.6585e-03  1.9890e+30      sun.gif
 1.0244e+11  3.4391e+10 -1.1156e+04  3.3224e+04  4.8690e+24    venus.gif
```

Copy/paste the output of your simulation when using planets.txt, running the simulation for 2,000,000 (two million) seconds, and with a time-step/dt value of 25,000

```
5
2.50e+11
 1.3774e+11  5.8036e+10 -1.1560e+04  2.7494e+04  5.9740e+24    earth.gif
 2.2275e+11  4.7841e+10 -5.0730e+03  2.3568e+04  6.4190e+23     mars.gif
-5.9865e+09  5.7090e+10 -4.8116e+04 -4.4176e+03  3.3020e+23  mercury.gif
 1.0223e+05  2.3000e+04  9.6223e-02  3.2991e-02  1.9890e+30      sun.gif
 8.5997e+10  6.5196e+10 -2.1191e+04  2.7971e+04  4.8690e+24    venus.gif
```

Run the simulation for a billion seconds (10^9) and a time-step/dt

of a million. You should see behavior inconsistent with what is expected for celestial bodies. This is due to large values of dt when approximating forces. Write down below what you see during this simulation.

The bodies move erratically and not in accordance with the real-life behaviour of such celestial bodies. The planets deviate significantly from the expected orbit, with planets leaving the observed area and returning back, as well as shifting into ellipsoid behaviour.

Run the simulation with the original time and dt values which are

double totalTime = 39447000.0;

double dt = 25000.0;

But use the input data file "data/kaleidoscope.txt".

In fewer than 50 words describe the visualization you observe.

The effect is certainly similar to that of a kaleidoscope. The inner ring of mars and earth alternate between being inner and outer, both while rotating and changing orbit size drastically. Meanwhile, large Jupiters rotate more slowly in an outside orbit, but with two different sets; one rotating clockwise and the other counter clockwise.