N-Body Simulations with REBOUND

Lab course protocol

Group 3+10

Pratyush Singh,
Proshmit Dasputpa,
Erasyl Telman

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Eberhard Karls Universität Tübingen

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Abstract

This is optional, but never longer than half a page.

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1 Introduction

Very short summary what the experiment is about and why the subject plays a role in astronomy/astrophysics.

2 Theory

2.1 Classical N-Body Problem

2.2 Time Integrators

2.2.1 Leapfrog

2.2.2 IAS15

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3 Experiment

3.1 Two Body Problem

3.2 Three Body Problem and Stability of the Planet System

3.3 Jupiter and Kirkwood Gaps

3.4 Resonant Capture of a Planet

4 Conclusions

An important section in which you should critically review the experiment and its results. Mention also parts that did not work out as expected, but keep a neutral to positive view. This can span from a few sentences to half

a page.

References

[1] Brown B, Aaron M (2001) The politics of nature. In: Smith J (ed) The rise of modern genomics, 3rd edn. Wiley, New York, p 234–295

[2] Dod J (1999) Effective Substances. In: The dictionary of substances and their effects. Royal Society of Chemistry. Available via DIALOG. http://www.rsc.org/dose/title of subordinate document. Cited 15 Jan 1999

[3] Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. J Mol Med, doi: 10.1007/s001090000086

[4] Smith J, Jones M Jr, Houghton L et al (1999) Future of health insurance. N Engl J Med 965:325–329

[5] South J, Blass B (2001) The future of modern genomics. Blackwell, London

Appendix

Code

Please attach here your original handwritten notes and other documents created during the experiment.