

Impact of Gas Giant's Growth on the Surrounding Embryos

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Introduction

- Origin of gas giants
- Multiple gas planet systems

Introduction

- Planet formation and growth
- Outward scattering of planetesimals
- Inward migration of planetesimals
- New core formation?

Method

- Initial system architecture

one star

$m=1$

one planet in circular orbit

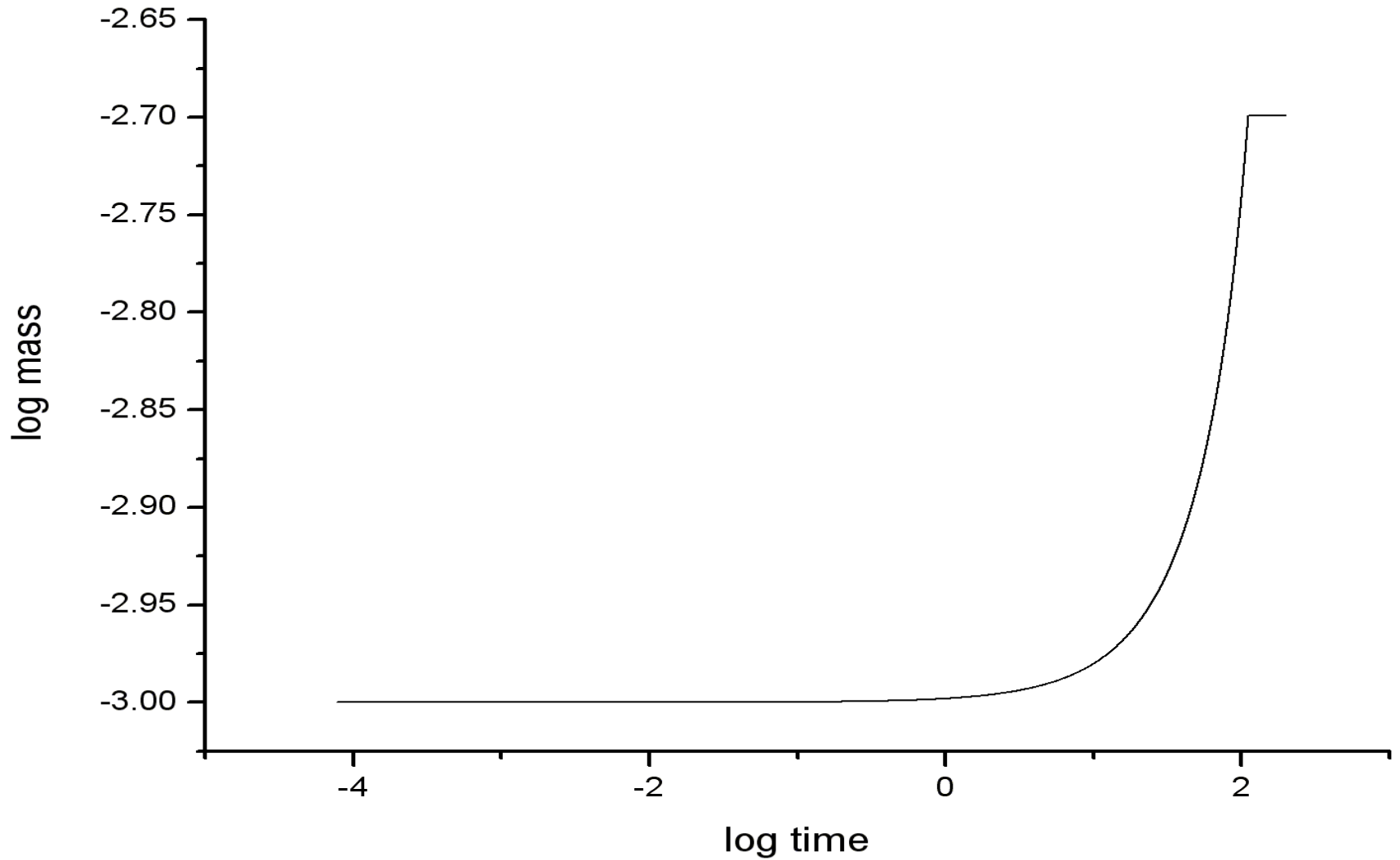
$m= 3 \times 10^{-5} \sim 10^{-3}$

many planetesimals in circular orbits and
randomly distributed

- N-body simulations (hermit 4 code)

Sverre Aarseth

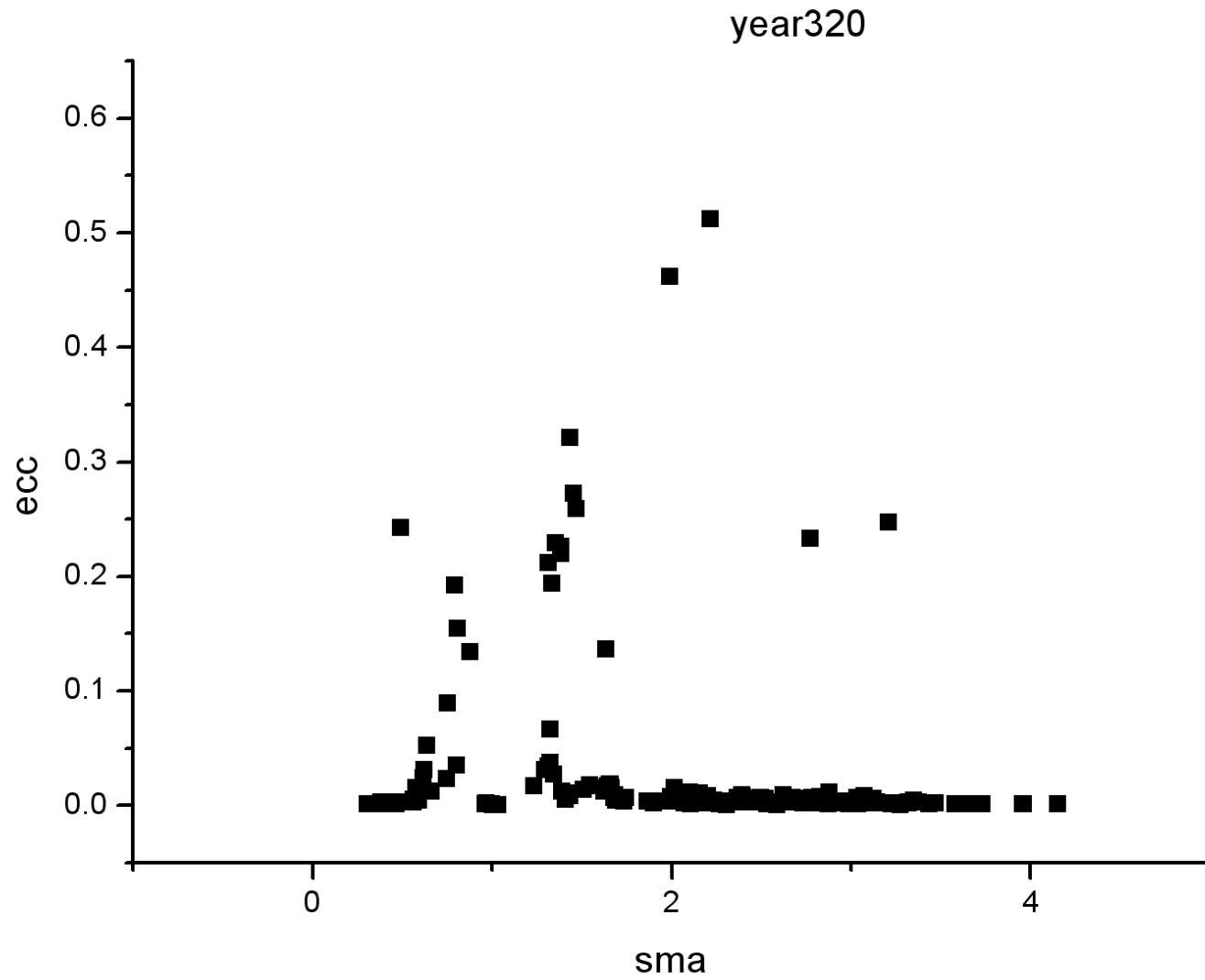
Planetesimal scattering



Assumptions

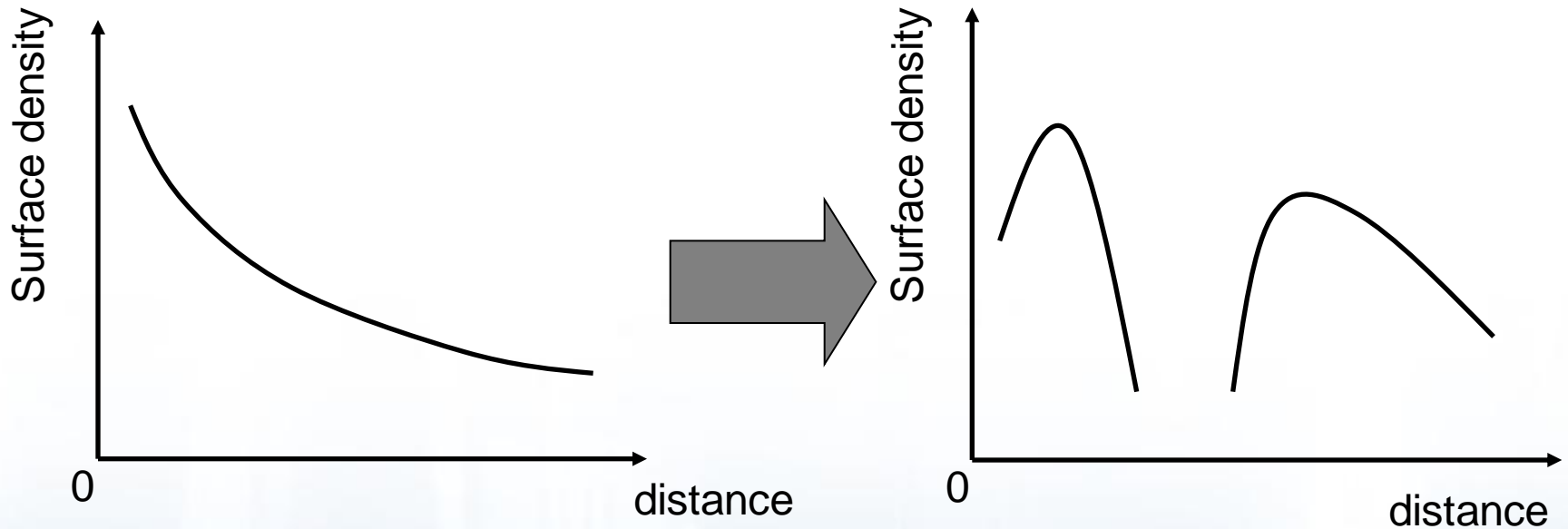
- No Collisions
- No evolution of the gas disk
- ...

Results



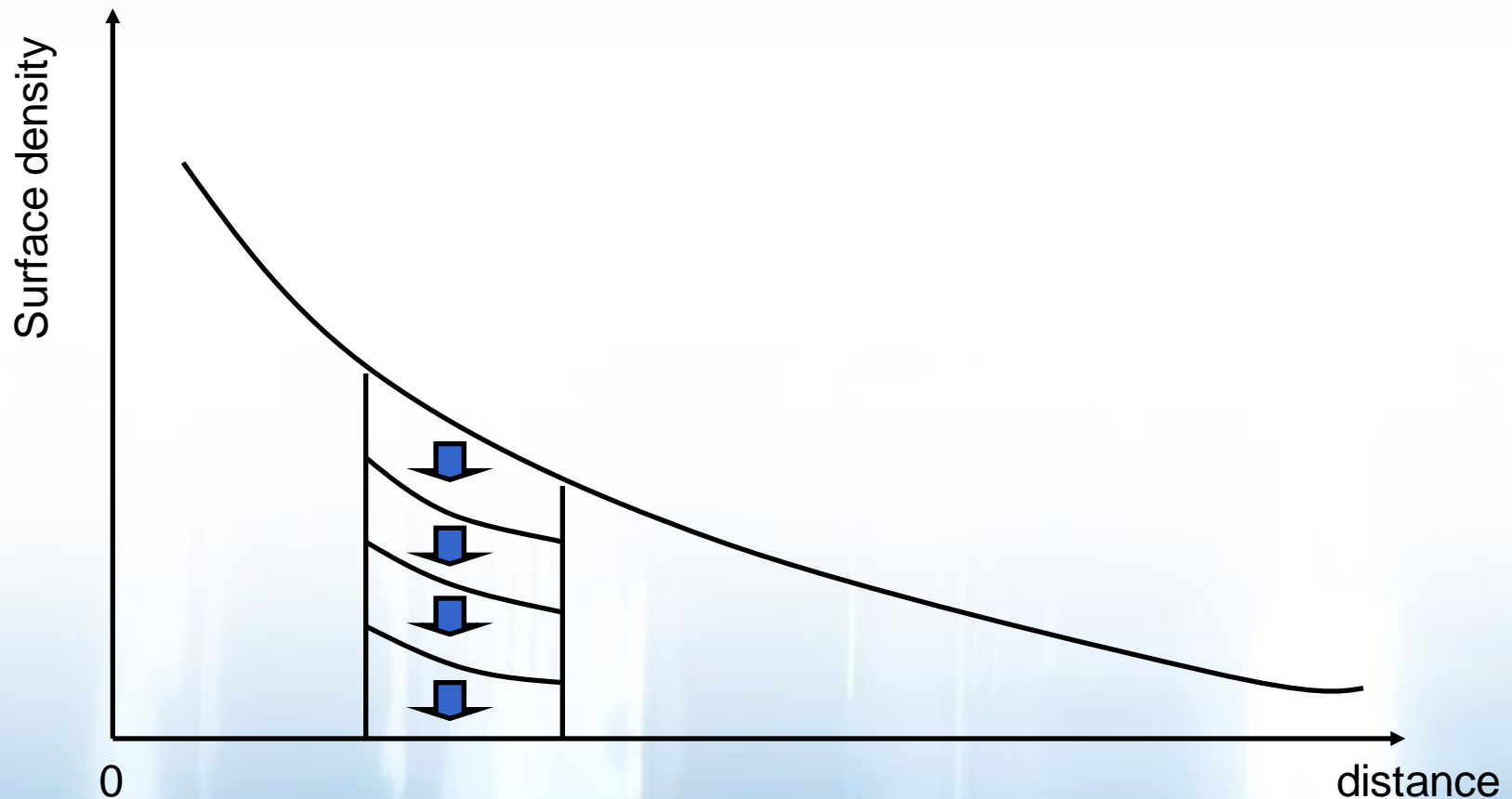
Future work

- Evolution of the disk



Future work

- Evolution of the disk



Summary

- Planet formation
- Planetesimal scattering
- N-body simulations
- Disk evolution

Thank you!

