Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

* So far we have done the 2-Body problem:
  * analytical vs. numerical
  * importance of timestep
  * how to check the accuracy of our simulations (conservation of E, L)
  * order of solvers (Euler vs. Hermite)
  * thought about how to deal with code that is getting more and more complex

* Started doing some multi-body problems! (N-Body) - saw how hard it is to make a stable system… got some hints that Kepler systems are pretty stable…

* Also smashed some planets:

  Super Planet Crash! http://www.stefanom.org/spc/

  Bonus - dealing with alien overlords:
  http://save-point.herokuapp.com/dashboard/users.php

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

* So far we have done the 2-Body problem:
  * analytical vs. numerical
  * importance of timestep
  * how to check the accuracy of our simulations (conservation of E, L)
  * order of solvers (Euler vs. Hermite)
  * thought about how to deal with code that is getting more and more complex
* Started doing some multi-body problems! (N-Body) - saw how hard it is to make a stable system… got some hints that Kepler systems are pretty stable…
* Also smashed some planets:

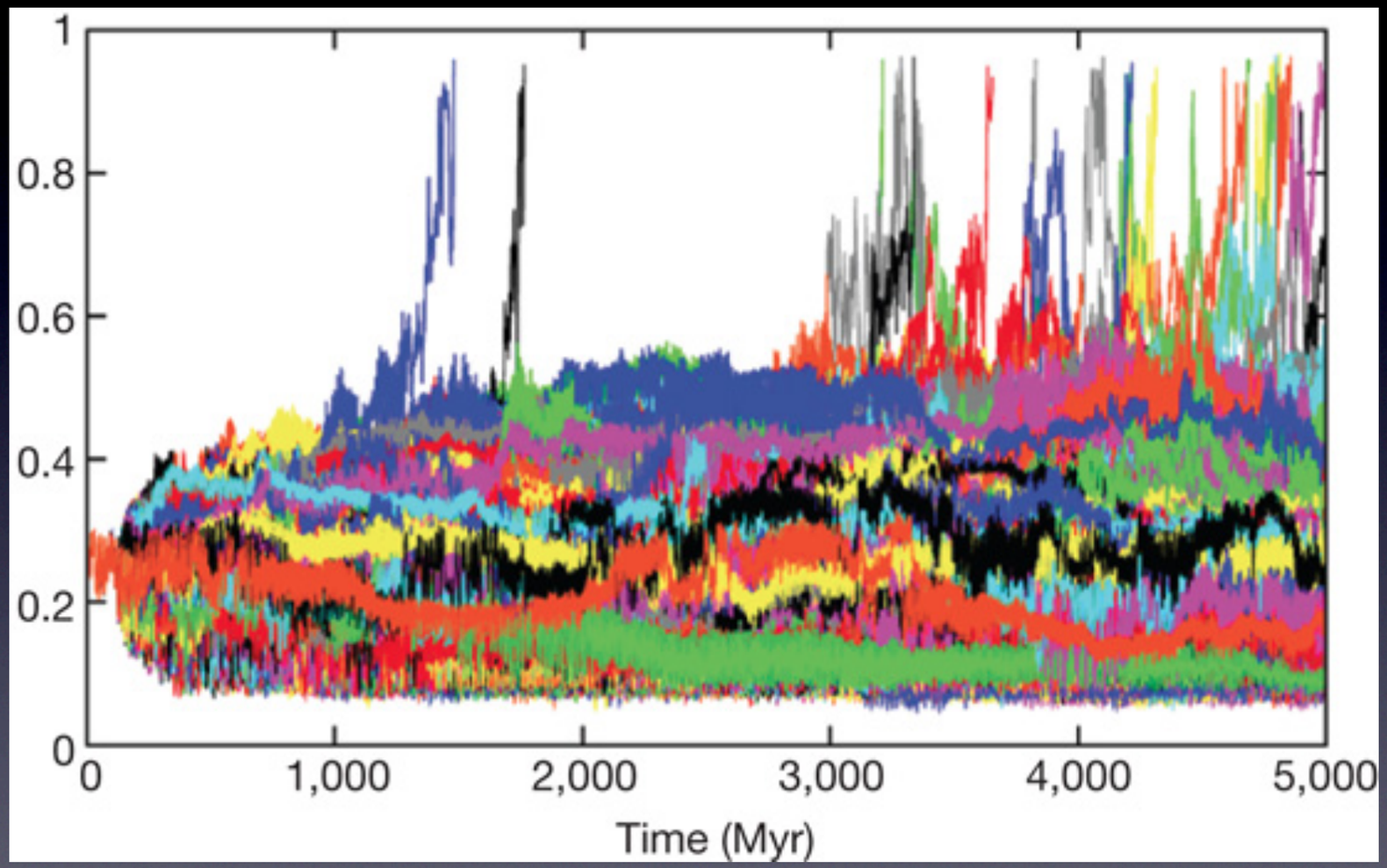
  Super Planet Crash! http://www.stefanom.org/spc/

  Bonus - dealing with alien overlords:
  http://save-point.herokuapp.com/dashboard/users.php

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

eccentricity of Mercury for 2500 nearby initial conditions



Laskar & Gastineau (2009)

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

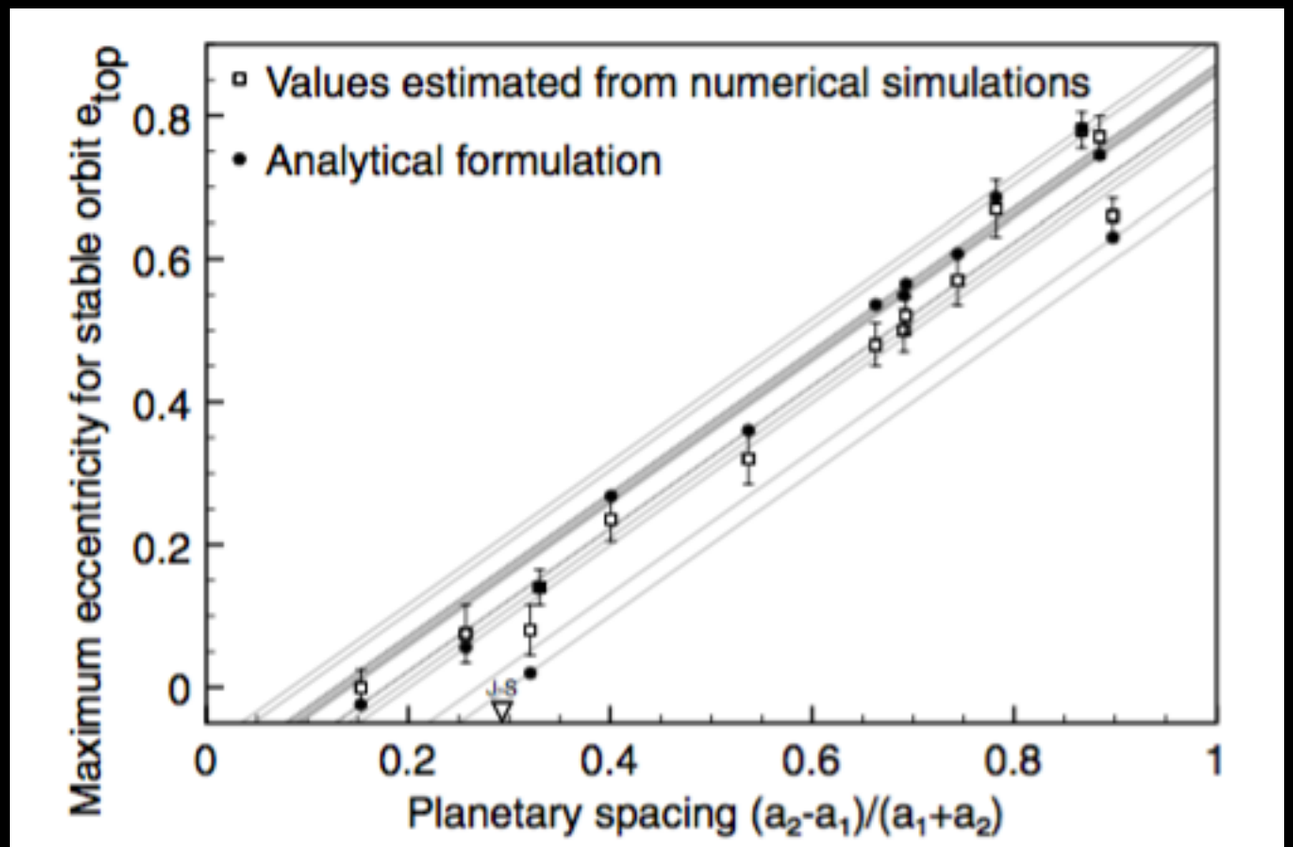


Figure 3. Maximum eccentricity for a stable test particle orbit at a semimajor axis $(a_1 + a_2)/2$ between two existing planets. The unfilled squares represent estimates of e_{top} with their uncertainties, and the filled circles and gray lines represent values of e_{top} computed from Equation (10) for various planetary systems (eight systems listed in Table 1 plus six additional systems for a larger sample). For comparison, the inverted triangle shows the planetary spacing between Jupiter and Saturn (note that we only considered two-planet systems with circular orbits, and our results may not be applicable to systems with greater multiplicity of planets or non-circular orbits).

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

Intro - Day 4

Everything for today is posted under day 4 of:
www.astroblend.com/ba2016

Start thinking about a system you want to visualize in more detail…

** check out day 4 on website for Adventures **

Teaser Trailer

https://skfb.ly/QHwx