

Publications by John E. Chambers

Refereed Journals

1. Symplectic integrators: T+V revisited and round-off reduced.
J.E.Chambers (2019) *Mon. Not. R. Astron. Soc.* **483**, 5574–5582.
2. The early instability scenario: terrestrial planet formation during the giant planet instability, and the effect of collisional fragmentation.
M.S.Clement, N.A.Kaib, S.N.Raymond, **J.E.Chambers** and K.J.Walsh (2019) *Icarus* **321**, 778–790.
3. Planet formation: an optimized population-synthesis approach.
J.E.Chambers (2018) *Astrophys. J.*, **865**, article 30.
4. Steamworlds: atmospheric structure and critical mass of planets accreting icy pebbles.
J.E.Chambers (2017) *Astrophys. J.*, **849**, article 30.
5. Collisional fragmentation is not a barrier to close-in planet formation.
J.Wallace, S.Tremaine and **J.E.Chambers** (2017) *Astron. J.*, **154**, article 175.
6. Pebble accretion and the diversity of planetary systems.
J.E.Chambers (2016) *Astrophys. J.*, **825**, article 63.
7. The frequency of giant impacts on Earth-like worlds.
E.V.Quintana, T.Barclay, W.J.Borucki, J.F.Rowe and **J.E.Chambers** (2016) *Astrophys. J.*, **821**, article 126.
8. The fragility of the terrestrial planets during a giant-planet instability.
N.A.Kaib and **J.E.Chambers** (2016) *Mon. Not. R. Astron. Soc.*, **455**, 3561–3569.
9. Obliquity variations of a potentially habitable early Venus.
J.W.Barnes, B.Quarles, J.J.Lissauer, **J. Chambers**, M.M.Hedman (2016) *Astrobiology* **16**, 487–499.
10. Bulk chemical and Hf-W isotopic consequences if incomplete accretion during planet formation.
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11. Giant planet formation with pebble accretion.
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12. Forming terrestrial planets.
J.Chambers (2014) *Science*, **344**, 479–480.
13. Planetary science: a chronometer for Earth’s age.
J.Chambers (2014) *Nature*, **508**, 51–52.

14. Late-stage planetary accretion including hit-and-run collisions with fragmentation.
J.E.Chambers (2013) *Icarus*, **224**, 43–56.
15. A survey for very short-period planets in the Kepler data.
B.Jackson, C.C.Stark, E.R.Adams, **J.E.Chambers**, D.Deming (2013) *Astrophys. J.*, **779**, article 165.
16. Obliquity variations on a moonless Earth.
J.J.Lissauer, J.W.Barnes and **J.E.Chambers** (2012) *Icarus*, **217**, 77–87.
17. Five new transit epochs of the exoplanet OGLE TR-111b.
S.Hoyer, P.Rojo, M.Lopez-Morales, R.F.Diaz, **J.E.Chambers**, D.Minniti. (2011) *Astrophys. J.*, **733**, article 53.
18. Planetesimal formation by turbulent concentration.
J.E.Chambers (2010) *Icarus*, **208**, 505–517.
19. Stellar elemental abundance patterns: implications for planet formation.
J.E.Chambers (2010) *Astrophys. J.*, **724**, 92–97.
20. Extrasolar planets: more giants in focus.
J.E.Chambers (2010) *Nature*, **467**, 405–406.
21. Jupiter - friend or foe? III The Oort cloud comets.
J.Horner, B.W.Jones and **J.E.Chambers** (2010) *Int J. Astrobiology*, **9**, 1–10.
22. How eccentric orbital solutions can hide planetary systems in 2:1 resonant orbits.
G.Anglada-Escude, M.Lopez-Morales and **J.E.Chambers** (2010) *Astrophys. J.* **709**, 168–178.
23. Five long-period extrasolar planets in eccentric orbits from the Magellan planet search program.
P.Arriagada, R.P.Butler, D.Minniti, M.Lopez-Morales, S.A.Shectman, F.C.Adams, A.P.Boss, **J.E.Chambers** (2010) *Astrophys. J.*, **711**, 1229–1235.
24. An analytic model for the evolution of a viscous, irradiated disk.
J.E.Chambers (2009) *Astrophys. J.*, **705**, 1206–1214.
25. Planetary science: archaeology of the asteroid belt.
J.E.Chambers (2009) *Nature*, **460**, 963–964.
26. Planetary migration: what does it mean for planet formation?
J.E.Chambers (2009) *Ann. Rev. Earth. Plan. Sci.*, **37**, 321–344,
27. Low-mass companions for five solar-type stars from the Magellan planet search program.
D.Minniti, R.P.Butler, M.Lopez-Morales, S.A.Shectman, F.C.Adams, P.Arriagada, A.P.Boss and **J.E.Chambers** (2009) *Astrophys. J.*, **693**, 1424–1430.
28. Oligarchic growth with migration and fragmentation.
J.E.Chambers (2008) *Icarus*, **198**, 256–273.

29. Solar and planetary destabilization of the Earth Moon triangular Lagrangian points.
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30. Is our Sun a singleton?
M.B.Davies, D.Malmberg, **J.E.Chambers**, R.P.Church, F.DeAngeli, D.Mackey, M.I.Wilkinson
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31. On the stability of a planet between Mars and the asteroid belt: implications for the Planet
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32. Terrestrial planet formation around individual stars within binary star systems.
E.V.Quintana, F.C.Adams, J.J.Lissauer and **J.E.Chambers** (2007) *Astrophys. J.*, **660**,
807–822.
33. The instability of planetary systems in binaries: how the Kozai mechanism leads to strong
planet-planet interactions.
D.Malmberg, M.B.Davies and **J.E.Chambers** *Mon. Not. R. Astron. Soc.*, **377**, L1–L4.
34. Planet formation with migration.
J.E.Chambers (2006) *Astrophys. J.*, **652**, L133–L136.
35. A semi-analytic model for oligarchic growth.
J.E.Chambers (2006) *Icarus*, **180**, 496–513.
36. Planetary accretion in the inner Solar System.
J.E.Chambers (2004) *Earth Plan. Sci. Lett.*, **223**, 241–252.
37. The origin of water on Mars.
J.I.Lunine, **J.E.Chambers**, A.Morbidelli, L.A.Leshin (2003) *Icarus*, **165**, 1–8.
38. Symplectic integrators with complex timesteps.
J.E.Chambers (2003) *Astron. J.*, **126**, 1119–1126.
39. The effects of nebula surface density profile and giant-planet eccentricities on planetary
accretion in the inner Solar System.
J.E.Chambers and P.Cassen (2002) *Meteoritics Plan. Sci.*, **37**, 1523–1540.
40. A dynamical analysis of the 47 Ursae Majoris planetary system.
G.Laughlin, **J.E.Chambers**, D.Fischer (2002) *Astron. J.*, **579**, 455–467.
41. Terrestrial planet formation in the Alpha Centauri system,
E.V.Quintana, J.J.Lissauer, **J.E.Chambers**, and M.J.Duncan (2002) *Astrophys. J.*, **576**,
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42. Extrasolar Trojans: the viability and detectability of planets in the 1:1 resonance.
G.Laughlin and **J.E.Chambers** (2002) *Astron. J.*, **124**, 592–600.
43. Symplectic integrator algorithms for modelling planetary accretion in binary star systems.
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44. Making more terrestrial planets.
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46. Comparing planetary accretion in two and three dimensions.
J.E.Chambers (2001) *Icarus*, **149**, 262–276.
47. Short-term dynamical interactions among extrasolar planets.
G.Laughlin and **J.E.Chambers** (2001) *Ap. J. Lett.*, **551**, L109–113.
48. The primordial excitation and clearing of the asteroid belt.
J.M.Petit, A.Morbidelli and **J.E.Chambers** (2001) *Icarus*, **153**, 338–347.
49. A plausible cause of the late heavy bombardment.
A.Morbidelli, J.M.Petit, B.Gladman and **J.E.Chambers** (2001) *Meteoritics Plan. Sci.*, **36**, 371–380.
50. The stability of the orbits of terrestrial planets in the habitable zones of known exoplanetary systems.
B.W.Jones, P.N.Sleep and **J.E.Chambers** (2001) *Astron. Astrophys.*, **366**, 254–262.
51. Source regions and timescales for the delivery of water on Earth.
A.Morbidelli, **J.E.Chambers**, J.I.Lunine, J.M.Petit, F.Robert G.B.Valsecchi and K.E.Cyr (2000) *Meteoritics Plan. Sci.*, **35**, 1309–1320.
52. Pseudo-high-order symplectic integrators.
J.E.Chambers and M.A.Murison (2000) *Astron. J.*, **119**, 425–433.
53. A hybrid symplectic integrator that permits close encounters between massive bodies.
J.E.Chambers (1999) *Mon. Not. R. astr. Soc.*, **304**, 793–799.
54. Making the terrestrial planets: N-body integrations of planetary embryos in three dimensions.
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55. N-Body simulations of planet formation: varying the initial number of planetary embryos.
J.E.Chambers (1998) *Earth, Moon and Planets*, **81**, 3–6.
56. Why Halley-types resonate but long-period comets don't.
J.E.Chambers (1997) *Icarus*, **125**, 32–38.
57. Fractionated accretion and the solar neutrino problem.
C.S.Jeffery, M.E.Bailey and **J.E.Chambers** (1997) *The Observatory*, **117**, 224–228.
58. The stability of multi-planet systems.
J.E.Chambers, G.W.Wetherill and A.P.Boss (1996) *Icarus*, **119**, 261–268.
59. The long-term dynamical evolution of comet Swift-Tuttle.
J.E.Chambers (1995) *Icarus*, **114**, 372–386.

60. A simple mapping for comets in resonance.
J.E.Chambers (1993) *Cel. Mech. Dyn. Astron.*, **57**, 131-136.
61. The origin of sungrazers: a frequent cometary endstate.
M.E.Bailey, J.E.Chambers and G.Hahn (1992) *Astron. Astrophys.*, **257**, 315-322.
62. Detection of comet nuclei at large heliocentric distances.
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