Christopher Spalding

Ph.D. Candidate
Division of Geological and Planetary Sciences
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Professional Preparation

2013 - 2018	*Planetary Science*	Ph.D. (in progress)	Calif. Institute of Technology
2009 - 2013	*Astrophysics*	BA/MSci (1st class honors)	University of Cambridge, UK

Appointments

2018 51 Pegasi b Postdoctoral Researcher	Yale University
2016 Summer Research Connection - Adviser	California Institute of Technology
2015 Geophysical Fluid Dynamics Summer Fellow	Woods Hole Oceanographic Institution
2013 - present Graduate Research Assistant	California Institute of Technology
2012 CTAMOP Summer Research Fellowship	Queen's University, Belfast, Northern Ireland

Publications (8 first-author)

1. Spalding, C., Doering, C. & Flierl, G., (2017). Resonant activation of population extinctions, *Phys. Rev. E,* 96, 042411.
2. Spalding, C. & Batygin, K., (2017). A secular resonant origin for the loneliness of hot Jupiters, *The Astronomical Journal, 154, 3*.
3. Spalding, C., Finnegan, S. & Fischer, W., W., (2017). Energetic costs of calcification under ocean acidification, *Global Biogeochemical Cycles*, *31, 866*.
4. Spalding, C. & Batygin, K., (2016), Spin-orbit misalignment as a driver of the *Kepler* dichotomy, *The Astrophysical Journal*, *830,* 5.
5. Spalding, C., Batygin, K. & Adams, F. C. (2016). Resonant removal of exomoons during planetary migration. *The Astrophysical Journal*, *817*(1), 18.
6. Spalding, C. & Batygin, K. (2015). Magnetic origins of the stellar mass-obliquity correlation in planetary systems. *The Astrophysical Journal*, *811*(2), 82.
7. Spalding, C., Batygin, K. & Adams, F. C. (2014). Alignment of protostars and circumstellar disks during the embedded phase. *The Astrophysical Journal Letters*, *797*(2), L29.
8. Spalding, C. & Batygin, K. (2014). Early excitation of spin-orbit misalignments in close-in planetary systems. *The Astrophysical Journal*, *790*(1), 42.

Invited Talks

1. TBD (2018) Yale University, Geology & Geophysics
2. Primordial Sculpting of Exoplanetary System Architectures (2018) Chicago, Geophysical Sciences
3. Primordial Sculpting of Exoplanetary System Architectures (2017) Penn State, Astronomy
4. Primordial Sculpting of Exoplanetary System Architectures (2017) Cornell, Astronomy
5. Primordial Sculpting of Exoplanetary System Architectures (2017) MIT, Earth and Planetary Sciences
6. Primordial Sculpting of Exoplanetary System Architectures (2017) Yale, Astronomy
7. Primordial Sculpting of Exoplanetary System Architectures (2017) Princeton, Astronomy
8. Primordial Sculpting of Exoplanetary System Architectures (2017) Berkeley, Astronomy
9. The Most Catastrophic Catastrophe: Extinction dynamics within a fluctuating environment (2017) Berkeley, Integrative Biology

10. Primordial Sculpting of Exoplanetary System Architectures (2017) UCSC
11. Primordial Sculpting of Exoplanetary System Architectures (2017) UCLA
12. A Secular Resonant Origin of the Loneliness of hot Jupiters (2017) UCLA
13. The Primordial Origins of Stellar Obliquity and the Kepler Dichotomy (2017) Harvard, Cfa
14. The Primordial Origins of Stellar Obliquity and the Kepler Dichotomy (2017) Ann Arbor, Michigan

Conference Presentations

1. A Minimum Population Extinction Time Driven by Stochastic Environmental Forcing (Dec 2017), Palaeontological Association Annual Meeting, London, UK (oral pres.)
2. A Minimum Population Extinction Time Driven by Stochastic Environmental Forcing (2017), GSA meeting, Seattle WA (oral pres.)
3. A Secular Resonant Origin for the Loneliness of Hot Jupiters (2017), DPS meeting. Provo Utah (oral pres.)
4. The Intrinsic Multiplicity of Single-Transiting *Kepler* Systems (2017), C. Spalding, & K. Batygin, DDA, London, UK (oral pres.)
5. Spin-Orbit Misalignments as a Driver of the *Kepler* Dichotomy (2017), C. Spalding, & K. Batygin, Aspen Winter Conference, Formation and Dynamical Evolution of Exoplanets (oral pres.)
6. Spin-Orbit Misalignments as a Driver of the *Kepler* Dichotomy (2016), C. Spalding, & K. Batygin, DPS meeting, Pasadena CA (oral pres.)
7. Planetary system architectures as sculpted from binary-disk interactions (2015), C. Spalding, & K. Batygin, ExSS meeting III, Hawaii DC (poster pres.)
8. The Primordial Destruction of Moons around Giant Exoplanets through Disk-Driven Migration (2015), C. Spalding, K. Batygin & F. C. Adams, AAS/DPS meeting, Washington DC (oral pres.)
9. The Energetic Costs of Calcification Under Ocean Acidification, C. Spalding, Seth Finnegan & W. W. Fischer, GSA meeting 2015, Baltimore, MD (oral pres.)
10. Alignment of protostars and disks in the embedded phase (2015) C. Spalding, K. Batygin, 2015 DDA, Pasadena, CA (oral pres.)
11. Origins of Spin-Orbit Misalignments (2014) C. Spalding, K. Batygin, AAS/DPS meeting #46, Tucson, AZ (oral pres.)

Synergistic Activities

Teaching Assistant, Ge/Ay 133, Formation and Evolution of Planetary Systems, 2016, Caltech
Calculus: A refresher course for graduate students 2016, 2017. Caltech.
Teaching Assistant, Ge 150, Planetary Atmosphere, 2016, Caltech
Teaching Assistant, Ge/Ay 137 Planetary Physics, 2015, Caltech
Reviewer: AAS Journals, *MNRAS, Physics Letters A, Global Biogeochemical Cycles*

Prizes/Awards

51 Pegasi b Postdoctoral Fellowship (to begin July 2018).
NESSF Graduate Fellowship in Earth and Planetary Science, 2015-present
Ray Duncombe Prize for Dynamical Astronomy, 2015
1912 Senior Scholarship, University of Cambridge, 2013
Barnes Scholarship, Cambridge University, 2012
QinetiQ Prize for Natural Sciences, 2012

Outreach

Interpretive volunteer, the Natural History Museum of Los Angeles County (March 2016 - Sep 2016, Aug 2017 - Dec 2017)
South Bay Observatory Presentation. “Up-side down, Inside-out Solar Systems” - April 2017
Science Saturdays Outreach Series, Caltech (Jan 2017, 2018)
Los Angeles BIL conference “Up-side down, Inside-out Solar Systems” - April 2016