Billy L. Quarles | Research Scientist

837 State Street – Atlanta, GA 30332

✉ billylquarles@gmail.com • www.billyquarles.com

Education

University of Texas at Arlington — **Physics**
Doctor of Philosophy — *2008–2012*

Stephen F. Austin State University — **Physics**
Master of Science — *2006–2008*

Texas Christian University — **Physics & Astronomy**
Bachelor of Science — *2002–2006*

PhD Dissertation

Title: *Selected studies of celestial dynamics and habitability of extrasolar planetary systems*

Supervisors: Professor Zdzislaw Musielak & Associate Professor Manfred Cuntz

Research Interests

Theory: Gravitational Dynamics, Planetary Spin Dynamics, Planet Formation, Planetary Habitability

Observation: Exoplanets in Binary Stars, Multiple Planet Systems

Research Experience

Georgia Institute of Technology — **Atlanta, GA**
Research Scientist — *August 2018 – present*

- **Investigate** the occurrence of circumbinary planets using data from the Transiting Exoplanet Survey Satellite.
- **Performed** an investigation of the changes in climate for exoplanets in binary systems due evolution of planetary spin.
- **Improved** the characterization of warm, large exoplanets using Gaussian Process based methods of noise characterization

University of Oklahoma — **Norman, OK**
Postdoctoral Research Associate — *September 2016 – August 2018*

- **Performed** an investigation of stability for multiple planets that may exist binary star systems.
- **Identified** the possible compositions of the TRAPPIST-1 planets based upon system stability.
- **Implemented** a new code to take advantage of GPUs to understand the processes of giant planet migration in the early Solar System.

University of Idaho **Moscow, ID**
Postdoctoral Research Associate *May 2016 – August 2016*

- **Investigated** the stability of obliquity in exoplanet systems.

San Diego State University **San Diego, CA**
Technical Consultant *September 2015 – August 2016*

- **Implemented** new computational methods that improve the efficiency of planet detection in binary systems.
- **Assisted** in the discovery of Kepler-1647, the largest and longest period circumbinary planet.

NASA Ames Research Center **Moffett Field, CA**
Postdoctoral Research Fellow *January 2013 – August 2015*

- **Assisted** in the discovery of Kepler-186f, the first Earth-sized exoplanet in the habitable zone.
- **Performed** investigation of orbital dynamics and the resulting consequences for habitability.
- **Assisted** in the discovery of circumbinary planets that orbit binary stars.
- **Participated** in vetting of Kepler Objects of Interest for Q12, Q16, & Q17 catalogs.
- **Assisted** in target selection of binary stars for K2 campaigns.
- **Proposed** and **Observed** the comet *Siding Spring* using K2.
- **Proposed** for 2500 stars hotter than 6000K using K2, which were later observed in 2016.

Teaching Experience

University of Nebraska at Kearney **Kearney, NE**
Visiting Assistant Professor *August 2015 – May 2016*

- **Introductory Physics I & II for Health Science majors**: curricula included lectures on Mechanics, Thermodynamics, Electromagnetism, and Special Relativity.
- **Conceptual Physical Science**: curricula included lectures and lab experiments on Physics, Geology, Hydrology, Meteorology, & Astronomy
- **Introductory Astronomy**: curricula included lectures on the night sky, physical description of atoms & light, stars, planets, and cosmology.

University of Texas at Arlington **Arlington, TX**
Astronomy Lab Supervisor *September 2012 – December 2012*

- **Supervised** and **managed** undergraduate astronomy lab instructors.
- **Designed** and **implemented** new lab exercises.

University of Texas at Arlington **Arlington, TX**
Graduate Teaching Assistant *January 2009 – August 2012*

- **Provided** mini-lectures for students in Physics lab sections.
- **Provided** procedural support for students in Physics lab sections.

University of Texas at Arlington **Arlington, TX**
Astronomy Lecturer *August 2010 – December 2010*

- **Introductory Astronomy**: curricula included the night sky, physical description of atoms & light, and the solar system.

Stephen F. Austin State University **Nacogdoches, TX**
Graduate Teaching Assistant *August 2006 – May 2008*

- **Provided** mini-lectures for students in Physics & Astronomy lab sections.
- **Provided** procedural support for students in Physics & Astronomy lab sections.
- **Administered** the Astronomy night labs.
- **Provided** technical support for public astronomical viewing events at SFA Observatory.

Student Research

Undergraduate Students

Georgia Institute of Technology **Atlanta, GA**
Karthik Yadavalli† *Aug 2018 – present*

- **Investigating** the conditions for *flux variations* of a circumbinary planet within the habitable zone of the host binary.

Georgia Institute of Technology **Atlanta, GA**
Ziqian Hong† *Aug 2018 – May 2019*

- **Investigated** the conditions for *observation* of an additional circumbinary planet near the stability limit within Kepler-1647AB.

University of Oklahoma **Norman, OK**
Ethan White *Aug 2017 – May 2018*

- **Investigated** the conditions for *planetary stability* within alpha Centauri AB including the effects of the Proxima Centauri and the Galactic environment.

Graduate Students

University of Idaho **Moscow, ID**
Steven Kreyche† *Aug 2018 – present*

- **Investigating** the influence of giant planets on *terrestrial planet obliquity* considering both prograde and retrograde spinning planets.

University of Texas at Arlington **Arlington, TX**
Marialis Rosario-Franco† *Aug 2017 – present*

- **Investigating** the conditions for *stable orbits of moons* in the Kepler & TESS data.

University of Oklahoma **Norman, OK**
Matt Clement (*Ph.D. awarded in 2019*) *Aug 2016 – May 2019*

- **Identified** the impact on outcomes of *terrestrial planet formation* in the solar system considering an early orbital instability of the giant planets.

University of Texas at Arlington **Arlington, TX**
Sarah Moorman† *Aug 2017 – May 2018*

- **Re-examined** the conditions for *habitability* within the Kepler-16 AB system.

University of Texas at Arlington **Arlington, TX**
Suman Satyal† (*Ph.D. awarded in 2014*) *Aug 2012 – Dec 2014*

- **Explored** the applicability of chaos indicators to study exoplanets in binary systems.
- **Re-examined** the stability constraints for circumbinary planets and the *consequences* for those discovered by the Kepler mission.

†Mentoring resulted in a publication and is denoted by color in my publication list.

Awards

NASA – ARC — **National Aeronautics and Space Administration**
Group Achievement Award — *2013*

Department of Physics — **University of Texas at Arlington**
Outstanding Physics Major — *2012*

Dept. of Physics & U.S. Dept. of Ed. — **University of Texas at Arlington**
GAANN Fellowship — *2009 – 2012*

Department of Physics & Astronomy — **Texas Christian University**
Best Undergraduate Research — *2006*

Media Coverage

November 2019: Phys.org – Exoplanet axis study boosts hopes of complex life, just not next door

July 2019: Cosmos Magazine – Planets in multiple-star systems may be habitable

May 2019: Sky and Telescope – Third planet found orbiting binary star system

June 2017: ScienceDaily.com – Composition of Earth-size planets in TRAPPIST-1 system

June 2016: Astrobiology Magazine – New planet largest discovered orbits two suns

April 2014: National Geographic – Kepler Telescope Discovers Most Earth-Like Planet Yet

January 2012: Universe Today – Goldilocks moons

January 2012: National Geographic – "Tatooine" Planet With Two Suns Could Host Habitable Moon?

January 2012: Space.com (NBC News) – Alien Earths could have 2 suns like Star Wars Tatooine

Computer skills

Programming: MATLAB, PYTHON, C, C++, FORTRAN, java, Linux/Unix script

Software: Mercury, SWIFT, HNBody, GENGA, Rebound

Institutional Service

2018 – present: Cosmic Coffee (journal club) organizer in the Center for Relativistic Astrophysics at Georgia Tech

Review Experience

2013 – present: Astrophysical Journal, Icarus, Monthly Notices of the Royal Astronomical Society, Advances in Space Research, Physical Letters A, Advances in Astronomy

2013 – present: K2 Guest Observer Program, NASA Earth and Space Science Fellowship Program, NSF Astronomy & Astrophysics

Research Collaborations

Kepler Working Groups
2013 – present: Eclipsing Binary, Transit Timing Variations & Multiple-Body, Threshold Crossing Event Review Team (TCERT)

TESS Working Groups
2016 – present: Circumbinary Planets, Transit Timing Variations & Multiple-Body

Books and Monographs Published

Z. Musielak and B. Quarles. Three Body Dynamics and Its Applications to Exoplanets. SpringerBriefs in Astronomy, July 2017. Google Scholar ISBN 9783319582269

Current, Past, & Future Research Support

A. **Current Support**

Project Title: Debris Disk Morphology due to Stellar Encounters
PI: **Gongjie Li**
Program Name: NASA ATP
Evan Scannapieco, (202) 358-3730, HQ-ATP@nasa.gov
Performance Period: FY 20-22
Commitment time of Billy Quarles 0.083 WY/yr

Project Title: Tidal Obliquity Variations of Potentially Habitable Planets
PI: Jason Barnes
Program Name: NASA HW
Mitchell Schulte, (202) 358-2127, mitchell.d.schulte@nasa.gov
Performance Period: FY 19-20
Commitment time of Billy Quarles 0.083 WY/yr

Project Title: Where to Search for Habitable Worlds
PI: Elisa Quintana
Program Name: NASA Sellers Exoplanet Environments Collaboration
Avi Mandell, (301) 286-6293, Avi.Mandell@nasa.gov
Performance Period: FY 19-20
Commitment time of Billy Quarles 0.166 WY/yr

B. **Past Support**
Project Title: Obliquity Stability of Potentially Habitable Worlds
PI: Jason Barnes
Program Name: NASA Astrobiology: Exobiology and Evolutionary Biology
Michael H. New, (202) 358-1766, HQ-EXO@mail.nasa.gov
Performance Period: FY 14-16
Commitment time of Billy Quarles 0.3 WY/yr

Project Title: Comprehensive Analyses of Comet Siding Spring, Before, During and After Its Mars Encounter
PI: Tony Farnham
Program Name: NASA SSW

Mitchell Schulte, (202) 358-2127, mitchell.d.schulte@nasa.gov
Performance Period: CY 16-18
Commitment time of Billy Quarles 0.0 WY/yr (collaborator)

Project Title: Detection and Prioritization of Warm Jupiters
PI: Rebekah Dawson
Program Name: NASA TESS GI
Martin Still, (202) 358-4462, martin.still@nasa.gov
Performance Period: FY 19-20
Commitment time of Billy Quarles 0.02 WY

Project Title: Warm, Large Exoplanets
PI: Rebekah Dawson
Program Name: NASA XRP
Christina Richey, (202) 358-2206, Christina.R.Richey@nasa.gov
Performance Period: CY 16-18
Commitment time of Billy Quarles 0.4, 0.4, 0.2 WY/yr

Conference Talks (*17*)

1. B. Quarles. Obliquity Variations of Terrestrial Planets in α Centauri Chesapeake Bay Exoplanet Meeting, January 2020.

2. B. Quarles, G. Li, and J. J. Lissauer. Obliquity Variations and Habitability in Alpha Centauri AB. In *AGU/Astrobiology Science Conference*, AGU/Astrobiology Science Conference, June 2019.

3. B. Quarles, G. Li, and J. J. Lissauer. Obliquity Evolution of Earthlike planets in α Centauri AB. In *AAS/Division of Dynamical Astronomy Meeting*, AAS/Division of Dynamical Astronomy Meeting, June 2019.

4. B. Quarles. The Habitability of Exoplanets Around Sunlike Stars. Georgia Tech Exploration and Origins Colloquium, March 2019.

5. B. Quarles, J. Barnes, J. J. Lissauer, and J. E. Chambers. Obliquity Variations of a Potentially Habitable Kepler-62f. In *AAS/Division of Planetary Sciences Meeting*, AAS/Division of Planetary Sciences Meeting, October 2018.

6. B. Quarles, S. Satyal, V. Kostov, N. Kaib, and N. Haghighipour. Dynamics of Circumbinary Planets Near the Stability Limit. In *AAS/Division of Dynamical Astronomy Meeting*, AAS/Division of Dynamical Astronomy Meeting, April 2018.

7. B. Quarles, and N. Kaib. Probing the Early Solar System using GPUs. Numerical Integrations Methods in Planetary Science Meeting, University of Toronto - Scarborough, August 2017.

8. B. Quarles, J. J. Lissauer, and N. Kaib. Maximizing planet packing in the alpha Centauri AB system. In *AAS/Division of Dynamical Astronomy Meeting*, AAS/Division of Dynamical Astronomy Meeting, June 2017.

9. B. Quarles, and N. Kaib. Dynamics of the Giant Planets due to a Fully Self-gravitating Planetesimal Disk. In *American Astronomical Society Meeting Abstracts #229*, volume 229 of *American Astronomical Society Meeting Abstracts*, page #112.02, January 2017.

10. B. Quarles, and J. J. Lissauer. Mapping α Centauri AB for Possible Habitable Planets. In *American Astronomical Society Meeting Abstracts #228*, volume 228 of *American Astronomical Society Meeting Abstracts*, page #404.07, June 2016.

11. B. Quarles, J. W. Barnes, J. J. Lissauer, J. E. Chambers, and M. M. Hedman. Obliquity Variations of a Rapidly Rotating Venus. In *AAS/Division of Dynamical Astronomy Meeting*, AAS/Division of Dynamical Astronomy Meeting, May 2015.

12. B. Quarles, and J. J. Lissauer. Dynamical Evolution of planets in α Centauri AB. In *AAS/Division of Dynamical Astronomy Meeting*, AAS/Division of Dynamical Astronomy Meeting, May 2015.

13. B. Quarles, J. Barnes, J. J. Lissauer, and J. E. Chambers. Obliquity Evolution of an Early Venus. In *AAS/Division of Planetary Sciences Meeting*, AAS/Division of Planetary Sciences Meeting, November 2014.

14. B. Quarles and J. J. Lissauer. Dynamical Evolution of the Earth-Moon Progenitors. In *IAU/Complex Planetary Systems Symposium*, IAU/Complex Planetary Systems Symposium, July 2014.

15. B. Quarles and J. J. Lissauer. Theia's Provenance: Regional Source of Earth's Late Impactor. In *AAS/Division of Dynamical Astronomy Meeting*, volume 45 of *AAS/Division of Dynamical Astronomy Meeting*, page #102.04, May 2014.

16. B. Quarles, M. Cuntz, and Z. Musielak. The stability of the suggested planet in the ν Octantis system: a numerical and statistical study. In *APS Texas Sections Spring Meeting Abstracts*, page C1003, March 2012.

17. B. Quarles, Z. E. Musielak, and M. Cuntz. On The Existence Of Earth-like Planets In The Circumbinary System Kepler-16. In *American Astronomical Society Meeting Abstracts #219*, volume 219 of *American Astronomical Society Meeting Abstracts*, page #110.03, January 2012.

Invited Talks (*13*)

1. B. Quarles. Dangers for Earthlike Planets in Binary Systems Carnegie Institution for Science DTM Colloquium, January 2020.

2. B. Quarles. Potential for Exoplanetary Neighbors in Alpha Centauri Texas Section of the American Physical Society, March 2019.

3. B. Quarles. Extrasolar Planets with 2 Suns: Paradise Lost? Tulsa City-County Library Idea Box Series, April 2018.

4. B. Quarles. Living on the Edge: Stability Limits of Circumbinary Planets Georgia Tech CRA Seminar, March 2018.

5. B. Quarles. Exoplanets in Binary Star Systems: Friends or foes? Louisiana School for Math, Science, and the Arts, Natchitoches, January 2018.

6. B. Quarles. Archimedes and the Giant Planet Instability Laboratoire d'Astrophysique de Bordeaux Guest Colloquium, June 2017.

7. B. Quarles. An Extremely Cold Case: Formation of the Earth's Moon. University of Oklahoma Department of Physics & Astronomy Guest Colloquium, October 2015.

8. B. Quarles. Vacations on an Earthlike planet: Just add water?. UC-Berkeley Center for Integrative Planetary Science Colloquium, April 2015.

9. B. Quarles. Early Solar System Evolution and Consequences for Habitability. Baylor-CASPER Seminar Series, March 2015.

10. B. Quarles. Early Solar System Evolution and Consequences for Habitability. Texas Christian University Seminar Series, March 2015.

11. B. Quarles, and J. J. Lissauer. Theia's date with destiny: possible conditions leading to a Giant Impact. SETI Institute Seminar Series, YouTube video January 2015.

12. B. Quarles. Theia's Provenance: Regional Source of Earth's Late Impactor, University of Texas at Arlington Department of Physics Colloquium, January 2014.

13. B. Quarles. Chaos in Extrasolar Planets, Texas Christian University Department of Physics & Astronomy Colloquium, February 2011.

Peer-Reviewed Publications (33)

NASA ADS Library (*>1000 citations; H-index = 13*)
Google Scholar Library (*>1200 citations;* ***H-index = 15***)
ArXiv Library

1. B. Quarles, G. Li, V. Kostov, and N. Haghighipour. Orbital Stability of Circumstellar Planets in Binary Systems. *AJ*. (*in press*)

2. Q. Socia, W. Welsh, J. Orosz, W. D. Cochran, et al. including B. Quarles. KOI-3152 b: A Kepler Transiting Circumbinary Planet in a Grazing Eclipsing Binary. *AJ*. (*in press*)

3. C. Beichman, M. Ygouf, J. Sayson, Y. Yung, et al. including B. Quarles. Searching for Planets Orbiting α Cen A with the James Webb Space Telescope. *PASP*. January 2020 NASA ADS: 2020PASP..132a5002B

4. B. Quarles, G. Li, and J. J. Lissauer. Obliquity Evolution of Circumstellar Planets in Sun-like Stellar Binaries. *ApJ*. November 2019 NASA ADS: 2019ApJ....886..56Q

5. B. Quarles, J. W. Barnes, J. J. Lissauer, and J. Chambers. Obliquity Evolution of the Potentially Habitable Exoplanet Kepler-62F. *Astrobiology*. October 2019 NASA ADS: 2017arXiv171008052Q

6. J. A. Orosz, W. F. Welsh, N. Haghighipour, B. Quarles and the *Kepler CBP Working Group*. The Detection and Characterization of a Third Planet in the Kepler-47 Circumbinary System. *AJ*, May 2019. NASA ADS: 2019AJ....157..174O

7. Z. Hong, B. Quarles, G. Li, and J. Orosz. Could There Be an Undetected Inner Planet Near the Stability Limit in Kepler-1647?. *AJ*. NASA ADS: 2019AJ....158....8H

8. B. Quarles, and N. Kaib. Instabilities in the Early Solar System due to a Self-gravitating Disk. *AJ*. NASA ADS: 2019AJ....157...67Q

9. S. Moorman, B. Quarles, Zh. Wang, and M. Cuntz. The Habitable Zone of Kepler-16: Impact of Binarity and Climate Models. *International Journal of Astrobiology*, February 2019. NASA ADS: 2019IJAsB..18...79M

10. B. Quarles, S. Satyal, V. Kostov, N. Kaib, and N. Haghighipour. Stability Limits of Circumbinary Planets: Is There a Pile-up in the Kepler CBPs?. *ApJ*, April 2018. NASA ADS: 2018ApJ...856..150Q

11. B. Quarles and J. J. Lissauer. Long-Term Stability of Tightly Packed Multi-Planet Systems in Prograde, Coplanar, Circumstellar Orbits within the alpha Centauri AB System. *AJ*, March 2018. NASA ADS: 2018AJ....155..130Q

12. B. Quarles, J. J. Lissauer, and N. Kaib. Long-Term Stability of Planets in the α Centauri System, II: Forced Eccentricities. *AJ*, February 2018. NASA ADS: 2018AJ....155...64Q

13. B. Quarles, E. Quintana, E. Lopez, J. Schlieder, and T. Barclay. Plausible Compositions of the Seven TRAPPIST-1 Planets Using Long-term Dynamical Simulations. *ApJL*, June 2017. NASA ADS: 2017ApJ...842L...5Q

14. J. Barnes, B. Quarles, J. J. Lissauer, J. E. Chambers, and M. Hedman. Obliquity Variations of an Early Venus. *Astrobiology*, July 2016. NASA ADS: 2016AsBio..16..487B

15. V. Kostov, W. F. Welsh, J. A. Orosz, L. R. Doyle, et al. including B. Quarles. KOI-2939b: the largest and longest-period Kepler transiting circumbinary planet *ApJ*, August 2016. NASA ADS: 2016ApJ...827...86K.

16. B. Quarles and J. J. Lissauer. Long Term Stability of planets in the α Centauri system. *AJ*, 2016, NASA ADS: 2016AJ....151..111Q.

17. J. Coughlin, F. Mullally, S. Thompson, J. F. Rowe, et al. including B. Quarles. Planetary Candidates Observed By *Kepler*: VII. The First Fully Automated Catalog Based on the Entire 48 Month *Kepler* Dataset (Q1-Q17 DR24). *ApJS*, May 2016. NASA ADS: 2016ApJS..224...12C.

18. B. Kirk, K. Conroy, A. Prša, M. Abdul-Masih, et al. including B. Quarles. Kepler Eclipsing Binary Stars. VII. The Catalog of Eclipsing Binaries Found in the Entire Kepler Data-Set. *AJ*, March 2016, NASA ADS: 2016AJ....151...68K.

19. W. F. Welsh, J. A. Orosz, D. R. Short, N. Haghighipour, et al. including B. Quarles. KIC 9632895 - The 10th Kepler Transiting Circumbinary Planet. *ApJ*, August 2015, NASA ADS: 2015ApJ...809...26W.

20. F. Mullally, J. L. Coughlin, S. E Thompson, J. Rowe, et al. including B. Quarles. Planetary Candidates Observed by *Kepler* VI: Planet Sample from Q1-16 (46 Months). *ApJS*, April 2015. NASA ADS: 2015ApJS..217...31M.

21. J. F., Rowe, J. L. Coughlin, V. Antoci, T. Barclay, et al. including B. Quarles. Planetary Candidates Observed by *Kepler*. V. The Q1-Q12 Planet Candidate Catalogue. *ApJS*, March 2015. NASA ADS: 2015ApJS..217...31M.

22. B. Quarles and J. J. Lissauer Dynamical Evolution of the Earth-Moon Progenitors – Whence Theia?. *Icarus*, March 2015 NASA ADS: 2015Icar..248..318Q.

23. K. E. Conroy, A. Prša, K. G. Stassun, S. Bloemen, et al. including B. Quarles. Kepler Eclipsing Binary Stars. V. Identification of 31 Eclipsing Binaries in the K2 Engineering Data-set. *PASP*, October 2014, NASA ADS: 2014PASP..126..914C.

24. S. Satyal, T. C. Hinse, B. Quarles, and J. P. Noyola. Chaotic dynamics of the planet in HD 196885 AB. *MNRAS*, September 2014. NASA ADS: 2014MNRAS.443.1310S

25. Z. E. Musielak and B. Quarles. The three-body problem. *Reports on Progress in Physics*, June 2014. NASA ADS: 2014RPPh...77f5901M

26. E. V. Quintana, T. Barclay, S. N. Raymond, J. F. Rowe, et al. including B. Quarles. An Earth-Sized Planet in the Habitable Zone of a Cool Star. *Science*, April 2014. NASA ADS: 2014Sci...344..277Q

27. S. Satyal, B. Quarles, and T. C. Hinse. Application of chaos indicators in the study of dynamics of S-type extrasolar planets in stellar binaries. $MNRAS$, August 2013, 1211.3956. NASA ADS: 2013MNRAS.433.2215S

28. M. Cuntz, B. Quarles, J. Eberle, and A. Shukayr. On the Possibility of Habitable Moons in the System of HD 23079: Results from Orbital Stability Studies. $PASA$, May 2013. NASA ADS: 2013PASA...30...33C

29. B. Quarles, Z. E. Musielak, and M. Cuntz. Study of resonances for the restricted 3-body problem. *Astronomische Nachrichten*, August 2012. NASA ADS: 2012AN....333..551Q

30. B. Quarles, Z. E. Musielak, and M. Cuntz. Habitability of Earth-mass Planets and Moons in the Kepler-16 System. *ApJ*, May 2012. NASA ADS: 2012ApJ...750...14Q

31. B. Quarles, M. Cuntz, and Z. E. Musielak. The stability of the suggested planet in the ν Octantis system: a numerical and statistical study. *MNRAS*, April 2012. NASA ADS: 2012MNRAS.421.2930Q

32. J. Eberle, M. Cuntz, B. Quarles, and Z. E. Musielak. Case studies of habitable Trojan planets in the system of HD 23079. *International Journal of Astrobiology*, October 2011. NASA ADS: 2011IJAsB..10..325E

33. B. Quarles, J. Eberle, Z. E. Musielak, and M. Cuntz The instability transition for the restricted 3-body problem. *A&A*, September 2011. NASA ADS: 2011A%26A...533A...2Q

Publications Under Review (3)

1. V. Kostov, J. Orosz, A. Feinstein, W. Welsh, et al. including B. Quarles. TOI-1338: TESS' First Transiting Circumbinary Planet. *ApJ*.

2. V. Kostov, W. Welsh, N. Haghighpour, E. Agol, et al. including B. Quarles. Multiple Transits during a Single Conjunction: Identifying Transiting Circumbinary Planetary Candidates from TESS. *ApJ*.

3. S. Kreyche, J. Barnes, B. Quarles, J. J. Lissauer, J. Chambers, and M. Hedman. Orbital eccentricity influences the obliquity stability of retrograde-rotating planets. *Planetary Science Journal*.

References

Georgia Tech Supervisor
Gongjie Li,
School of Physics
837 State Street
Atlanta, GA 30332
gongjie.li@phyiscs.gatech.edu,
(404) 385-7606

OU Postdoctoral Advisor
Nathan Kaib,
Department of Physics & Astronomy
440 W. Brooks St.
Norman, OK 73019
nathan.kaib@ou.edu,
(405) 325-7064

NASA Postdoctoral Advisor
Jack J. Lissauer,
Astrobiology and Space Sciences Division MS 245-3
Moffett Field, CA 94035
jack.lissauer@nasa.gov,
(650) 604-2293

Research Colleague
Jason Barnes,
Department of Physics
875 Perimeter Drive, MS 0903
Moscow, ID 83844-0903
jwbarnes@uidaho.edu,
(208) 991-4592

PhD Thesis Advisor
Zdzislaw Musielak,
Department of Physics
502 Yates St., Science Hall Rm 108 Box 19059
Arlington, TX 76019
zmusielak@uta.edu,
(817) 272-2513