# Megan E. Schwamb

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## **Education**:

Ph.D.,	Planetary	Science -	California	Institute of	Technology	June 2	2011	l
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Thesis: 'Beyond Sedna: Probing the Distant Solar System'

Advisor: Michael E. Brown

M.S., Astrophysics - California Institute of Technology

June 2008

B.A., Physics - University of Pennsylvania May 2006

Summa Cum Laude with Distinction in Physics

# **Employment & Positions Held:**

Lecturer, Queen's University Belfast	2019 - present
Assistant Scientist, Gemini Observatory, Northern Operations Center	2016-2019
Postdoctoral Fellow, Institute of Astronomy & Astrophysics, Academia Sinica	2013-2016
Postdoctoral Fellow, Yale University	2010-2013
Graduate Teaching Assistant, California Institute of Technology	2009
Graduate Research Assistant, California Institute of Technology	2006-2010

#### **Awards & Honors:**

AURA Science Award	2019
Carl Sagan Medal for Excellence in Public Communication in Planetary	2017
Science (American Astronomical Society, Division for Planetary Sciences)	
WIRED Innovation Fellowship	2015
Academia Sinica Postdoctoral Fellowship	2013-2015
Kavli Fellow, Kavli Frontiers of Science Japanese-American Symposium	2012
NSF Astronomy and Astrophysics Postdoctoral Fellowship	2010-2013
NASA Earth and Space Sciences Fellowship	2009
Reed Fellowship, California Institute of Technology	2006
Barry M. Goldwater Scholarship	2005
University Scholar Honors, University of Pennsylvania	2002-2006

# **Observing Experience:**

70+ nights observing experience with both small (24-inch, 48-inch, and 60-inch) telescopes and large meter class telescopes, including 3.4-m NTT, 3.5-m WIYN, Hale 5-m, 8-m Subaru, 8-m Gemini North, 10-m Keck, 10-m Caltech Submillimeter Observatory, and 15-m James Clerk Maxwell Telescope. Fully trained in performing queue observing for the Gemini North Telescope.

## **Professional Activities:**

Rubin Observatory Survey Cadence Optimization Committee (SCOC)	2020-present
Mikulski Archive for Space Telescopes (MAST) User Group Member	2020-present
LSST:UK Solar System Science Point of Contact	2020-present
LSST:UK Affiliate PI	2020-present
LSST:UK Board Member (Queen's University Belfast Representative)	2019-present
Comet Interceptor (ESA F-Class mission) Science Team Member and Target Selection Team Member	2019-present
Rubin Observatory International in-kind Contribution Evaluation Committee	2020-2021
Rubin Observatory Science Advisory Committee Member	2018-present
Gemini Observatory Time Domain Advisory Committee Member	2018-2021
Rubin Observatory Legacy Survey of Space and Time (LSST) Solar System Science Collaboration (SSSC) Co-Chair – the SSSC is one of the eight active LSST Science Collaborations	2017-present
AAS World Wide Telescope Steering Committee Member	2017-2019
Gemini Observatory GNIRS (Near InfraRed Spectrograph) instrument team member	2017-2019
Gemini Observatory NIRI (Near InfraRed Imager and spectrograph) instrument scientist and instrument team lead	2017-2019
Outer Solar System Origins Survey (OSSOS) Light curves Working Group Team Lead	2016-2017
Member of the LSST Solar System Science Collaboration	2016-presen
AAS World Wide Telescope Advisory Board Member	2016-2017
Comet Hunters Project Scientist	2015-present
Comet Hunters Science Team Member	2015-present
Col-OSSOS (Colours of the Outer Solar System Origins Survey) Optical Team Manager	2015-present
Member of the Zooniverse collaboration – the Zooniverse builds and hosts the largest collection of online citizen science projects	2014-present
Member of the Colours of the Outer Solar System Origins Survey (Col-OSSOS) collaboration	2014-present
Collaboration member of the Outer Solar System Origins Survey (OSSOS) (member of Surfaces and Light Curves working groups)	2014-present

Planet Four Project Science Team Member	2013-present
Member of Various Time Allocation Committees including Las Cumbres Observatory Global Telescope (LCOGT), NASA Keck Timeshare, Taiwan Canada-France Hawaii Allocation, and Yale University	2011-2018
Planet Hunters Project Scientist	2011-2015
Planet Hunters Science Team Member	2010-2015
Member of the La Silla-QUEST Kuiper belt Survey	2010-2013
Co-organizer of various Seminar/Colloquia/Discussion series for Caltech Planetary Science Department, Yale Center for Astronomy & Astrophysics, ASIAA colloquium committee, Gemini North Science Coffee, and Gemini North Operations Tea	2009-2019
Member of the Palomar Distant Solar System Survey	2006-2009

#### **Research Interests:**

- Probing the Solar System's Small Body Populations in particular focusing on the Kuiper belt and Inner Oort Cloud
- Utilizing crowdsourcing/citizen science to tackle big data challenges in planetary astronomy
- Studying the seasonal winds and atmosphere/surface interactions of Mars' South Pole

## **Selected Recent Outreach Activities:**

2016-2019: Organizing Gemini Observatory blog series (http://www.gemini.edu/blog/): Get to Know Gemini, a monthly blog series to highlight the different types of jobs and people behind Gemini observatory, and Gemini's 12 Days of Solstice Advent Calendar.

Frequent contributor to the blogs, for the Planet Four projects (<a href="http://blog.planetfour.org/">http://blog.planetfour.org/</a>) previously for the Planet Hunters (<a href="http://blog.planethunters.org/">http://blog.planethunters.org/</a>) and Comet Hunters (<a href="http://www.comethunters.org/">http://blog.planethunters.org/</a>) projects, communicating to the public the progress and science resulting from these citizen projects.

Co-Founder of Astronomy On Tap (<a href="http://www.astronomyontap.org">http://www.astronomyontap.org</a>) public astronomy lecture series consisting of short talks by astronomers and planetary scientists held in local bars. Branches of this series now exist including: New York City, Washington DC, Columbus, Chicago, Seattle, Lansing, Rochester, and Austin, USA; Toronto, Canada;

Co-founder and co-curator (from 2014-2019) of the curated twitter account Astrotweeps (<a href="www.astrotweeps.org">www.astrotweeps.org</a>), launched in January 2014, where each week a different astronomer or planetary scientist takes hosts the account engaging with over 7600+ followers.

Coordinated the ASIAA Education and Public Outreach Office effort to translate eight astronomy-based Zooniverse citizen science projects to traditional character Chinese.

## **Relevant Formal Training:**

January 2018: Attended Introducing Current Research Into Your Classroom with Astrobites Workshop focusing on best practices utilizing science journal papers and Astrobites summaries

in classroom.

January 2017: Attended New Methods for Teaching about Exoplanets Workshop, a one-day workshop focusing on best practices in implementing active learning strategies to the topic of exoplanets in the undergraduate classroom

January 3-4 2016: Attended Center for Astronomy Education's Tier I Teaching Excellence Workshop focusing on best practices in implementing active learning strategies.

## **Selected Recent Teaching Experience/Student Mentoring:**

2019-present: Taught first half of PHY2003 Astrophysics I (Introduction to modern astrophysics for undergraduate physics majors) - The purpose is to introduce students to the breadth of current astrophysical knowledge, and to become familiar with the range of bodies and environments observed in our Universe. As our understanding is based on current physics, many subjects will be studied in a quantitative manner, including the derivation of relevant formulae and the calculation of astrophysical parameters.

2019-present: Level 3 Research Projects – serving as primary and secondary supervisor for Year 3 undergraduate students research projects. These involve an open-ended experimental or computational investigation of a specific area of physics and astronomy providing hands-on data analysis and computation experience for undergraduate physics majors.

September 2016- March 2017: Co-supervised undergraduate PIO (Public Information and Outreach) intern to develop Gemini blog series about Gemini's Large and Long Program (observing projects allocated multi-semester nights of observing time) and the Gemini PIO 12 Days of Solstice Advent Calendar.

Students Mentored: Laura Buchanan (expected graduation 2023), Matthew Dobson (expected graduation 2024)

## **Selected Recent Organized Conferences & Workshops:**

Irish National Astronomy Meeting (Science/Local Organizing Committee)	2021
LSST:UK All Hands Meeting (Science Organizing Committee)	2021
LSST and the Solar System workshops at the American Astronomical Society's Division for Planetary Sciences Meeting (Co-organizer)	2017-2018
LSST Solar System Readiness Sprints (Co-organizer)	2018-present
Hack Day/Hack Together Day at the winter American Astronomical Society Meeting (Co-Founder & Co-organizer)	2013-2018
2015 East Asian Young Astronomer Meeting (Science Organizing Committee Member)	February 2015

#### **Selected Recent Invited Talks:**

University Edinburgh Astronomy Seminar, Virtual – April 13, 2021

University Edinburgh Astronomy Seminar, Virtual - April 8, 2020

Hot-wiring the Transient Universe VI Meeting Invited Remote Speaker, Evanston, IL, USA, August 20, 2019

Building the NASA Citizen Science Community Invited Speaker, Tucson, AZ, USA, June 20, 2019

Astroinformatics and Astrostatistics in the Age of Big Data Splinter Session at Winter AAS meeting, invited panelist, Seattle Washington - January 7, 2019

DECam Community Science Workshop 2018 Invited Speaker, Tucson, AZ, USA – May 22, 2018

University of Auckland Astronomy Seminar, Auckland, New Zealand - October 9, 2017

Canada-France-Hawaii Telescope Seminar, Waimea, Hawaii, USA - July 24,2017

Earth & Life Science Institute Colloquium, Tokyo Institute of Technology, Japan – June 30, 2017

Invited Talk at the Small Bodies Session at AGU Meeting, San Francisco, USA - Dec 15, 2016

Our Red Planet Workshop Invited Speaker, NASA HQ/NASA Goddard – September 20, 2016

## **Selected Recent Funding & Grants Awarded:**

UKRI STFC Astronomy Consolidated Grant, 'New Applicant Scheme Consolidated Grant Application in Solar System Studies- Towards the Solar System's Edge: Exploring the Inner Oort Cloud', 2021-2023, £225,556

Large Synoptic Survey Telescope Corporation 2020 Enabling Science Grant, 'Preparing for LSST Solar System Follow-up,' 2020, **\$8000.0** 

Planetary Society Grant Supporting the 2nd Solar System Science Collaboration Science Readiness Sprint, 2019, **\$1000.0** 

AURA Funding Supporting LSST Solar System Science Collaboration Activities, 2018, **\$3000.0** Large Synoptic Survey Telescope Corporation 2018 Enabling Science Grant, 'The 1st Solar System Science Collaboration Science Readiness Sprint', 2018, **\$23,149.50** 

#### **Publications:**

## Peer Reviewed Publications

- W.C. Fraser, S. D. Benecchi, J. J. Kavelaars, M. Marsset, R. Pike, M. T. Bannister, M. E. Schwamb, K. Volk, D. Nesvorný, M. Alexandersen, Y-T, Chen, S. Gwyn, M. J. Lehner, & S-Y Wang, 2021, Col-OSSOS: The Distinct Colour Distribution of Single and Binary Cold Classical KBOs, PSJ, in press, arXiv:2104.00028
- 2. N. L Eisner, O. Barragán, C. Lintott, S. Aigrain, B. Nicholson, T. S. Boyajian, S. Howell, C. Johnston B. Lakeland, G. Miller, A. McMaster, H. Parviainen, E. J. Safron, **M.E. Schwamb**, L. Trouille, S. Vaughan, N. Zicher, C. Allen, S. Allen, M. Bouslog, C. Johnson, M. N.

- Simon, Z. Wolfenbarger, E. M. L. Baeten, D. M. Bundy, T. Hoffman, 2021, Planet Hunters TESS II: findings from the first two years of TESS, MNRAS, 501, 4
- 3. G. Fedorets, M. Micheli, R. Jedicke, S. P. Naidu, Shantanu, D. Farnocchia, M. Granvik, N. Moskovitz, **M. E. Schwamb**, R. Weryk, K. Wierzchoś, E. Christensen, T. Pruyne, W. F. Bottke, Q. Ye, R. Wainscoat, M. Devogèle, L. E. Buchanan, A. A. Djupvik, D. M. Faes, D. R. Föhring, J. Roediger, T. Seccull, & A. B. Smith, 2020, *Establishing Earth's Minimoon Population through Characterization of Asteroid 2020 CD3*, AJ, 160, 277
- D. Nesvorný, D. Vokrouhlický, M. Alexandersen, M. T. Bannistea L. E. Buchanan, Y-T Chen, B. J. Gladman, S. D. J. Gwyn, J. J. Kavelaars, J-M Petit, M. E. Schwamb, & K. Volk, 2020, OSSOS XX: The Meaning of Kuiper Belt Colors, AJ, 160, 46
- 5. M. Marsset, W. C. Fraser, M. T. Bannister, **M. E. Schwamb**, R. E. Pike, Susan Benecchi, J. J. Kavelaars, M. Alexandersen, Y.-T. Chen, B. J. Gladman, S. D. J. Gwyn, J.-M. Petit & Kathryn Volk, 2020, *Col-OSSOS: Compositional Homogeneity of Three Kuiper Belt Binaries*, PSJ, 1, 1
- N. L. Eisner, O. Barragan,S. Aigrain,C. Lintott, G. Miller, N. Zicher, T. S. Boyajian, C. Briceno, E. M. Bryant, J. L. Christiansen, A. D. Feinstein, L. M. Flor-Torres, M. Fridlund, D. Gandolfi, J. Gilbert,N. Guerrero, J. M. Jenkins, K. Jones, M. H. Kristiansen, A. Vanderburg, N. Law, A. R. Lopez-Sanchez, A. W. Mann, E. J. Safron, M. E. Schwamb, K. G. Stassun, H. P. Osborn, J. Wang, A. Zic, C. Ziegler, F. Barnet, S. J. Bean, D. M. Bundy, Z. Chetnik, J. L. Dawson, J. Garstone, A. G. Stenner, M. Huten, S. Larish, L. D. Melanson, T. Mitchell, C. Moore, K. Peltsch, D. J. Rogers, C. Schuster, D. S. Smith, D. J. Simister, C. Tanner, I. Terentev & A. Tsymbal, 2020, *Planet Hunters TESS I: TOI 813, a subgiant hosting*, MNRAS, 494, 1
- 7. C. Kiss, G. Marton, A. H. Parker, W. Grundy, A. Farkas-Takács, J. Stansberry, A. Pála, T. Müller, K. S. Noll, **M. E. Schwamb**, A. C. Barr, L. A. Young, & J. Vinkó, 2019, *The mass and density of the dwarf planet (225088) 2007 OR10*, Icarus, 334
- 8. M. Alexandersen, S. D. Benecchi, Y-T Chen, M. R. Eduardo, A. Thirouin, **M. E. Schwamb**, M. J. Lehner, S-Y. Wang, M. T. Bannister, B. J. Gladman, S. D. J. Gwyn, J. J. Kavelaars, J.-M. Petit, & K. Volk, 2019, OSSOS XII: Variability studies of Trans-Neptunian Objects using the Hyper-Suprime Camera, AJ, 244, 19
- 9. **M. E. Schwamb**, W. C. Fraser, Michele T. Bannister, M. Marsset, R. E. Pike, J. J. Kavelaars, S. D. Benecchi, M. J. Lehner, S.-Y. Wang, A. Thirouin, A. Delsanti, N. Peixinho, K. Volk, M. Alexandersen, Y.-T. Chen, B. Gladman, S. D. J. Gwyn, and J.-M. Petit, 2019, *Col-OSSOS: The Colours of the Outer Solar System Origins Survey*, ApJS, 243, 12
- M. Marsset, W. C. Fraser, R. E Pike, M. T. Bannister, M. E. Schwamb, K. Volk, J. J. Kavelaars, M. Alexandersen, Y.-T Chen, B. J. Gladman, S. D. J. Gwyn, & J.-M. Petit, 2019, Col-OSSOS: Color and Inclination Are Correlated throughout the Kuiper Belt, ApJ, 2019, 157, 3
- 11. K.-M Aye, **M. E. Schwamb**, G. Portyankina, C. J. Hansen, A. McMaster, G. R.M. Miller, B. Carstensen, C. Snyder, M. Parrish, Stuart Lynn, C. Mai, David Miller, R. J. Simpson, & A. M. Smith, 2019, *Planet Four: Probing Springtime Winds on Mars by Mapping the Southern Polar CO2 Jet Deposits*, Icarus, 319

- 12. S. D. Benecchi, C.M. Lisse, E.L. Ryan, R. P. Binzel, **M. E. Schwamb**, L. A. Young, & A. J. Verbiscier, 2018, *K2 Lightcurve: Twelves Days on Pluto-Charon*, Icarus, 314
- 13. **M. E. Schwamb**, K.-M. Aye, G. Portyankina, C. J. Hansen, C. Allen, S. Allen, F. J. Calef III, S. Duca, A. McMaster, G. R. M. Miller, 2018, *Planet Four: Terrains Discovery of Araneiforms Outside of the South Polar Layered Deposits*, Icarus, 308
- 14. M. T. Bannister, B. J. Gladman, J.J. Kavelaars, J.-M. Petit, K. Volk, Y.-T. Chen, M. Alexandersen, S. D. J. Gywn, M. E. Schwamb, S. Benecchi, N. Cabral, R. Dawson, A. Delsanti, W. C. Fraser, M. Granvik, S. Greenstreet, A. Guilbert-Lepoutre, W.-H. Ip, M. Jakubik, R. L. Jones, N. Kaib, P. Lacerda, C. Van Laerhoven, S. Lawler, M. J. Lehner, H. W. Lin, P. S. Lykawka, M. Marsset, R. Murray-Clay, R. E. Pike, P. Rousselot, C. Shankman, A. Thirouin, P. Vernazza, S.-Y. Wang, 2018, OSSOS: 800+ trans-Neptunian objects --- the complete data release, AJ, 236, 18
- M. T. Bannister, M. E. Schwamb, W. C. Fraser, M. Marsset, A. Fitzsimmons, S. D. Benecchi, P. Lacerda, R. E. Pike, J.J. Kavelaars, A. B. Smith, S. O. Stewart, S.-Y. Wang, M. J. Lehner, 2017, Col-OSSOS: Colors of the Interstellar Planetesimal 1I/ Oumuamua, ApJL, 851, L38
- R. E. Pike, W. C. Fraser, M. E. Schwamb, J. J. Kavelaars, M. Marsset, M. T. Bannister, M. J. Lehner, S.-Y. Wang, B. Gladman, J.-M. Petit, S. Gwyn, Y.-T. Chen, M. Alexandersen, & K. Volk, 2017, Col-OSSOS: Z Band Photometry Reveals Three Distinct TNO Surface Types, AJ, 154, 101
- 17. M. T. Bannister, C. Shankman, K. Volk, Y.-T. Chen, N. Kaib, B. J. Gladman, M. Jakubik, J.J. Kavelaars, W.C Fraser, **M.E. Schwamb**, J.-M. Petit, S.-Y. Wang, S. D. J. Gwyn, M. Alexandersen, & R. E. Pike, 2017, OSSOS: V. Diffusion in the orbit of a high-perihelion distant Solar System object, AJ, 153,262
- 18. W. C. Fraser, M T. Bannister, R. E. Pike, M. Marsset, **M. E. Schwamb**, J. J. Kavelaars, P. Lacerda, D. Nesvorný, K. Volk, A. Delsanti, S. Benecchi, M. J. Lehner, K. Noll, B. Gladman, J.-M. Petit, S. Gwyn, Y.-T. Chen, S.-Y.Wang, M. Alexandersen, T. Burdullis, S. Sheppard & Chad Trujillo, 2017, *All planetesimals born near the Kuiper belt formed as binaries*, Nature Astronomy, 1, 88
- M.T. Bannister, M. Alexandersen, S. D. Benecchi, Y.-T. Chen, A. Delsanti, W. C. Fraser, B. J. Gladman, M. Granvik, W. M. Grundy, A. Guilbert-Lepoutre, S. D. J. Gwyn, W.-H. Ip, M. Jakubik, R. L. Jones, N. Kaib, J. J. Kavelaars, P. Lacerda, S. Lawler, M. J. Lehner, H. W. Lin, P. S. Lykawka, M. Marsset, R. Murray-Clay, K. S. Noll, A. Parker, J.-M. Petit, R. E. Pike, P. Rousselot, M. E. Schwamb, C. Shankman, P. Veres, P. Vernazza, K. Volk, S.-Y. Wang, & R. Weryk, 2016, OSSOS: IV. Discovery of a dwarf planet candidate in the 9:2 resonance with Neptune, AJ 152, 212
- 20. M. T. Bannister, J. J. Kavelaars, J.-M. Petit, B. Gladman, S. Gwyn, Y.-T. Chen, K. Volk, M. Alexandersen, S. Benecchi, F. Bianco, A. Delsanti, W. C. Fraser M. Granvik, W. Grundy, A. Guilb-Lepoutre, A. Gulbis, D. Hestroer, W. Ip, M. Jakubik, L. Jones, N. Kaib, P. Lacerda, S. Lawler, M. Lehner, E. Lin, T. Lister, P. Lykawka, S. Monty, M. Marsset, R. Murray-Clay, K. Noll, A. H. Parker, R. Pike, P. Rousselot, D. Rusk, **M. E. Schwamb**, C. Shankman, B.

- Sicardy, P. Vernazza, & S-Y. Wang, 2016, *The Outer Solar System Origins Survey: Design and First-quarter Discoveries*, AJ, 152, 70B
- 21. A. C. Barr & M. E. Schwamb, 2016, Interpreting the Densities of the Kuiper Belt's Dwarf Planets, MNRAS, 460,1542
- 22. W. C. Fraser, M. Alexandersen, **M. E. Schwamb**, M. Marsset, R. E. Pike, J. J. Kavelaars, M. T. Bannister, S. Benecchi, & A. Delsanti, 2016, *TRIPPy: Trailed Image Photometry in Python*, AJ, 151, 158
- 23. J. R. Schmitt, A. Tokovinin, J. Wang, D. A. Fischer, M. H. Kristiansen, D. M. LaCourse, R.t Gagliano, A. J. V. Tan, H. M. Schwengeler, M. R. Omohundro, A. Venner, I. Terentev, A. R. Schmitt, T. L. Jacobs, T. Winarski, J. Sejpka, K. J. Jek, T. S. Boyajian, J. M. Brewer, S. T. Ishikawa, C. Lintott, S. Lynn, K. Schawinski, M. E. Schwamb, & A. Weiksnar, 2016, *Planet Hunters X: Searching for Nearby Neighbors of 75 Planet and Eclipsing Binary Candidates from the K2 Kepler extended mission*, AJ, 151, 159
- 24. M. Kimura, K. Isogai, T. Kato, Y. Ueda, S. Nakahira, M. Shidatsu, T. Enoto, T. Hori, D. Nogami, C. Littlefield, R. Ishioka, Y.-T. Chen, S.-K. King, C.-Y. Wen, S.-Y. Wang, M. J. Lehner, M. E. Schwamb, J.-H. Wang, Z.-W Zhang, C. Alcock, T. Axelrod, F. B. Bianco, Y.-I. B, W.-P. Chen, K. H. Cook, D.-W. Kim, T. Lee, S. L. Marshall, E. P. Pavlenko, & et al., 2015, Repetitive patterns in rapid optical variations in the nearby black-hole binary V404 Cygni, Nature, 529, 54
- 25. R. Brasser & M. E. Schwamb, 2015, Reassessing the Formation of the Inner Oort cloud in an Embedded Star Cluster II: Probing the Inner Edge, MNRAS, 446, 3788
- 26. J. R. Schmitt, E. Agol, K. M. Deck, L. A. Rogers, J. Z. Gazak, D. A. Fischer, J. Wang, M. J. Holman, K. J. Jek, C. Margossian, M. R. Omohundro, T. Winarski, J. M. Brewer, M. J. Giguere, C. Lintott, S. Lynn, M. Parrish, K. Schawinski, M. E. Schwamb, R. Simpson, & A. M. Smith, 2014, Planet Hunters VII. Discovery of a New Low-Mass, Low-Density Planet (PH3 c) Orbiting Kepler-289 with Mass Measurements of Two Additional Planets (PH3 b and d), ApJ, 795, 167
- 27. J. R. Schmitt, J. Wang, D. A. Fischer, K. J. Jek, J. C. Moriarty, T. S. Boyajian, **M. E. Schwamb**, C. Lintott, A M. Smith, M. Parrish, K. Schawinski, S. Lynn, R. Simpson, M. Omohundro, T. Winarski, S. J. Goodman, T. Jebson, & D. Lacourse, 2014, *Planet Hunters VI: An Independent Characterization of KOI-351 and Several Long Period Planet Candidates from the Kepler Archival Data, AJ, 148, 28*
- 28. **M. E. Schwamb**, M. E. Brown, & W. C. Fraser, 2014, *The Small Number of Large Kuiper belt objects*, AJ, 147, 2
- 29. A. Mao, E. Kamar, Y. Chen, E. Horvitz, **M. E. Schwamb**, C.J. Lintott, & A. M. Smith, 2013, *Volunteering vs. Work for Pay: Incfentives and Tradeoffs in Crowdsourcing*, Proceedings of the First Association for the Advancement of Artificial Intelligence Conference on Human Computation (HCOMP 2013)
- 30. J. Wang, D. A. Fischer, T. Barclay, T. S. Boyajian, J.R. Crepp, **M. E. Schwamb**, C. Lintott, K.J. Jek, A. M. Smith, M. Parrish, Michael, K. Schawinski, J. R. Schmitt, M.J. Giguere, J.M. Brewer, S. Lynn, Stuart; R. Simpson, A. J. Hoekstra, T. L. Jacobs, D. LaCourse, H.M.

- Schwengeler, M.Chopin, Mike, & R. Herszkowicz, 2013, *Planet Hunters V: A Confirmed Jupiter-Size Planet in the Habitable Zone and 42 Planet Candidates from the Kepler Archive Data*, ApJ, 776,10
- 31. D. Rabinowitz, **M. E. Schwamb**, E. Hadjiyska, S. Tourtellotte, & P. Rojo 2013, *The Peculiar Photometric Properties of 2010 WG9: A Slowly Rotating Trans-Neptunian Object from the Oort Cloud*, AJ, 146, 17
- 32. C. J. Lintott, **M. E. Schwamb**, T. Barclay, C. Sharzer, D.A. Fischer, J. Brewer, M. Giguere, M., S. Lynn, M. Parrish, N. Batalha, S. Bryson, J. Jenkins, D. Ragozzine, J. F. Rowe, K. Schawinski, R. Gagliano, J. Gilardi, K. J. Jek, J.-P Pääkkönen, & T. Smits, 2013, *Planet Hunters: New Kepler planet candidates from analysis of quarter 2*, AJ, 145 151
- 33. **M. E. Schwamb,** J. A. Orosz, J. A. Carter, W.F. Welsh, D. A. Fischer, G. Torres, A. W. Howard, J. R. Crepp, W. C. Keel, C. J. Lintott, N. A. Kaib, D. Terrell, R. Gagliano, K. J. Jek, M. Parrish, A. M. Smith, S. Lynn, R. J. Simpson, M. J. Giguere & K. Schawinski, 2013, *Planet Hunters: A Circumbinary Planet in a Quadruple Star System*, ApJ 768, 127
- 34. D. Rabinowitz, **M. E. Schwamb**, E. Hadjiyska, & S. Tourtellotte, 2012, *The La Silla QUEST Kuiper Belt Survey*, AJ, 144, 140
- 35. **M. E. Schwamb**, C.J. Lintott, D.A. Fischer, M. J. Giguere, S. Lynn, A. M. Smith, J, M. Brewer, M. Parrish, K. Schawinski, & R. J. Simpson, 2012. *Planet Hunters: Assessing the Kepler Inventory of Short Period Planets*, ApJ, 754, 129
- 36. R. Brasser, **M. E. Schwamb**, P. S. Lykawka, & R. Gomes, 2012, *An Oort cloud origin for the high-inclination, high-perihelion Centaurs*, MNRAS, 420, 3396
- 37. D. A. Fischer, **M. E. Schwamb**, K. Schawinski, C. Lintott, J. Brewer, M. Giguere, S. Lynn, M. Parrish, T. Sartori, R. Simpson, A. Smith, J. Spronck, N. Batalha, J. Rowe, J. Jenkins, S. Bryson, A. Prsa, P. Tenenbaum, J. Crepp, T. Morton, A. Howard, M. Beleu, Z. Kaplan, N. Vannispen, C. Sharzer, J. Defouw, A. Hajduk, J. P. Neal, A. Nemec, N. Schuepbach, & V. Zimmermann, 2012, *The First Two Planet Candidates Identified by the Public using the Kepler Public Archive Data*, MNRAS, 419, 2900
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