

Shea Garrison-Kimmel

POSTDOCTORAL SCHOLAR IN NUMERICAL ASTROPHYSICS

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Professional Appointments

Caltech

POSTDOCTORAL SCHOLAR

Pasadena, CA

Aug. 2018 - present

Caltech

EINSTEIN POSTDOCTORAL FELLOW

Pasadena, CA

Aug 2015 - Aug 2018

Education

University of California, Irvine

PH.D. & M.S. IN PHYSICS & ASTRONOMY

Irvine, CA

Awarded Jun. 2015

Haverford College

B.S. IN ASTRONOMY & PHYSICS (WITH A CONCENTRATION IN COMPUTER SCIENCE)

Haverford, PA

Awarded May 2009

Fellowships and Awards

FUNDING

- 2015 **Einstein Postdoctoral Fellowship**, NASA
- 2015 **Chancellor's Club Dissertation Fellowship**, University of California, Irvine
- 2014 **Price Prize for Outstanding Graduate Students**, the Ohio State University
- 2009 **Chancellor's Club Recruitment Fellowship**, University of California, Irvine
- 2009 **Summer Research Fellowship**, University of California, Irvine

COMPUTING TIME (PI-ED AWARDS)

- 2017 **Simulating the Dark Matter distribution in the Local Group**, 30 million CPU hours at LANL HPC
- 2017 **Galaxy Formation in the Local Group (Augmentation)**, 15 million CPU hours at NASA NAS
- 2017 **Galaxy Formation in the Local Group with State of the Art Hydrodynamics**, XSEDE startup at TACC & PSC
- 2016 **The Local Group: Galaxy Formation in the Nearby Universe**, 18 million CPU hours at NASA NAS

Research Interests

Galaxy formation, theoretical cosmology, and numerical simulations, including:

- Placing the Milky Way in its proper cosmological context as a member of the Local Group
- Numerical simulations of structure formation on both large and small scales
- Constraining the behavior of dark matter by comparing with local galactic properties
- The impact of environment on dwarf galaxy evolution
- The formation and evolution of the smallest galaxies in the universe
- Comparing theoretical predictions with observational data to constrain baryonic physics
- Using gravitational wave observations to probe galaxy formation and binary star evolution

Professional Service

- Created and organized inaugural GalFRESKA conference in summer 2016
- Co-organized second and third annual GalFRESKA conferences in summers of 2017 and 2018
- Two-time member of NASA Astrophysics Theory Program grant review panels
- Three-year member of the Caltech TAPIR Seminar Organizing Committee
- Member of the SOC for *Science in Our Own Backyard: Exploring the Galaxy and the Local Group with WFIRST*

Teaching and Mentoring

TEACHING EXPERIENCE

University of California, Irvine

TEACHING ASSISTANT

Irvine, CA
2009 - 2010 & 2014

- Discussion section instructor for Basic Physics III
- Discussion section instructor for Classical Physics II
- Laboratory instructor for Classical Physics II
- Laboratory instructor for Basic Physics III
- Laboratory instructor for Fundamentals of Experimental Physics
- Discussion section instructor and occasional lecturer for Introduction to Programming and Numerical Analysis

California State Summer School for Mathematics and Science (COSMOS)

TEACHING ASSISTANT

Irvine, CA
Jul. 2010, 2011, & 2012

Haverford College

PHYSICS CLINIC TUTOR

Haverford, PA
Feb. 2007 - May 2009

MENTORING AND ADVISING EXPERIENCE

- Mentored Jaspreet Lally, then a rising junior at University of California, Irvine, on how to run and analyze simulations of dwarf galaxies in isolation with a time varying potential to search for core formation, resulting in an authorship on Garrison-Kimmel et al., 2013. Jaspreet successfully graduated the following year.
- Mentored Kyle Lee, then a sophomore at Chapman University, on how to set up, simulate, and analyze cosmological simulations, resulting in an authorship on Garrison-Kimmel et al., 2014 and helping to secure his current position in a Ph.D. program at Stony Brook University.
- Mentored Emma Bardwell, then a rising sophomore at Case Western University, on a project exploring the relationship between halo mass and galaxy stellar mass, and the impact of scatter in that relation, resulting in an authorship on Garrison-Kimmel et al., 2016.
- Mentored Kris Burke, then a senior at University of California, Irvine, on simulating the cosmological evolution of galaxies with a central potential to explore the impact of the Milky Way disk on the substructure population with minimal CPU cost, resulting in an authorship on a paper in preparation. Kris has since continued into a M.Sc. program at Texas A&M.
- Aided Dr. Astrid Lamberts in mentoring the summer research of Kaliden Drango, then an entering undergraduate at Caltech who built the initial machinery for applying binary population synthesis models to the FIRE simulations to make gravitational wave predictions.
- Currently co-advising Ivanna Escala, a graduate student at Caltech, on a study comparing galactic evolution as inferred from one-zone chemical evolution models applied to simulated dwarf galaxies to the actual evolution of those dwarfs.

References

Philip F. Hopkins*

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James S. Bullock*

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Talks and Presentations

RECENT INVITED PRESENTATIONS

Apr. 2019	Astronomy on Tap – <i>What isn't dark matter?</i> , Der Wolfskopf	Pasadena, CA
Apr. 2019	SLAC Cosmology Seminar – <i>Dark matter and galaxy formation in the Local Group</i> , Stanford University	Palo Alto, CA
Jan. 2019	Lunch Talk – <i>Near-field cosmology with Local Group dwarf galaxies</i> , Carnegie Observatories	Pasadena, CA
Oct. 2018	TAP Colloquium – <i>Near-field cosmology with Local Group dwarf galaxies</i> , University of Arizona	Tucson, AZ
May 2018	Astro Lunch – <i>ELVIS on FIRE: tackling small-scale problems with baryonic physics</i> , UC Santa Barbara	Santa Barbara, CA
Mar. 2018	Astrophysics Distinguished Seminar Series – <i>Probing the Universe via the Local Group</i> , LANL	Los Alamos, NM
Mar. 2018	Physics Colloquium – <i>Probing the Universe via the Local Group</i> , Cal State LA	Los Angeles, CA
May 2017	The Galaxy-Halo Connection – <i>The depletion of dark matter subhalos by Milky Way-like galaxies</i> , KITP	Santa Barbara, CA

SELECTED CONTRIBUTED PRESENTATIONS

Sep. 2018	GalFRESKA 2018 – <i>Star formation histories of dwarf galaxies vary with mass and environment</i> , Caltech	Pasadena, CA
June 2018	BlueWaters Symposium – <i>Next-generation Galaxy Formation Simulations with FIRE</i> , NCSA	Sunriver, OR
June 2018	Swinburne-Caltech Workshop 3 – <i>Morphological drivers of Milky Way-mass galaxies</i> , Caltech	Sunriver, OR
Aug. 2018	UCSC Galaxy Workshop – <i>ELVIS on FIRE: tackling small-scale problems with baryonic physics</i> , UCSC	Santa Cruz, CA
Sep. 2016	The Milky Way and its environment – <i>Embedding galaxies in cosmological simulations</i> , IAP	Paris, France

First-author publications

PEER-REVIEWED PUBLICATIONS

- [1] *The Local Group on FIRE: Dwarf galaxy populations across a suite of hydrodynamic simulations*, **S. Garrison-Kimmel**, P. F. Hopkins, A. Wetzel, J. S. Bullock, M. Boylan-Kolchin, D. Keres, C.-A. Faucher-Giguere, K. El-Badry, A. Lamberts *et al.*. arXiv:1806.04143 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv180604143G>
- [2] *The origin of the diverse morphologies and kinematics of Milky Way-mass galaxies in the FIRE-2 simulations*, **S. Garrison-Kimmel**, P. F. Hopkins, A. Wetzel, K. El-Badry, R. E. Sanderson, J. S. Bullock, X. Ma, F. van de Voort, Z. Hafen *et al.*. *MNRAS* **481**, 4133–4157 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.481.4133G>
- [3] *Not so lumpy after all: modelling the depletion of dark matter subhaloes by Milky Way-like galaxies*, **S. Garrison-Kimmel**, A. Wetzel, J. S. Bullock, P. F. Hopkins, M. Boylan-Kolchin, C.-A. Faucher-Giguère, D. Kereš, E. Quataert, R. E. Sanderson *et al.*. *MNRAS* **471**, 1709–1727 (2017). <https://ui.adsabs.harvard.edu/abs/2017MNRAS.471.1709G>
- [4] *Organized chaos: scatter in the relation between stellar mass and halo mass in small galaxies*, **S. Garrison-Kimmel**, J. S. Bullock, M. Boylan-Kolchin, and E. Bardwell. *MNRAS* **464**, 3108–3120 (2017). <https://ui.adsabs.harvard.edu/abs/2017MNRAS.464.3108G>
- [5] *Running with BICEP2: implications for small-scale problems in CDM*, **S. Garrison-Kimmel**, S. Horiuchi, K. N. Abazajian, J. S. Bullock, and M. Kaplinghat. *MNRAS* **444**, 961–970 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.444..961G>
- [6] *Too big to fail in the Local Group*, **S. Garrison-Kimmel**, M. Boylan-Kolchin, J. S. Bullock, and E. N. Kirby. *MNRAS* **444**, 222–236 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.444..222G>
- [7] *ELVIS: Exploring the Local Volume in Simulations*, **S. Garrison-Kimmel**, M. Boylan-Kolchin, J. S. Bullock, and K. Lee. *MNRAS* **438**, 2578–2596 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.438.2578G>
- [8] *Can feedback solve the too-big-to-fail problem?*, **S. Garrison-Kimmel**, M. Rocha, M. Boylan-Kolchin, J. S. Bullock, and J. Lally. *MNRAS* **433**, 3539–3546 (2013). <https://ui.adsabs.harvard.edu/abs/2013MNRAS.433.3539G>

PAPERS UNDER REVIEW

- [1] *Star formation histories of dwarf galaxies in the FIRE simulations: dependence on mass and Local Group environment*, **S. Garrison-Kimmel**, A. Wetzel, P. F. Hopkins, R. Sanderson, K. El-Badry, A. Graus, T. Chan, R. Feldmann, M. Boylan-Kolchin *et al.*. arXiv:1903.10515 (2019). <https://ui.adsabs.harvard.edu/#abs/2019arXiv190310515G>

PEER-REVIEWED PUBLICATIONS

- [1] *The suppression of star formation on the smallest scales: what role does environment play?*, M. Rodriguez Wimberly, M. Cooper, S. Fillingham, M. Boylan-Kolchin, J. Bullock, and **S. Garrison-Kimmel**. *MNRAS* **483**, 4031–4039 (2019). <https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.4031R>
- [2] *Formation, vertex deviation, and age of the Milky Way’s bulge: input from a cosmological simulation with a late-forming bar*, V. P. Debattista, O. A. Gonzalez, R. E. Sanderson, K. El-Badry, **S. Garrison-Kimmel**, A. Wetzel, C.-A. Faucher-Giguère, and P. F. Hopkins. *MNRAS* **485**, 5073–5085 (2019). <https://ui.adsabs.harvard.edu/abs/2019MNRAS.485.5073D>
- [3] *Where are the most ancient stars in the Milky Way?*, K. El-Badry, J. Bland-Hawthorn, A. Wetzel, E. Quataert, D. R. Weisz, M. Boylan-Kolchin, P. F. Hopkins, C.-A. Faucher-Giguère, D. Kereš *et al.* *MNRAS* **480**, 652–668 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.480..652E>
- [4] *Warm FIRE: simulating galaxy formation with resonant sterile neutrino dark matter*, B. Bozek, A. Fitts, M. Boylan-Kolchin, **S. Garrison-Kimmel**, K. Abazajian, J. S. Bullock, D. Kereš, C.-A. Faucher-Giguère, A. Wetzel *et al.* *MNRAS* **483**, 4086–4099 (2019). <https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.4086B>
- [5] *Environmental quenching of low-mass field galaxies*, S. P. Fillingham, M. C. Cooper, M. Boylan-Kolchin, J. S. Bullock, **S. Garrison-Kimmel**, and C. Wheeler. *MNRAS* **477**, 4491–4498 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.477.4491F>
- [6] *Predicting the binary black hole population of the Milky Way with cosmological simulations*, A. Lamberts, **S. Garrison-Kimmel**, P. Hopkins, E. Quataert, J. Bullock, C.-A. Faucher-Giguère, A. Wetzel, D. Kereš, K. Drango *et al.* *MNRAS* **480**, 2704–2718 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.2704L>
- [7] *Reconciling Observed and Simulated Stellar Halo Masses*, R. E. Sanderson, **S. Garrison-Kimmel**, A. Wetzel, T. Keung Chan, P. F. Hopkins, D. Kereš, I. Escala, C.-A. Faucher-Giguère, and X. Ma. *ApJ* **869**, 12 (2018). <https://ui.adsabs.harvard.edu/abs/2018ApJ...869...12S>
- [8] *Modeling the Impact of Baryons on Subhalo Populations with Machine Learning*, E. O. Nadler, Y.-Y. Mao, R. H. Wechsler, **S. Garrison-Kimmel**, and A. Wetzel. *ApJ* **859**, 129 (2018). <https://ui.adsabs.harvard.edu/abs/2018ApJ...859...129N>
- [9] *The origin of ultra diffuse galaxies: stellar feedback and quenching*, T. Chan, D. Kereš, A. Wetzel, P. Hopkins, C.-A. Faucher-Giguère, K. El-Badry, **S. Garrison-Kimmel**, and M. Boylan-Kolchin. *MNRAS* **478**, 906–925 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.478..906C>
- [10] *Simulating galaxies in the reionization era with FIRE-2: morphologies and sizes*, X. Ma, P. F. Hopkins, M. Boylan-Kolchin, C.-A. Faucher-Giguère, E. Quataert, R. Feldmann, **S. Garrison-Kimmel**, C. C. Hayward, D. Kereš *et al.* *MNRAS* **477**, 219–229 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.477..219M>
- [11] *Simulating galaxies in the reionization era with FIRE-2: galaxy scaling relations, stellar mass functions, and luminosity functions*, X. Ma, P. F. Hopkins, **S. Garrison-Kimmel**, C.-A. Faucher-Giguère, E. Quataert, M. Boylan-Kolchin, C. C. Hayward, R. Feldmann, and D. Kereš. *MNRAS* **478**, 1694–1715 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.478.1694M>
- [12] *Gas kinematics, morphology and angular momentum in the FIRE simulations*, K. El-Badry, E. Quataert, A. Wetzel, P. F. Hopkins, D. R. Weisz, T. Chan, A. Fitts, M. Boylan-Kolchin, D. Kereš *et al.* *MNRAS* **473**, 1930–1955 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.473.1930E>
- [13] *Formation of globular cluster candidates in merging proto-galaxies at high redshift: a view from the FIRE cosmological simulations*, J.-h. Kim, X. Ma, M. Y. Grudić, P. F. Hopkins, C. C. Hayward, A. Wetzel, C.-A. Faucher-Giguère, D. Kereš, **S. Garrison-Kimmel** *et al.* *MNRAS* **474**, 4232–4244 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.474.4232K>

- [14] *FIRE-2 simulations: physics versus numerics in galaxy formation*, P. F. Hopkins, A. Wetzel, D. Kereš, C.-A. Faucher-Giguère, E. Quataert, M. Boylan-Kolchin, N. Murray, C. C. Hayward, **S. Garrison-Kimmel et al.** *MNRAS* **480**, 800–863 (2018). <https://ui.adsabs.harvard.edu/abs/2018MNRAS.480..800H>
- [15] *A Testable Conspiracy: Simulating Baryonic Effects on Self-interacting Dark Matter Halos*, O. D. Elbert, J. S. Bullock, M. Kaplinghat, **S. Garrison-Kimmel**, A. S. Graus, and M. Rocha. *ApJ* **853**, 109 (2018). <https://ui.adsabs.harvard.edu/abs/2018ApJ...853..109E>
- [16] *Under pressure: quenching star formation in low-mass satellite galaxies via stripping*, S. P. Fillingham, M. C. Cooper, A. B. Pace, M. Boylan-Kolchin, J. S. Bullock, **S. Garrison-Kimmel**, and C. Wheeler. *MNRAS* **463**, 1916–1928 (2016). <https://ui.adsabs.harvard.edu/abs/2016MNRAS.463.1916F>
- [17] *When and where did GW150914 form?*, A. Lamberts, **S. Garrison-Kimmel**, D. Clausen, and P. Hopkins. *MNRAS* **463**, L31–L35 (2016). <https://ui.adsabs.harvard.edu/abs/2016MNRAS.463L...31L>
- [18] *Properties of resonantly produced sterile neutrino dark matter subhaloes*, S. Horiuchi, B. Bozek, K. N. Abazajian, M. Boylan-Kolchin, J. S. Bullock, **S. Garrison-Kimmel**, and J. Onorbe. *MNRAS* **456**, 4346–4353 (2016). <https://ui.adsabs.harvard.edu/abs/2016MNRAS.456.4346H>
- [19] *Resonant sterile neutrino dark matter in the local and high- z Universe*, B. Bozek, M. Boylan-Kolchin, S. Horiuchi, **S. Garrison-Kimmel**, K. Abazajian, and J. S. Bullock. *MNRAS* **459**, 1489–1504 (2016). <https://ui.adsabs.harvard.edu/abs/2016MNRAS.459.1489B>
- [20] *Satellites of LMC-mass dwarfs: close friendships ruined by Milky Way mass haloes*, A. Deason, A. Wetzel, **S. Garrison-Kimmel**, and V. Belokurov. *MNRAS* **453**, 3568–3574 (2015). <https://ui.adsabs.harvard.edu/abs/2015MNRAS.453.3568D>
- [21] *Sweating the small stuff: simulating dwarf galaxies, ultra-faint dwarf galaxies, and their own tiny satellites*, C. Wheeler, J. Oñorbe, J. S. Bullock, M. Boylan-Kolchin, O. D. Elbert, **S. Garrison-Kimmel**, P. F. Hopkins, and D. Kereš. *MNRAS* **453**, 1305–1316 (2015). <https://ui.adsabs.harvard.edu/abs/2015MNRAS.453.1305W>
- [22] *Taking care of business in a flash: constraining the time-scale for low-mass satellite quenching with ELVIS*, S. P. Fillingham, M. C. Cooper, C. Wheeler, **S. Garrison-Kimmel**, M. Boylan-Kolchin, and J. S. Bullock. *MNRAS* **454**, 2039–2049 (2015). <https://ui.adsabs.harvard.edu/abs/2015MNRAS.454.2039F>
- [23] *Satellite Dwarf Galaxies in a Hierarchical Universe: Infall Histories, Group Preprocessing, and Reionization*, A. R. Wetzel, A. J. Deason, and **S. Garrison-Kimmel**. *ApJ* **807**, 49 (2015). <https://ui.adsabs.harvard.edu/abs/2015ApJ...807...49W>
- [24] *Core formation in dwarf haloes with self-interacting dark matter: no fine-tuning necessary*, O. D. Elbert, J. S. Bullock, **S. Garrison-Kimmel**, M. Rocha, J. Oñorbe, and A. H. Peter. *MNRAS* **453**, 29–37 (2015). <https://ui.adsabs.harvard.edu/abs/2015MNRAS.453...29E>
- [25] *Satellite Dwarf Galaxies in a Hierarchical Universe: The Prevalence of Dwarf-Dwarf Major Mergers*, A. Deason, A. Wetzel, and **S. Garrison-Kimmel**. *ApJ* **794**, 115 (2014). <https://ui.adsabs.harvard.edu/abs/2014ApJ...794..115D>
- [26] *Cosmological simulations of decaying dark matter: implications for small-scale structure of dark matter haloes*, M.-Y. Wang, A. H. Peter, L. E. Strigari, A. R. Zentner, B. Arant, **S. Garrison-Kimmel**, and M. Rocha. *MNRAS* **445**, 614–629 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.445..614W>
- [27] *Near-field limits on the role of faint galaxies in cosmic reionization.*, M. Boylan-Kolchin, J. Bullock, and **S. Garrison-Kimmel**. *MNRAS* **443**, L44–L48 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.443L...44B>
- [28] *The Stellar-to-halo Mass Relation for Local Group Galaxies*, C. Brook, A. Di Cintio, A. Knebe, S. Gottlöber, Y. Hoffman, G. Yepes, and **S. Garrison-Kimmel**. *ApJ* **784**, L14 (2014). <https://ui.adsabs.harvard.edu/abs/2014ApJ...784L...14B>
- [29] *Sterile neutrino dark matter bounds from galaxies of the Local Group*, S. Horiuchi, P. J. Humphrey, J. Oñorbe, K. N. Abazajian, M. Kaplinghat, and **S. Garrison-Kimmel**. *Phys. Rev. D* **89**, 025017 (2014). <https://ui.adsabs.harvard.edu/abs/2014PhRvD...89b5017H>

- [30] *How to zoom: bias, contamination and Lagrange volumes in multimass cosmological simulations*, J. Oñorbe, **S. Garrison-Kimmel**, A. H. Maller, J. S. Bullock, M. Rocha, and O. Hahn. *MNRAS* **437**, 1894–1908 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.437.1894O>
- [31] *On the stark difference in satellite distributions around the Milky Way and Andromeda*, B. Yniguez, **S. Garrison-Kimmel**, M. Boylan-Kolchin, and J. S. Bullock. *MNRAS* **439**, 73–82 (2014). <https://ui.adsabs.harvard.edu/abs/2014MNRAS.439...73Y>
- [32] *Cosmological simulations with self-interacting dark matter - I. Constant-density cores and substructure*, M. Rocha, A. H. Peter, J. S. Bullock, M. Kaplinghat, **S. Garrison-Kimmel**, J. Oñorbe, and L. A. Moustakas. *MNRAS* **430**, 81–104 (2013). <https://ui.adsabs.harvard.edu/abs/2013MNRAS.430...81R>

PAPERS UNDER REVIEW

- [1] *A profile in FIRE: resolving the radial distributions of satellite galaxies in the Local Group with simulations*, J. Samuel, A. Wetzel, E. Tollerud, **S. Garrison-Kimmel**, S. Loebman, K. El-Badry, P. F. Hopkins, M. Boylan-Kolchin, C.-A. Faucher-Giguere et al.. arXiv:1904.11508 (2019). <https://ui.adsabs.harvard.edu/abs/2019arXiv190411508S>
- [2] *Be it therefore resolved: Cosmological Simulations of Dwarf Galaxies with Extreme Resolution*, C. Wheeler, P. F. Hopkins, A. B. Pace, **S. Garrison-Kimmel**, M. Boylan-Kolchin, A. Wetzel, J. S. Bullock, D. Keres, C.-A. Faucher-Giguere et al.. arXiv:1812.02749 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv181202749W>
- [3] *Phat ELVIS: The inevitable effect of the Milky Way’s disk on its dark matter subhaloes*, T. Kelley, J. S. Bullock, **S. Garrison-Kimmel**, M. Boylan-Kolchin, M. S. Pawlowski, and A. S. Graus. arXiv:1811.12413 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv181112413K>
- [4] *Dwarf Galaxies in CDM, WDM, and SIDM: Disentangling Baryons and Dark Matter Physics*, A. Fitts, M. Boylan-Kolchin, B. Bozek, J. S. Bullock, A. Graus, V. Robles, P. F. Hopkins, K. El-Badry, **S. Garrison-Kimmel** et al.. arXiv:1811.11791 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv181111791F>
- [5] *The Origins of the Circumgalactic Medium in the FIRE Simulations*, Z. Hafen, C.-A. Faucher-Giguere, D. Angles-Alcazar, J. Stern, D. Keres, C. Hummels, C. Esmerian, **S. Garrison-Kimmel**, K. El-Badry et al.. arXiv:1811.11753 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv181111753H>
- [6] *Under the Firelight: Stellar Tracers of the Local Dark Matter Velocity Distribution in the Milky Way*, L. Necib, M. Lisanti, **S. Garrison-Kimmel**, A. Wetzel, R. Sanderson, P. F. Hopkins, C.-A. Faucher-Giguère, and D. Kereš. arXiv:1810.12301 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv181012301N>
- [7] *How low does it go? Too few Galactic satellites with standard reionization quenching*, A. S. Graus, J. S. Bullock, T. Kelley, M. Boylan-Kolchin, **S. Garrison-Kimmel**, and Y. Qi. arXiv:1808.03654 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv180803654G>
- [8] *Synthetic Gaia surveys from the FIRE cosmological simulations of Milky-Way-mass galaxies*, R. E. Sanderson, A. Wetzel, S. Loebman, S. Sharma, P. F. Hopkins, **S. Garrison-Kimmel**, C.-A. Faucher-Giguère, D. Kereš, and E. Quataert. arXiv:1806.10564 (2018). <https://ui.adsabs.harvard.edu/abs/2018arXiv180610564S>

CONFERENCE PROCEEDINGS

- [1] *Constraining the Physics of Low-Mass Satellite Galaxy Quenching*, S. P. Fillingham, M. C. Cooper, M. Boylan-Kolchin, J. S. Bullock, **S. Garrison-Kimmel**, C. Wheeler, T. Kelley, A. B. Pace, and M. K. Rodriguez Wimberly. *American Astronomical Society Meeting Abstracts #233* (2019). <https://ui.adsabs.harvard.edu/#abs/2019AAS...23333902F>
- [2] *Decaying sterile neutrino dark matter in the Local Group*, B. Bozek, M. Boylan-Kolchin, S. Horiuchi, **S. Garrison-Kimmel**, K. Abazajian, and J. Bullock. *American Astronomical Society Meeting Abstracts #229* (2017). <https://ui.adsabs.harvard.edu/#abs/2017AAS...22941806B>
- [3] *Cosmological simulations with self-interacting dark matter*, M. Rocha, A. Peter, J. Bullock, M. Kaplinghat, **S. Garrison-Kimmel**, J. Onorbe, and L. Moustakas. *Probes of Dark Matter on Galaxy Scales* (2013). <https://ui.adsabs.harvard.edu/#abs/2013pdmg.conf30203R>

- [4] *Gaps and Tails: The restricted N-body problem in colliding galaxies and the asteroid belt*, A. Pancoast, **S. Garrison-Kimmel**, and P. Love. *APS March Meeting Abstracts* (2009). <https://ui.adsabs.harvard.edu/#abs/2009APS.MAR.K1007P>