

# JEFFREY L. CARLIN

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## EDUCATION

**University of Virginia**, Charlottesville, VA, USA  
**Ph.D., Astronomy, 2010**; Advisor: Steven R. Majewski  
*“Kinematical and Chemical Probes of Milky Way Satellite Accretion”*

**University of Virginia**, Charlottesville, VA, USA  
**M.S., Astronomy, 2004**; Advisor: Craig Sarazin  
*“Chandra Observations of Diffuse Gas and Point Sources in the Elliptical Galaxy NGC 533”*

**San Francisco State University**, San Francisco, CA, USA  
**B.S., Physics, 2002**; Mathematics minor, Magna Cum Laude

## EMPLOYMENT

**Data Management Science Validation Scientist and Community Scientist**, Vera Rubin Observatory/Legacy Survey of Space and Time (LSST), Tucson, AZ, USA; Sep. 2019 – present

**Research Associate**, Large Synoptic Survey Telescope (LSST) Project Office, Tucson, AZ, USA; Jul. 2016 – Sep. 2019

**Senior Research Associate**, Haverford College, Department of Astronomy, Haverford, PA, USA; Jan. 2016 – Jul. 2016

**Adjunct Professor**, Earlham College, Department of Physics and Astronomy, Richmond, IN, USA; Aug. 2014 – Dec. 2015

**Postdoctoral Research Associate**, Rensselaer Polytechnic Institute, Department of Physics, Applied Physics, and Astronomy, Troy, NY, USA; Sep. 2010 – Jul. 2016

**Adjunct Professor**, Rensselaer Polytechnic Institute, Department of Physics, Applied Physics, and Astronomy, Troy, NY, USA; Aug. 2012 – Dec. 2012

## TEACHING AND ADVISING

2016 – 2020	Mentoring research assistants, Steward Observatory/University of Arizona: Ragadeepika Pucha (graduate student), Madison Walder (undergraduate)
2015 (Fall)	Earlham College; PHYS 282: “Intro to Astrophysics”
2015 (Spring)	Earlham College; PHYS 105: “Physics of Music” (general education lecture course)
2014 (Fall)	Earlham College; PHYS 120/125: “General/Analytical Physics” (lab instructor)
2012 (Fall)	Rensselaer Polytechnic Institute; ASTR 2050: “Introductory Astronomy & Astrophysics” (course for Physics majors)
2010 – 2016	Mentored undergraduate research assistants, Rensselaer Polytechnic Institute (students include William Yam, Charles Martin, Jimmy DeLaunay, Daniel Gole, Katie Grabowski, Taylor Varilly, Ben Bowles, Jeff Chowaniec, and Liam Moynihan)
2010 – 2016	Advised Chinese graduate students and research assistants on research projects, including XU Yan, LI Jing, YANG Fan, and ZHANG Yueyang
2012 (Summer)	Advised summer Research Experience for Undergraduate students on research projects, Rensselaer Polytechnic Institute
2004 – 2005	Tutored student-athletes in astronomy classes, University of Virginia
2002 – 2004	Head Teaching Assistant, “Intro to Astronomical Observation,” Univ. of Virginia

2004 Teaching Assistant, “Intro to Stars, Galaxies, and the Universe,” Univ. of Virginia  
2002, 2004 Teaching Assistant, “Archaeo-Astronomy,” Univ. of Virginia

## PROFESSIONAL SERVICE

Referee: Astrophysical Journal, Astrophysical Journal Letters, Astronomical Journal, Monthly Notices of the Royal Astronomical Society, Nature Astronomy, Galaxies.

Proposal reviewer:

- National Optical Astronomy Observatory (NOIR Lab) Time Allocation Committee (Galactic panel), 2019A-2021A (panel chair, 2020B, 2021A).
- Gemini Large and Long Programs observing proposals.
- Hubble Space Telescope Mid-cycle GO observing proposals (2 times).
- NASA Astrophysics Data Analysis Program (ADAP) research proposals.
- FONDECYT (Chile) research proposals (3 times).
- TAP (Telescope Access Program; China) observing proposals (2 times).

Member, LSST “Stars, Milky Way, and the Local Volume,” “Galaxies,” “Dark Energy” science collaborations.

Member of Scientific Organizing Committee:

- *Rubin Observatory Project and Community Workshop*, August 2020.
- *Near-Field Cosmology with the Dark Energy Survey’s DR1 and Beyond*, Univ. of Chicago, June 2018.

“DEEP” Working Group lead, DECam Local Volume Exploration (DELVE) survey (2019-2021).

Thesis committee member for Ekta Patel’s PhD at University of Arizona/Steward Observatory (May 2019).

Invited participant, *Searching for Dwarf Companions of the Milky Way and Beyond in the LSST Era*, Tucson, AZ, Oct. 2017. Contributed to the resulting white paper.

Volunteer judge for the Chambliss Astronomy Achievement Student Awards (2013-2017, 2019), Abstract Sorter (2014-2016) for the January American Astronomical Society meetings. Session chair at AAS meetings, Jan. 2014, 2015, and 2016.

Represented RPI as an American Astronomical Society “AAS Agent,” 2013-2014.

Participated in *Highly Multiplexed Spectroscopy with BigBOSS on the Mayall Telescope: An NOAO Community Workshop*, Tucson, AZ, Sep. 2011. Contributed to the BigBOSS white paper submitted to the NSF Portfolio Review Committee.

Participated in *Yale/WIYN One Degree Imager Survey Workshop*, New Haven, CT, Jul. 2005.

## OUTREACH

Space Drafts/Astronomy on Tap public lecture, “The eating habits of the Milky Way and other galaxies” April 11, 2018; Tucson, AZ.

Participated in a [reddit.com](#) “Ask Me Anything (AMA)” as part of the MilkyWay@Home collaboration in Nov. 2015, answering public questions about astronomy.

RPI Summer Teaching Institute: Planetary Science and Astronomy for the Next Generation of Science Standards, Jul. 2012, 2013, and 2014; invited lecture/training.

Designed and wrote content for LAMOST-PLUS collaboration website (formerly <http://lamost.us/league/>; no longer maintained).

Assisted at twice-yearly public open nights, Fan Mountain Observatory, and annual events at McCormick Observatory (Virginia), 2002-2009.

## AWARDS, GRANTS, & FELLOWSHIPS

National Science Foundation Astronomy & Astrophysics Research Grant AST-1816196; “Collaborative Research: Testing the Lambda Cold Dark Matter Paradigm with Dwarf Satellites of Low-mass Galaxies” (\$56,740; Co-PI).

Hubble Space Telescope Cycle 25; “Testing Galaxy Evolution in Unexplored Environments: the First Faint Dwarf Satellites of Local Volume LMC Analogs” (4 orbits, \$16,471).

American Astronomical Society International Travel Grant (airfare to attend “Stellar Halos Across the Cosmos” meeting in Heidelberg, Germany; \$1,592).

Chinese Academy of Sciences (CAS) President’s International Fellowship for Visiting Scientists; funded 2 months salary and expenses for May-Jul. 2015 visit to China (~\$7,700).

National Science Foundation grant AST-1409421, “Collaborative Research: Getting the Most from LAMOST,” (\$80,481; Co-I – funded one additional year of my postdoc position).

Univ. of Virginia Huskey Graduate Research Exhibition, 2nd Prize, Paper Presentation, March 2009 (\$200).

Virginia Space Grant Consortium, Aerospace Graduate Research Fellowship, 2005-2008 (\$5,000/yr.).

National Science Foundation Research Experience for Undergraduates (REU), La Serena, Chile, 2002 (Advisor: R. Chris Smith).

Meeting travel support:

- “Resurgence of High Resolution Spectroscopy at Gemini” splinter session, 233rd American Astronomical Society meeting, Seattle, WA, Jan. 2019
- “2nd LAMOST-Kepler Workshop: LAMOST in the era of large spectroscopic surveys,” Brussels, Belgium, Aug. 2017
- “reSolving Galaxies in the Era of Extremely Large Telescopes,” Monterey, CA, Oct. 2015
- “Stellar Populations Across Cosmic Time,” Paris, France, Jun. 2012
- “Galactic Archaeology: Near-Field Cosmology and the Formation of the Milky Way,” Shuzenji, Japan, Nov. 2011
- “A Universe of Dwarf Galaxies,” Lyon, France, Jun. 2010
- “Yale/WIYN One Degree Imager Survey Workshop,” New Haven, CT, Sep. 2009
- “Extreme Star Formation in Dwarf Galaxies,” Ann Arbor, MI, Jul. 2009
- “A Giant Step: from Milli- to Micro-arcsecond Astrometry, IAU Symposium 248,” Shanghai, China: NSF and IAU travel grants, Oct. 2007
- “The Origin of the Galaxy and Local Group, 37th Saas-Fee Advanced Course of the Swiss Society for Astrophysics and Astronomy,” Mürren, Switzerland, Mar. 2007
- Univ. of Virginia Huskey Travel Award (support for meeting attendance), 2007, 2008, 2009
- “Yale Astrometry Workshop,” New Haven, CT, Jul. 2005
- “Michelson Summer Workshop,” Pasadena, CA, Jul. 2005

## INVITED TALKS

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| Oct. 2019 | “Low-mass galaxies in the Local Volume as near-field cosmological probes,” Temple University, Philadelphia, PA; colloquium  |
| Mar. 2019 | “Does NGC 2403 Have a Missing Satellites Problem?,” National Optical Astronomical Observatories, Tucson, AZ; Scientific Lunch Talk  |
| Jan. 2019 | “Science Highlights from GRACES,” Resurgence of High Resolution Spectroscopy at Gemini splinter session, 233rd American Astronomical Society meeting, Seattle, WA; invited talk   |
| Jan. 2018 | “Chemical abundances of Sagittarius tidal debris via Gemini/GRACES spectra,” Gemini Visiting Instruments: New Science Results and Capabilities session, 231st American Astronomical Society meeting, Washington, DC; invited talk |
| Aug. 2017 | “The merging history of the Milky Way as seen by LAMOST,” 2nd LAMOST-Kepler Workshop: LAMOST in the era of large spectroscopic surveys, Brussels, Belgium; invited talk   |
| Oct. 2016 | “Near-field cosmology with the Magellanic Analog Dwarf Companions And Stellar Halos (MAD-CASH) survey,” Steward Observatory, Tucson, AZ; Galaxy Group talk  |
| Apr. 2016 | “Characterizing the SHARDS of Disrupted Milky Way Satellites with LAMOST,” National Optical Astronomical Observatories, Tucson, AZ; Scientific Lunch Talk   |
| Mar. 2016 | “Pre-cursor LSST science with Subaru/HSC: LMC-mass dwarf galaxies and their little friends as cosmological probes,” LSST, Tucson, AZ; Survey Science Group lunch  |

- Sep. 2014 “Complicating the canonical picture of the Milky Way disk,” University of Notre Dame, South Bend, IN; Astrophysics seminar
- Mar. 2014 “Stellar streams and substructures as probes of the Milky Way and its evolution,” Shanghai Observatory, Shanghai, China; seminar
- Feb. 2014 “Observing the tidal effects of satellite interactions on the Milky Way disk,” National Astronomical Observatories of China, Chinese Academy of Sciences, Beijing, China; seminar
- Nov. 2013 “Stellar streams and substructures as probes of the Milky Way and its evolution,” University of Rochester, Rochester, NY; colloquium
- Oct. 2013 “The galactic food chain: using stellar substructures to examine the diet of the Milky Way,” Colgate University, Hamilton, NY; seminar
- May 2013 “Kinematic lumps, bumps, and wiggles in the Galaxy from LEGUE,” National Astronomical Observatories of China, Chinese Academy of Sciences, Beijing, China; LAMOST-PLUS Workshop
- Jan. 2013 “Stellar streams and substructures as probes of the Milky Way and its merging history,” Yale University, New Haven, CT; colloquium
- May 2012 “Disk substructure with LAMOST,” China West Normal University, Nanchong, China; LAMOST-PLUS Workshop
- May 2012 “Stellar streams and substructures as probes of the Milky Way and its merging history,” Shanghai Observatory, Shanghai, China; colloquium
- Mar. 2012 “The origin of the Virgo Stellar Substructure,” National Astronomical Observatories of China, Beijing, China; lunch talk
- Jan. 2012 “On Rings and Streams in the Galactic Anticenter,” American Astronomical Society 219th Meeting, Austin, TX; SDSS-III session
- June 2011 “LAMOST commissioning data,” Rensselaer Polytechnic Institute, Troy, NY; LAMOST-PLUS Workshop
- May 2008 “Phase-space structure in the Sagittarius tidal tail,” Green Bank Observatory, Green Bank, WV; Science Lunch Talk
- Nov. 2007 “Phase-space structure in Kapteyn’s Selected Areas: first results for the Sagittarius trailing tidal tail,” National Optical Astronomical Observatories, Tucson, AZ; Scientific Lunch Talk

## CONTRIBUTED TALKS AND POSTER PRESENTATIONS

[t]: contributed talk, [p]: poster

- Aug. 2020 “Faint Satellites of Magellanic Analogs Beyond the Local Group: an HST perspective,” The Local Group: Assembly and Evolution, Baltimore, MD; contributed talk [t]
- Jan. 2019 “Does NGC 2403 Have a Missing Satellites Problem?,” 233rd American Astronomical Society meeting, Seattle, WA; contributed talk [t]
- July 2018 “Near-Field Cosmology with Resolved Stellar Populations Around Local Volume LMC Stellar-Mass Galaxies,” Stellar Halos Across the Cosmos, Heidelberg, Germany; contributed talk [t]
- June 2018 “Near-Field Cosmology with Resolved and Unresolved Stellar Populations Around Low-Mass Local Volume Galaxies,” Near-Field Cosmology With the Dark Energy Survey’s DR1 and Beyond, Chicago, IL; contributed talk [t]
- June 2018 “Recreating the chemical evolution of the Sagittarius dwarf spheroidal from its tidal debris,” Stellar Abundances in Dwarf Galaxies Meeting-in-a-Meeting, 232nd American Astronomical Society meeting, Denver, CO; contributed talk [t]
- June 2018 “Near-Field Cosmology with Resolved Stellar Populations Around Local Volume LMC Stellar-Mass Galaxies,” 232nd American Astronomical Society meeting, Denver, CO; contributed talk [t]
- May 2018 “Probing the halo of the Milky Way beyond 100 kpc with RR Lyrae,” DECam Community Science Workshop 2018, Tucson, AZ; contributed talk [t]
- Jan. 2018 “Pushing the boundaries: probing the halo of the Milky Way beyond 100 kpc with RR Lyrae Stars,” American Astronomical Society 231st Meeting, Washington, DC [p]

- Mar. 2017 “Magellanic Analog Dwarf Companions and Stellar Halos (MADCASH): near-field cosmology with resolved stellar populations around Local Volume LMC stellar-mass galaxies,” On the Origin (and Evolution) of Baryonic Galaxy Halos, Galapagos Islands, Ecuador [t]
- Jan. 2017 “The Magellanic Analog Dwarf Companions and Stellar Halos (MADCASH) survey: near-field cosmology with resolved stellar populations around Local Volume LMC stellar-mass galaxies,” American Astronomical Society 229th Meeting, Grapevine, TX [p]
- Aug. 2016 “Pre-cursor LSST science with Subaru/HSC: A faint dwarf galaxy companion to the low mass spiral galaxy NGC 2403 at 3.2 Mpc,” LSST 2016 Project and Community Workshop, Tucson, AZ [t]
- Jan. 2016 “Exploring the SHARDS of disrupted Milky Way satellites with LAMOST,” American Astronomical Society 227th Meeting, Kissimmee, FL [t]
- Oct. 2015 “Studying the SHARDS of disrupted Milky Way satellites with LAMOST,” reSolving Galaxies in the Era of Extremely Large Telescopes, Monterey, CA [p]
- Apr. 2015 “The LAMOST view of Galactic halo substructure,” Satellites and Streams in Santiago, Santiago, Chile [t]
- Jan. 2015 “Dissecting the Milky Way disk with LAMOST,” American Astronomical Society 225th Meeting, Seattle, WA [p]
- Feb. 2014 “Galactic archaeology with LAMOST,” The Near-Field Deep-Field Connection, Irvine, CA [p]
- Jan. 2014 “LAMOST observations of substructure in bulk velocities of Milky Way disk stars,” American Astronomical Society 223rd Meeting, Washington, D.C. [p]
- Jan. 2014 “Relating dark matter to tidal streams with MilkyWay@home,” American Astronomical Society 223rd Meeting, Washington, D.C. [t]
- Oct. 2013 “Asymmetric substructure in kinematics of nearby disk stars from the LAMOST Survey,” Astronomical Society of New York meeting, Schenectady, NY [t]
- Aug. 2013 “Asymmetric substructure in kinematics of nearby disk stars from the LAMOST Survey,” Structure and Dynamics of Disk Galaxies, Petit Jean Mountain, AR [t]
- May 2013 “Kinematic lumps, bumps, and wiggles in the Galaxy from LEGUE,” Setting the Scene for Gaia and LAMOST, Lijiang, China [p]
- Jan. 2013 “Update on the LAMOST-PLUS collaboration,” American Astronomical Society 221st Meeting, Long Beach, CA [p]
- June 2012 “On the origin of the stellar substructure(s) in Virgo,” Stellar Populations Across Cosmic Time, Paris, France [p]
- Nov. 2011 “Kinematics of stars along the Sagittarius trailing tidal tail and constraints on the Milky Way mass distribution,” Galactic Archaeology: Near-Field Cosmology and the Formation of the Milky Way, Shuzenji, Japan [p]
- July 2011 Columbia University, New York, NY; Pizza Lunch [t]
- Jan. 2011 “Comparison of derived stellar parameters for LAMOST and SEGUE spectra,” American Astronomical Society 217th Meeting, Seattle, WA [p]
- Oct. 2010 “Kinematical and chemical probes of Milky Way satellite accretion,” Rensselaer Polytechnic Institute, Troy, NY; Astrophysics Seminar [t]
- June 2010 “Kinematics and metallicities of an Anticenter Stream tributary in Kapteyn’s Selected Area 76,” A Universe of Dwarf Galaxies, Lyon, France [p]
- Jan. 2010 “Absolute proper motions of Sagittarius trailing tidal debris,” American Astronomical Society 215th Mtg., Washington, D.C.; dissertation talk [t]
- July 2009 “Boötes III: a disrupted dwarf galaxy?” Extreme Star Formation in Dwarf Galaxies, Ann Arbor, MI [t]
- Mar. 2009 “Constraining Fundamental Milky Way Parameters With Stellar Kinematics of Sagittarius Tidal Debris,” Univ. of Virginia, Charlottesville, VA; Huskey Graduate Research Exhibition [t]
- Oct. 2007 “Preliminary proper motion analysis of the Carina dwarf spheroidal,” A Giant Step: from Milli- to Micro-arcsecond Astrometry, Shanghai, China [p]
- July 2004 “Chandra observations of NGC 533,” Galaxies Viewed With Chandra, Cambridge, MA [p]
- Jan. 2003 “Characterization of the shock front and discovery of Balmer filaments in optical images of Vela Bullet C,” American Astronomical Society 201st Meeting, Seattle, WA [p]

## PUBLICATIONS

As of October 2020: *h*-index: 29/23/11 (as co-author, 1st-3rd author, lead author).  
96 total publications (78 in refereed journals), with 6063 citations.  
ORCID: 0000-0002-3936-9628

## EDITED VOLUME

Newberg, H. J. & **Carlin, J. L.**, eds., 2016, *Tidal Streams in the Local Group and Beyond: Observations and Implications*, Springer International Publishing, Astrophysics and Space Science Library, 420 (ISBN 978-3-319-19335-9)

## REFEREED PUBLICATIONS AS LEAD AUTHOR

**Carlin, J. L.**, Mutlu-Pakdil, B., Crnojević, D., Garling, C. T., Karunakaran, A., Peter, A. H. G., Tollerud, E., Forbes, D. A., Hargis, J. R., Lim, S., Romanowsky, A. J., Sand, D. J., Spekkens, K., & Strader, J. 2021, *Astrophysical Journal*, *submitted*; *arXiv:2012.09174*; “Hubble Space Telescope Observations of Two Faint Dwarf Satellites of Nearby LMC Analogs from MADCASH”

**Carlin, J. L.**, Garling, C. T., Peter, A. H. G., Crnojević, D., Forbes, D. A., Hargis, J., Mutlu-Pakdil, B., Pucha, R., Romanowsky, A. J., Sand, D. J., Spekkens, K., Strader, J., & Willman, B. 2019, *Astrophysical Journal*, 886, 109 (*arXiv:1906.08260*); “Tidal destruction in a low mass galaxy environment: the discovery of tidal tails around DDO 44”

**Carlin, J. L.** & Sand, D. J. 2018, *Astrophysical Journal*, 865, 7 (*arXiv:1805.11624*); “Boötes III is a disrupting dwarf galaxy associated with the Styx stream”

**Carlin, J. L.**, Sheffield, A. A., Cunha, K., & Smith, V. V. 2018, *Astrophysical Journal Letters*, 859, L10 (*arXiv:1805.04120*); “Chemical abundances of hydrostatic and explosive alpha-elements in Sagittarius stream stars”

**Carlin, J. L.**, Sand, D. J., Muñoz, R. R., Spekkens, K., Willman, B., Crnojević, D., Forbes, D. A., Hargis, J., Kirby, E., Peter, A. H. G., Romanowsky, A. J., & Strader, J. 2017, *Astronomical Journal*, 154, 267 (*arXiv:1710.06444*); “Deep Subaru Hyper Suprime-Cam Observations of Milky Way Satellites Columba I and Triangulum II”

**Carlin, J. L.**, Sand, D. J., Price, P., Willman, B., Karunakaran, A., Spekkens, K., Bell, E. F., Brodie, J. P., Crnojević, D., Forbes, D. A., Hargis, J., Kirby, E., Lupton, R., Peter, A. H. G., Romanowsky, A. J., & Strader, J. 2016, *Astrophysical Journal Letters*, 828, L5; “First Results From the MADCASH Survey: A Faint Dwarf Galaxy Companion to the Low Mass Spiral Galaxy NGC 2403 at 3.2 Mpc”

**Carlin, J. L.**, Liu, C., Newberg, H. J., Beers, T. C., Deng, L., Guhathakurta, P., Cao, Z., Hou, Y., Wang, Y., Wu, Y., & Zhang, Y. 2016, *Astrophysical Journal*, 822, 16; “Characterizing the SHARDS of Disrupted Milky Way Satellites with LAMOST”

**Carlin, J. L.**, Liu, C., Newberg, H. J., Beers, T. C., Chen, L., Deng, L., Guhathakurta, P., Hou, J., Hou, Y., Lépine, S., Li, G., Luo, A.-L., Smith, M. C., Wu, Y., Yang, M., Yanny, B., Zhang, H., & Zheng, Z. 2015, *Astronomical Journal*, 150, 4; “Estimation of Distances to Stars With Stellar Parameters From LAMOST”

**Carlin, J. L.**, DeLaunay, J., Newberg, H. J., Deng, L.-C., Gole, D., Grabowski, K., Jin, G., Liu, C., Liu, X.-W., Luo, A.-L., Yuan, H.-B., Zhang, H.-T., Zhao, G., & Zhao, Y. 2013, *Astrophysical Journal Letters*, 777, L5; “Substructure in bulk velocities of Milky Way disk stars”

**Carlin, J. L.**, Lépine, S., Newberg, H. J., Deng, L.-C., and 21 additional co-authors, 2012, *Research in Astronomy and Astrophysics*, 12, 755; “An algorithm for preferential selection of spectroscopic targets in LEGUE”

**Carlin, J. L.**, Yam, W., Casetti-Dinescu, D. I., Willett, B. A., Newberg, H. J., Majewski, S. R. & Girard, T. M. 2012, *Astrophysical Journal*, 753, 145; “The Origin of the Virgo Stellar Substructure”

**Carlin, J. L.**, Majewski, S. R., Casetti-Dinescu, D. I., Law, D. R., Girard, T. M., & Patterson, R. J. 2012, *Astrophysical Journal*, 744, 25; “Kinematics and Chemistry of Stars Along the Sagittarius Trailing Tidal Tail and Constraints on the Milky Way Mass Distribution”

**Carlin, J. L.**, Casetti-Dinescu, D. I., Grillmair, C. J., Majewski, S. R., & Girard, T. M. 2010, *Astrophysical Journal*, 725, 2290; “Kinematics in Kapteyn’s Selected Area 76: Orbital Motions Within the Highly Substructured Anticenter Stream”

**Carlin, J. L.**, Grillmair, C. J., Muñoz, R. R., Nidever, D. L., & Majewski, S. R. 2009, *Astrophysical Journal Letters*, 702, 9; “Kinematics and Metallicities in the Boötes III Stellar Overdensity: A Disrupted Dwarf Galaxy?”

## REFEREED PUBLICATIONS AS CO-AUTHOR

(\* indicates student papers on which I was the lead senior author).

Comoretto, G., Guy, L. P., O’Mullane, W., Bechtol, K., **Carlin, J. L.**, Sick, J., Van Klaveren, B., & Roberts, A. 2020, *SPIE*, *accepted*; “Documentation Automation for the Verification and Validation of Rubin Observatory Software”

Cerny, W., Pace, A. B., Drlica-Wagner, A., Ferguson, P. S., Mau, S., Adamów, M., **Carlin, J. L.**, Choi, Y., Erkal, D., Johnson, L. C., Li, T. S., Martínez-Vázquez, C. E., Mutlu-Pakdil, B., Nidever, D. L., Olsen, K. A. G., Pieres, A., Simon, J. D., Tollerud, E. J., Vivas, A. K., James, D. J., Kuropatkin, N., Majewski, S., Martínez-Delgado, D., Massana, P., Miller, A., Noël, N. E. D., Riley, A. H., Sand, D. J., Santana-Silva, L., Stringfellow, G. S., Neilsen, E. H., & Tucker, D. L. 2020, *Astrophysical Journal*, *submitted*; “Discovery of an Ultra-Faint Stellar System near the Magellanic Clouds with the DECam Local Volume Exploration (DELVE) Survey”

Chené, A.-N., Mao, S., Lundquist, M., Martioli, E., & **Carlin, J. L.** 2020, *Astrophysical Journal*, *accepted*; *arXiv:2012.08045*; “DRAGRACES: A pipeline for the GRACES high-resolution spectrograph at Gemini”

Wang, H.-F., López-Corredoira, M., Huang, Y., Chang, J., Zhang, H.-W., **Carlin, J. L.**, Chen, X.-D., Chrobáková, Ž., & Chen, B.-Q. 2020, *Astrophysical Journal*, *accepted*; *arXiv:2004.06600*; “Mapping the Galactic disk with the LAMOST and Gaia Red clump sample. VI: An evidence for the long lived non-steady warp of non-gravitational scenarios”

Li, J., Xue, X.-X., Liu, C., Zhang, B., Rix, H.-W., **Carlin, J. L.**, Yang, C., Mendez, R., Zhong, J., Tian, H., Zhang, L., Xu, Y., Wu, Y., Zhao, G., & Chang, R. 2020, *Astrophysical Journal*, *submitted*; “Exploring the Galactic Anticenter substructure with LAMOST & Gaia DR2”

Mau, S. et al.; (**Carlin, J. L.** 11th of 59 co-authors) 2020, *Astrophysical Journal*, 890, 136 (*arXiv:1912.03301*); “Two Ultra-Faint Milky Way Stellar Systems Discovered in Early Data from the DECam Local Volume Exploration Survey”

Hargis, J. R., Albers, S., Crnojević, D., Sand, D. J., Weisz, D. R., **Carlin, J. L.**, Spekkens, K., Willman, B., Peter, A. H. G., Dolphin, A. E., & Grillmair, C. J. 2020, *Astrophysical Journal*, 888, 31 (*arXiv:1907.07185*); “Hubble Space Telescope Imaging of Antlia B: Star Formation History and a New Tip of the Red Giant Branch Distance”

Zhong, J., Li, J., **Carlin, J. L.**, Li, C., Mendez, R., & Hou, J. 2019, *Astrophysical Journal Supplements*, 244, 8 (*arXiv:1908.01128*); “Value-added catalogs of M type stars in LAMOST DR5”

Yang, C., Xue, X.-X., Li, J., Liu, C., Zhang, B., Rix, H.-W., Zhang, L., Zhao, G., Tian, H., Zhong, J., Xing, Q., Wu, Y., Li, C., **Carlin, J. L.**, & Chang, J. 2019, *Astrophysical Journal*, 886, 154 (*arXiv:1909.12558*); “Tracing Kinematic and Chemical Properties of the Sagittarius Stream using K-giants, M-giants, and BHB Stars”

Mutlu-Pakdil, B., Sand, D. J., Walker, M. G., Caldwell, N., **Carlin, J. L.**, Collins, M. L., Crnojević, D., Mateo, M., McLeod, B., Olszewski, E. W., Seth, A. C., Strader, J., Willman, B., & Zaritsky, D. 2019, *Astrophysical Journal*, 885, 53 (*arXiv:1907.07233*); “Signatures of Tidal Disruption in Ultra-Faint Dwarf Galaxies: A Combined HST, Gaia, and MMT/Hectochelle Study of Leo V”

- Wang, H.-F., Huang, Y., **Carlin, J. L.**, López-Corredoira, M., Chen, B.-Q., Wang, C., Chang, J., Zhang, H.-W., Xiang, M.-S., Yuan, H.-B., Sun, W.-X., Li, X.-Y., Yang, Y., & Deng, L.-C. 2019, *Astrophysical Journal*, 884, 135; “Mapping the Galactic disk with red clump stars from LAMOST and Gaia-III: A new velocity substructure and time stamps of the Galactic disk asymmetry in the disk between 12-15 kpc”
- Wang, H.-F., López-Corredoira, M., Huang, Y., **Carlin, J. L.**, Chen, B.-Q., Wang, C., Chang, H., Zhang, H.-W., Xiang, M.-S., Yuan, H.-B., Sun, W.-X., Li, X.-Y., Yang, Y., & Deng, L.-C. 2019, *Monthly Notices of the Royal Astronomical Society*, *accepted (arXiv:1905.11944)*; “Mapping the Galactic disk with red clump stars from LAMOST and Gaia II: 3D asymmetrical kinematics of mono-age populations in the disk between 6-14 kpc”
- Pucha, R., **Carlin, J. L.**, Willman, B., Strader, J., Sand, D. J., Bechtol, K., Brodie, J. P., Crnojević, D., Forbes, D. A., Garling, C., Hargis, J., Peter, A. H. G., & Romanowsky, A. J. 2019, *Astrophysical Journal*, 880, 104 (*arXiv:1905.02210*); “Hyper Wide Field Imaging of the Local Group Dwarf Irregular Galaxy IC 1613: An Extended Component of Metal-poor Stars”
- Ivezić, Z. et al.; (**Carlin, J. L.** one of 317 co-authors) 2019, *Astrophysical Journal*, 873, 111; “LSST: From Science Drivers to Reference Design and Anticipated Data Products”
- Li, J., Liu, C., Xue, X.-X., Zhong, J., Weiss, J., **Carlin, J. L.**, & Tian, H. 2019, *Astrophysical Journal*, 874, 138 (*arXiv:1902.07861*); “Detecting the Sagittarius stream with LAMOST DR4 M giants & Gaia DR2”
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