

Curriculum Vitae
ALEX DRLICA-WAGNER
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Fermilab Center for Particle Astrophysics
Mail Station 127
P.O. Box 500
Batavia, IL 60510-5011, USA

Phone: (630) 840-3662
Email: kadrlica@fnal.gov
<http://home.fnal.gov/~kadrlica>
<https://github.com/kadrlica>

EDUCATION

- 2013 Stanford University (Stanford, CA): *Ph.D., Physics*
 Advisor: Elliott Bloom
- 2008 Washington University in St. Louis (St. Louis, MO): *B.A., Physics (summa cum laude)*
 Advisor: James Buckley

APPOINTMENTS

- 2018–present Wilson Fellow (Associate Scientist), Fermi National Accelerator Laboratory
- 2013–2018 Schramm Fellow (Postdoctoral Researcher), Fermi National Accelerator Laboratory
- 2008–2013 Graduate Research Associate, Stanford University & SLAC National Accelerator Laboratory

HONORS AND AWARDS

- 2018 *Wilson Fellow*, Fermi National Accelerator Laboratory
- 2018 *Evans Visiting Scholar in Astrophysics*, University of California, Irvine
- 2016 *Alvin Tollestrup Award*, Fermi National Accelerator Laboratory
- 2014–present *Associate Fellow*, Kavli Institute for Cosmological Physics, University of Chicago
- 2013–present *Schramm Fellow*, Fermi National Accelerator Laboratory
- 2012 *Paul Giddings Graduate Fellow*, Department of Physics, Stanford University
- 2012 *Joachim Herz Stiftung Fellow*, 62nd Lindau Meeting of Noble Laureates
- 2010–2013 *Office of Science Graduate Fellow*, United States Department of Energy
- 2008 *Senior Physics Prize*, Department of Physics, Washington University in St. Louis
- 2007 *Greg Delos Fellow*, Department of Physics, Washington University in St. Louis

SCIENTIFIC COLLABORATIONS

- 2017–present Blanco Imaging of the Southern Sky (BLISS)
Co-PI: BLISS is a community survey to establish complete DECam coverage of the southern extragalactic sky. The goals of BLISS are 1) template imaging for the detection of optical counterparts to gravitational wave sources, 2) deep, wide-area searches for Milky Way satellite galaxies, and 3) the detection of faint outer-solar-system objects. BLISS has processed >100,000 public DECam exposures using the DES data processing pipeline. I lead survey operations, image reduction, object catalog creation, and dwarf galaxy searches. As Co-PI, I am responsible for writing observing proposals, seeking funding to support operations, and establishing collaboration policies. BLISS has ~40 members.
- 2017–present LSST Stars, Milky Way, and Local Volume Collaboration

- 2015–present Magellanic Satellites Survey (MagLiteS)
Deputy PI: MagLiteS is a DECam community survey that seeks to perform a complete, unbiased search for ultra-faint galaxies around the Magellanic Clouds. I lead survey operations, image reduction, object catalog creation, and dwarf galaxy searches. As Deputy PI, I am responsible for writing observing proposals, seeking funding to support operations, and establishing collaboration policies. MagLiteS has ~60 members.
- 2014–present LSST Dark Energy Science Collaboration (DESC)
Organizer, Dark Matter Study Group: The dark matter study group investigates techniques for probing the fundamental nature of dark matter with LSST. It interfaces with the DESC survey simulations working group and several of the DESC analysis working groups (e.g., theory and joint probes, clusters, and strong lensing). The dark matter study group has ~40 members.
- 2012–present Dark Energy Survey (DES) Collaboration
Co-Coordinator, Milky Way Science Working Group: This is one of the twelve DES science working groups. Science topics include near-field cosmology, Local Group studies, Galactic archaeology, and stellar astrophysics. As co-coordinator, I help guide the scientific direction of the group, organize scientific analyses, and coordinate the resulting publications. The Milky Way working group has ~50 members.
Coordinator, Science Release Working Group: This is one of the twelve DES science working groups. It is responsible for providing, validating, and documenting the data products used for DES cosmology. As founding coordinator, I set the scope and mission of the group and coordinated the production of the data set used for DES Year-1 cosmology. The Science Release working group has ~70 members.
- 2009–present Fermi Large Area Telescope (LAT) Collaboration
Affiliated Member: I lead a program to search for signatures of dark matter annihilation in combined observations of Milky Way satellite galaxies. This program has established the strongest and most robust constraints on dark matter annihilation. This work has excluded the natural thermal relic cross section for dark matter particles with mass < 100 GeV.

RESEARCH GRANTS AND OBSERVING PROPOSALS

Below are reasearch grants and successful observing proposals that I have led via writing and/or analysis. In addition, I have served as Co-I on successful observing proposals using HST, VLT, Gemini, Magellan, and SOAR.

- 2018 *PALS: Paralensing Survey of Intermediate Mass Black Holes*
 Blanco Telescope 2018A–2019B (32 nights; PI: W. Dawson; Co-I: A. Drlica-Wagner)
- 2017 *Dark Matter and Satellite Galaxies in the Era of LSST*
 France and Chicago Collaborating in the Sciences Grant (\$15k; PI: A. Drlica-Wagner)
- 2017 *LSST: The Dark Matter Telescope*
 LSST Enabling Science Grant (\$9k; PI: A. Drlica-Wagner)
- 2017 *Blanco Imaging of the Southern Sky (BLISS)*
 Blanco Telescope 2017A (11.5 nights; Co-PI: A. Drlica-Wagner, M. Soares-Santos)
- 2016 *Search for Dark Matter Annihilation in Newly Discovered Milky Way Satellite Galaxies*
 Fermi Cycle-9 Guest Investigator Program (\$48k; PI: A. Drlica-Wagner)
- 2016 *Cetus II - The Least Luminous Galaxy?*
 Magellan Baade Telescope 2016B (2 nights; PI: A. Drlica-Wagner)
- 2016 *Magellanic Satellites Survey: The Search for Hierarchical Structures within the Local Group*
 Blanco Telescope 2016A (12 nights; PI: K. Bechtol; Deputy PI: A. Drlica-Wagner)
- 2016 *A Group of Milky Way Satellites in the Constellation Tucana*
 Magellan Baade Telescope 2016A (2 nights; Author: A. Drlica-Wagner; PI: J. Frieman)

- 2015 *Spectroscopic Confirmation of Milky Way Satellite Galaxy Candidate DES J0335.7–5403*
Gemini South 2015A Director’s Discretionary Time (10 hours; PI: A. Drlica-Wagner)
- 2014 *Disentangling Dark Matter Gamma-Ray Signals from Astrophysical Foregrounds: Combining Searches in a Public Framework.*
Fermi Cycle-7 GI Program (\$420k; A. Drlica-Wagner analysis lead; PI: E. Charles)
- 2013 *The Smith Cloud: a High-Velocity Cloud Confined by Dark Matter.*
Fermi Cycle-6 GI Program (\$50k; A. Drlica-Wagner analysis lead; PI: T. Linden)

PROFESSIONAL SERVICE AND LEADERSHIP

- 2018–present Member, DES External Collaborator Committee (proposal review and approval)
- 2017–present Member, [Fermilab SIST Committee](#) (summer research targeting underrepresented groups)
- 2017 Review Panelist, *Fermi* Cycle-10 Guest Investigator Program
- 2016–present Computational Science Strategy Group, Fermilab
- 2016 Community Study Author, “[Maximizing Science in the Era of LSST](#)”
- 2015–present Member, DES Science Committee (coordination of science working groups)
- 2015–present Reviewer for *Physical Review Letters*, *Physical Review D*, and *ApJ Letters*
- 2015–2016 Member, DES Executive Committee (oversight of survey and camera operation)
- 2015 Fermilab Congressional Delegation
- 2013–present [Journal Club Organizer](#) for the Fermilab Center for Particle Astrophysics
- 2012–present DES and *Fermi*-LAT Collaboration Internal Reviewer
- 2012–2015 Executive officer of student and postdoc organizations at Stanford, [SLAC](#), and [Fermilab](#)

CONFERENCES AND WORKSHOPS ORGANIZED

- 2018 [Probing the Nature of Dark Matter with LSST](#), Pittsburgh, PA
- 2017 [Dark Matter Complementarity Workshop at TeVPA 2017](#), Columbus, OH
- 2017 [Searching for Dwarf Companions of the Milky Way and Beyond](#), Tucson, AZ
- 2017 [DES Collaboration Meeting](#), Chicago, IL
- 2017 [LSST Dark Energy Science Collaboration Hack Week](#), Batavia, IL
- 2017 [DES Chicagoland Workshop](#), Batavia, IL
- 2015 [DES Chicagoland Workshop](#), Batavia, IL

TEACHING EXPERIENCE

- 2016–present *Phys. 112: Astronomy and the Universe*, University of Illinois at Chicago – Guest Lecturer
- 2014–present *Saturday Morning Physics*, Fermilab – Tour Guide Training
- 2010 *Phys. 17: Black Holes*, Stanford University – Head Teaching Assistant
- 2009 *Phys. 120: Intermediate Electricity & Magnetism*, Stanford University – Teaching Assistant
- 2009 *Phys. 25: Modern Physics*, Stanford University – Teaching Assistant
- 2005–2008 *Phys. 125: Solar System Astronomy*, Washington University in St. Louis – Observatory Assistant

STUDENT SUPERVISION AND MENTORING

2017–present	Sidney Mau – Undergraduate physics major and Provost Scholar at the University of Chicago. Searches for dwarf galaxies using BLISS, MagLiteS, and DES.
2017	Karen Perez Sarmiento – Undergraduate physics major at the Macalester College; summer SIST intern at Fermilab. R-process elements and neutron star mergers in dwarf galaxies.
2016–present	Nora Shipp – Ph.D. student in Astronomy & Astrophysics at the University of Chicago. Detection, measurement, and modeling of stellar streams using DES. Ms. Shipp is a DOE SCGSR Fellow and LSST Data Science Fellow.
2016	Brandon Buncher – Undergraduate physics major at the College of William and Mary; summer SULI intern at Fermilab. Characterization of the dwarf galaxy Tucana III. Mr. Buncher is now a Ph.D. student at University of Illinois, Urbana-Champaign working on machine learning and large-scale structure.
2014	Oscar Meza Aldama – Undergraduate summer intern at Fermilab from Benemerita Universidad. Developing machine-learning algorithms for star-galaxy separation in DES.
2014	Parisstacia Smith and Aeon Scott – High school interns in the Fermilab TARGET program. Visual inspection of DES data and data processing artifacts. Ms. Smith now attends Denison University.
2012	Andrea Klein – Stanford University undergraduate physics major. Undergraduate thesis on Milky Way dark matter subhalo abundances. Ms. Klein is now a machine learning engineer and has worked at Google and Apple.

RECENT PUBLIC PRESS

2018	“What’s the Universe Made Of?” – <i>Nova</i>
2018	“The Dark Energy Survey Revealed New Origins of Stars in Our Galaxy” – <i>Seeker</i>
2018	“New stellar streams confirm ‘melting pot’ history of the galaxy” – <i>Science Daily</i>
2018	“Rivers in the Sky” – <i>Symmetry Magazine</i>
2018	“New Stellar Streams Confirm ‘Melting Pot’ History of the Galaxy” - <i>NOAO Press Release</i>
2018	“Dark Energy Survey publicly releases first three years of data” – <i>Fermilab Press Release</i>
2017	“Seeing the Beginning of Time” – <i>Documentary by Thomas Lucas Productions</i>
2016	“Our Galactic Neighborhood” – <i>Symmetry Magazine</i>
2016	“The Booming Science of Dwarf Galaxies” – <i>Symmetry Magazine</i>
2015	“Gamma Rays May Be Clue on Dark Matter” – <i>The New York Times</i>
2015	“New Dwarf Galaxies Near Milky Way” – <i>Sky & Telescope</i>
2015	“Have Astronomers Finally Found Dark Matter?” – <i>National Geographic</i>
2015	“Dwarf Galaxies Loom Large in the Quest for Dark Matter” – <i>Kavli Science Spotlight</i>
2015	“Deciphering Gamma Rays from a Dwarf Galaxy” – <i>APS Physics Viewpoint</i>
2015	“DECam Pinpoints Asteroid” – <i>Symmetry Magazine</i>

PUBLIC OUTREACH

2018	International Stellar Stream Naming Competition
2017	Adler After Dark , Adler Planetarium
2016	DOE Laboratory Internship Networking, National Society of Black Physicists

- 2015–present Contributing Author to the [DES DArchive](#) (DES Results in a Nutshell)
- 2014–present Public Tour Guide, [Fermilab Saturday Morning Physics](#)
- 2013–present Contributing Author to [Dark Energy Detectives](#)
- 2012–2013 [Public Tour Guide](#), SLAC National Accelerator Laboratory
- 2012–2013 [Visualization Laboratory Operator](#), Kavli Institute for Particle Astrophysics and Cosmology
- 2010 [SLAC Kids' Day Volunteer](#)
- 2005–2008 [Public Observatory Operator](#), Crow Observatory, Washington University in St. Louis
- 2005 Public Tour Guide, American Museum of Natural History

SCIENTIFIC SOCIETY MEMBERSHIP

- 2015–present Member, American Astronomical Society (AAS)
- 2011–present Member, American Physical Society (APS)
- 2008 (inducted) Sigma Xi, Scientific Research Society
- 2008 (inducted) National Scholars, Honor Society

RECENT INVITED COLLOQUIA

- 2017 *“Astrophysics at Fermilab”*
Fermilab 50th Anniversary Symposium, Batavia, IL
- 2017 *“Searching for the Darkest Galaxies”*
Physics Colloquium at Indiana University, Bloomington, IN
- 2017 *“The Milky Way’s Dark Companions”*
KICP Colloquium at University of Chicago, Chicago, IL
- 2016 *“Searching for the Darkest Galaxies”*
Physics Colloquium at University of Illinois at Chicago, Chicago, IL

RECENT INVITED SEMINARS

- 2018 *“Small Galaxies, Big Science: Using Cosmic Surveys to Study the Fundamental Nature of Dark Matter”* Panofsky Seminar at SLAC National Accelerator Laboratory, Menlo Park, CA
- 2018 *“Small Galaxies, Big Science: The Booming Industry of Milky Way Satellite Galaxies”*
Astronomy Seminar at the Institute for Astronomy, Manoa, HI
- 2018 *“Small Galaxies, Big Science: Using Cosmic Surveys to Study the Fundamental Nature of Dark Matter”* Physics and Astronomy Seminar at the University of Hawaii, Manoa, HI
- 2018 *“Small Galaxies, Big Science: Using Cosmic Surveys to Study the Fundamental Nature of Dark Matter”* Physics Colloquium at the University of New Mexico, Albuquerque, NM
- 2018 *“Using Cosmic Surveys to Understand the Fundamental Nature of Dark Matter”*
Cosmology Seminar at the University of Pittsburgh, Pittsburgh, PA
- 2018 *“Small Galaxies, Big Science: Using Cosmic Surveys to Study the Fundamental Nature of Dark Matter”* Astronomy Seminar at Michigan State University, East Lansing, MI
- 2018 *“Using Cosmic Surveys to Understand the Fundamental Nature of Dark Matter”*
Research Progress Meeting at Lawrence Berkeley National Laboratory, Berkeley, CA
- 2018 *“Small Galaxies, Big Science: The Booming Industry of Milky Way Satellite Galaxies”*
Berkeley Cosmology Seminar, Berkeley, CA

- 2018 *“Using Cosmic Surveys to Understand the Fundamental Nature of Dark Matter”*
Physics Seminar at Indiana University, Bloomington, IN
- 2017 *“Probing Dark Matter with Dwarf Galaxies”*
Physics Seminar at Lawrence Livermore National Laboratory, Livermore, CA
- 2017 *“Searching for the Milky Way’s Dark Companions”*
HEP Seminar at Brookhaven National Lab, Brookhaven, NY
- 2016 *“Fundamental Physics with the Smallest Galaxies”*
CCAPP Seminar at the Ohio State University, Columbus, OH
- 2015 *“Searching for Dwarf Galaxies in Optical and Gamma Rays”*
Cosmology Seminar at Carnegie Mellon University, Pittsburgh, PA
- 2015 *“Searching for Milky Way Satellites with the Dark Energy Survey”*
Fermilab Wine & Cheese Seminar, Batavia, IL
- 2015 *“Searching for Dark Matter in Galactic Substructure”*
Fermilab Wine & Cheese Seminar, Batavia, IL
- 2014 *“Searching for Dark Matter with the Fermi Large Area Telescope”*
University of Chicago High Energy Physics Seminar, Chicago, IL

RECENT INVITED CONFERENCE TALKS

- 2018 *“Milky Way Science with the Dark Energy Survey”*
Special Session at 231st AAS Meeting, Washington, D.C.
- 2017 *“Searching for Milky Way Satellite Galaxies”*
Plenary talk at Barolo Astroparticle Meeting, Barolo, Italy
- 2017 *“Searching for Dark Matter in Dwarf Galaxies”*
Plenary talk at Aspen Winter Conference, Aspen, CA
- 2016 *“Dark Matter Results from Fermi”*
Overview talk at the Bloom Symposium, Menlo Park, CA
- 2016 *“DES and Fermi results on Dwarf Galaxies”*
Plenary talk at the 12th UCLA Dark Matter Conference, Los Angeles, CA
- 2015 *“Searching for Dwarf Spheroidal Galaxies with DES and the Fermi-LAT”*
Plenary talk at the 6th Fermi Symposium, Washington, DC
- 2015 *“Searching for Dwarf Spheroidal Galaxies”*
Plenary talk at the GMT Community Science Meeting, Monterey, CA
- 2015 *“Searching for Dwarf Spheroidal Galaxies”*
Mitchell Workshop on Collider and Dark Matter Physics, College Station, TX
- 2015 *“Searching for Milky Way Satellites with the Dark Energy Survey”*
“Hot Topics in Astrophysics” talk at the April APS Meeting, Baltimore, MD
- 2014 *“A Modified Likelihood Approach to Search for Faint Sources”*
Plenary talk at the 5th Fermi Symposium, Nagoya, Japan
- 2014 *“Searches for Dark Matter Annihilation in Dwarf Spheroidal Galaxies with the Fermi-LAT”*
Plenary talk at the 11th UCLA Dark Matter Conference, Los Angeles, CA

RECENT CONTRIBUTED TALKS

- 2017 *“Searching for Dwarf Spheroidal Galaxies with DES and the Fermi-LAT”*
TeV Particle Astrophysics (TeVPA), Colomubus, OH
- 2017 *“Searching for the Darkest Galaxies: Covering the Entire Southern Sky with DECam”*
TeV Particle Astrophysics (TeVPA), Colomubus, OH

- 2017 *“Searching for Milky Way Satellite Galaxies with DECam”*
American Physical Society DPF2017, Batavia, IL
- 2016 *“Searching for Dwarf Spheroidal Galaxies with DES and the Fermi-LAT”*
38th International Conference on High Energy Physics (ICHEP), Chicago, IL
- 2016 *“Using LSST to Probe the Fundamental Nature of Dark Matter”*
LSST Cross-Correlation Workshop, Brookhaven, NY
- 2015 *“DES and Fermi-LAT Observations of Milky Way Satellite Galaxies”*
KIPAC Tea Talk Seminar, Stanford CA
- 2015 *“Recent Results on Indirect Dark Matter Searches with Dwarf Galaxies”*
LHC Physics Center seminar at Fermilab, Batavia, IL
- 2014 *“Searching for Dark Matter Annihilation in the Smith High-Velocity Cloud”*
KIPAC tea talk seminar, Stanford CA
- 2014 *“Searching for Dark Matter Annihilation in the Smith High-Velocity Cloud”*
Contributed talk at the COSMO 2014 Meeting, Chicago IL
- 2014 *“Multivariate Classification”*
Chalk talk at the Fermilab Center for Particle Astrophysics, Batavia IL

Publication List

I have authored >100 publications, received >10,000 citations, and have an h-index of 57. I am an active member of the Fermi-LAT, DES, and LSST DESC Collaborations, which leads to many long author lists. Each collaboration has several classes of papers, some of which have alphabetized author lists. For clarity, I have highlighted publications in which I led the scientific analysis and/or writing. Please refer to the publication policies of these collaborations for more details: [Fermi-LAT Publication Policy](#), [DES Publication Policy](#), [LSST DESC Publication Policy](#).

Journal Abbreviations – PhRvL: *Physical Review Letters*; PhRvD: *Physical Review D*; JCAP: *Journal of Cosmology and Astroparticle Physics* ApJ: *The Astrophysical Journal*, MNRAS: *Monthly Notices of the Royal Astronomical Society*; AJ: *The Astronomical Journal*; PASP: *Publications of the Astronomical Society of the Pacific*

* – Indicates students I supervised on specific analyses.

PRIMARY CONTRIBUTOR

Publications where I was a primary contributor to the scientific analysis and/or writing.

1. N. Shipp*, A. Drlica-Wagner, E. Balbinot, et al., “Stellar Streams Discovered in the Dark Energy Survey”, submitted to ApJ (2018), [[arXiv:1801.03097](#)]. **Corresponding Author; DES Collaboration.**
2. **DES Collaboration:** T. Abbott et al., “The Dark Energy Survey Data Release 1”, submitted to ApJS (2018), [[arXiv:1801.03181](#)]. **Analysis Contributions; Paper Writing and Figures.**
3. **DES Collaboration:** E. Morganson et al., “The Dark Energy Survey Image Processing Pipeline”, accepted to PASP (2018), [[arXiv:1801.03177](#)]. **Analysis Contributions; Paper Writing and Figures.**
4. A. Drlica-Wagner, I. Sevilla-Noarbe, E. S. Rykoff, et al., “Dark Energy Survey Year 1 Results: Photometric Data Set for Cosmology”, accepted to ApJS (2017), [[arXiv:1708.01531](#)]. **Corresponding Author; Analysis Lead; DES Collaboration.**
5. J. Tiffenberg, M. Sofo-Haro, A. Drlica-Wagner, et al., “Single-Electron and Single-Photon Sensitivity with a Silicon Skipper CCD”, PhRvL **119**, 131802 (2017), [[arXiv:1706.00028](#)]. **Data Analysis; Astrophysical Applications.**
6. T. S. Li, J. D. Simon, A. Drlica-Wagner, et al., “Farthest Neighbor: The Distant Milky Way Satellite Eridanus II”, ApJ **838**, 8 (2017), [[arXiv:1611.05052](#)]. **Analysis Contributions; Paper Writing; DES Collaboration.**
7. J. D. Simon, T. S. Li, A. Drlica-Wagner, et al., “Nearest Neighbor: The Low-Mass Milky Way Satellite Tucana III”, ApJ **838**, 11 (2017), [[arXiv:1610.05301](#)]. **Analysis Contributions; Paper Writing; DES Collaboration.**
8. A. Albert, K. Bechtol, A. Drlica-Wagner, et al., “Searching for Dark Matter Annihilation in Recently Discovered Milky Way Satellites with Fermi-LAT”, ApJ **834**, 110 (2017), [[arXiv:1611.03184](#)]. **Corresponding Author; Analysis Lead; LAT Category II Paper; DES Collaboration.**
9. A. Drlica-Wagner, K. Bechtol, S. Allam, et al., “An Ultra-Faint Galaxy Candidate Discovered in Early Data from the Magellanic Satellites Survey”, ApJ **833**, L5 (2016), [[arXiv:1609.02148](#)]. **Corresponding Author; Analysis Lead; MagLiteS Collaboration.**
10. J. Najita, B. Willman, D. P. Finkbeiner, R. J. Foley, S. Hawley, et al., *Maximizing Science in the Era of LSST: A Community-Based Study of Needed US OIR Capabilities*, ch. 7, pp. 14–28. 2016. [[arXiv:1610.01661](#)]. **Chapter Author: “Mapping Galaxies to Dark Matter Halos”.**
11. **DES Collaboration:** T. Abbott et al., “The Dark Energy Survey: More Than Dark Energy - An Overview”, MNRAS **460**, 1270–1299 (2016), [[arXiv:1601.00329](#)]. **Milky Way Section Author.**

12. P. Melchior, E. Sheldon, **A. Drlica-Wagner**, E. S. Rykoff, et al., “Crowdsourcing Quality Control for Dark Energy Survey Images”, *Astronomy and Computing* 99–108 (2016), [[arXiv:1511.03391](#)]. **Contributions to software development and paper writing; DES Collaboration.**
13. **A. Drlica-Wagner**, K. Bechtol, E. S. Rykoff, et al., “Eight Ultra-faint Galaxy Candidates Discovered in Year Two of the Dark Energy Survey”, *ApJ* **813**, 109 (2015), [[arXiv:1508.03622](#)]. **Corresponding Author; Analysis Lead; DES Collaboration.**
14. J. D. Simon, **A. Drlica-Wagner**, T. S. Li, et al., “Stellar Kinematics and Metallicities in the Ultra-Faint Dwarf Galaxy Reticulum II”, *ApJ* **808**, 95 (2015), [[arXiv:1504.02889](#)]. **DES photometry and targeting; Paper writing; DES Collaboration.**
15. **A. Drlica-Wagner**, A. Albert, K. Bechtol, et al., “Search for Gamma-Ray Emission from DES Dwarf Spheroidal Galaxy Candidates with Fermi-LAT Data”, *ApJ* **809**, L4 (2015), [[arXiv:1503.02632](#)]. **Corresponding Author; Analysis Lead; LAT Category II Paper; DES Collaboration.**
16. K. Bechtol, **A. Drlica-Wagner**, E. Balbinot, et al., “Eight New Milky Way Companions Discovered in First-Year Dark Energy Survey Data”, *ApJ* **807**, 50 (2015), [[arXiv:1503.02584](#)]. **Corresponding Author; Analysis Lead; DES Collaboration.**
17. **Fermi-LAT Collaboration**: M. Ackermann et al., “Searching for Dark Matter Annihilation from Milky Way Dwarf Spheroidal Galaxies with Six Years of Fermi Large Area Telescope Data”, *PhRvL* **115**, 231301 (2015), [[arXiv:1503.02641](#)]. **Corresponding Author; Analysis Lead; LAT Category I Paper.**
18. **DES Collaboration**: M. R. Buckley, E. Charles, J. M. Gaskins, A. M. Brooks, **A. Drlica-Wagner**, et al., “Search for Gamma-ray Emission from Dark Matter Annihilation in the Large Magellanic Cloud with the Fermi Large Area Telescope”, *PhRv* **D91**, 102001 (2015), [[arXiv:1502.01020](#)]. **Analysis Framework Development; LAT Category II Paper.**
19. **A. Drlica-Wagner**, G. A. Gomez-Vargas, J. W. Hewitt, T. Linden, and L. Tibaldo, “Searching for Dark Matter Annihilation in the Smith High-Velocity Cloud”, *ApJ* **790**, 24 (2014), [[arXiv:1405.1030](#)]. **Corresponding Author; Analysis Lead; LAT Category II Paper.**
20. **Snowmass 2013 Cosmic Frontier Working Groups 1-4**: D. Bauer et al., “Dark Matter in the Coming Decade: Complementary Paths to Discovery and Beyond”, *Phys. Dark Univ.* **7-8**, 16–23 (2013), [[arXiv:1305.1605](#)]. **Indirect Detection Section Author.**
21. **Fermi-LAT Collaboration**: M. Ackermann et al., “Dark Matter Constraints from Observations of 25 Milky Way Satellite Galaxies with the Fermi Large Area Telescope”, *PhRv* **D89**, 042001 (2014), [[arXiv:1310.0828](#)]. **Corresponding Author; Analysis Lead; LAT Category I Paper.**
22. M. Cahill-Rowley, R. Cotta, **A. Drlica-Wagner**, et al., “Complementarity of Dark Matter Searches in the Phenomenological MSSM”, *PhRv* **D91**, 055011 (2015), [[arXiv:1405.6716](#)]. **LAT Data Analysis; LAT Category II Paper.**
23. **Fermi-LAT Collaboration**: M. Ackermann et al., “Search for Dark Matter Satellites using the Fermi-LAT”, *ApJ* **747**, 121 (2012), [[arXiv:1201.2691](#)]. **Corresponding Author; Analysis Lead; LAT Category I Paper.**
24. R. Cotta, **A. Drlica-Wagner**, S. Murgia, et al., “Constraints on the pMSSM from LAT Observations of Dwarf Spheroidal Galaxies”, *JCAP* **1204**, 016 (2012), [[arXiv:1111.2604](#)]. **Corresponding Author; LAT Data Analysis; LAT Category II Paper.**
25. **Fermi-LAT Collaboration**: M. Ackermann et al., “Constraining Dark Matter Models from a Combined Analysis of Milky Way Satellites with the Fermi Large Area Telescope”, *PhRvL* **107**, 241302 (2011), [[arXiv:1108.3546](#)]. **Analysis Lead; LAT Category I Paper.**
26. A. Mantz, S. Allen, H. Ebeling, D. Rapetti, and **A. Drlica-Wagner**, “The Observed Growth of Massive Galaxy Clusters II: X-ray Scaling Relations”, *MNRAS* **406**, 1773–1795 (2010), [[arXiv:0909.3099](#)]. **ROSAT Analysis Lead and Section Author.**

Publications that I facilitated as co-coordinator of the DES Milky Way working group.

1. **DES Collaboration:** E. Luque et al., “Deep SOAR follow-up photometry of two Milky Way outer-halo companions discovered with Dark Energy Survey”, submitted to MNRAS (2017), [[arXiv:1709.05689](#)].
2. **DES Collaboration:** D. Q. Nagasawa et al., “Chemical Abundance Analysis of Three α -Poor, Metal-Poor Stars in the Ultra-Faint Dwarf Galaxy Horologium I”, submitted to ApJ (2017), [[arXiv:1708.02290](#)].
3. **DES Collaboration:** T. T. Hansen et al., “An r -process Enhanced Star in the Dwarf Galaxy Tucana III”, ApJ **838**, 44 (2017), [[arXiv:1702.07430](#)].
4. **DES and MagLiteS Collaborations:** A. Pieres et al., “A Stellar Overdensity Associated with the Small Magellanic Cloud”, MNRAS **468**, 1349–1360 (2017), [[arXiv:1612.03938](#)].
5. **DES Collaboration:** E. Luque et al., “The Dark Energy Survey view of the Sagittarius stream: Discovery of two faint stellar system candidates”, MNRAS **468**, 97–108 (2017), [[arXiv:1608.04033](#)].
6. **DES Collaboration:** A. Pieres et al., “Physical Properties of Star Clusters in the Outer LMC as Observed by the Dark Energy Survey”, MNRAS **461**, 519541 (2016), [[arXiv:1512.01032](#)].
7. **DES Collaboration:** T. S. Li et al., “Discovery of a Stellar Overdensity in Eridanus-Phoenix in the Dark Energy Survey”, ApJ **817**, 135 (2016), [[arXiv:1509.04296](#)].
8. **DES Collaboration:** E. Luque et al., “Digging Deeper into the Southern Skies: a Compact Milky-Way Companion Discovered in First-Year Dark Energy Survey data”, MNRAS **458**, 603612 (2015), [[arXiv:1508.02381](#)].

CO-AUTHOR DES COLLABORATION

Publications that I have contributed to as a member of the DES Collaboration. First-tier authorship denotes significant contributions to paper writing, scientific analysis, and/or scientific validation.

1. **DES Collaboration:** D. Scolnic et al., “How Many Kilonovae Can Be Found in Past, Present, and Future Survey Data Sets?”, ApJ **852**, L3 (2018), [[arXiv:1710.05845](#)].
2. **DES Collaboration:** D. L. Burke et al., “Forward Global Photometric Calibration of the Dark Energy Survey”, AJ **155**, 41 (2018), [[arXiv:1706.01542](#)]. **First-Tier Author.**
3. **DES Collaboration:** T. M. C. Abbott et al., “Dark Energy Survey Year 1 Results: Measurement of the Baryon Acoustic Oscillation scale in the distribution of galaxies to redshift 1”, submitted to MNRAS (2017), [[arXiv:1712.06209](#)].
4. **DES Collaboration:** M. Soares-Santos et al., “The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. I. Dark Energy Camera Discovery of the Optical Counterpart”, ApJ **848**, 16 (2017), [[arXiv:1710.05459](#)]. **First-Tier Author.**
5. **LIGO, Virgo, DES, etc. Collaborations:** B. P. Abbott et al., “A gravitational-wave standard siren measurement of the Hubble constant”, *Nature* **551**, 85–88 (2017), [[arXiv:1710.05835](#)].
6. **DES Collaboration:** A. Palmese et al., “DECam and DES perspective of the GW170817 host, NGC 4993: indication for dynamically-driven formation of binary neutron star in early type galaxies”, ApJ **849**, 2 (2017), [[arXiv:1710.06748](#)].
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