

Tim Linden

POSTDOCTORAL FELLOW · THE OHIO STATE UNIVERSITY

Physics Research Building · 191 West Woodruff Ave · Columbus, OH 43210

☎ (330) 310-1836 | ✉ linden.70@osu.edu | 🏠 www.trlinden.com

Employment

The Ohio State University

Columbus, OH

POSTDOCTORAL FELLOW

July 2015 — Present

- Center for Cosmology and AstroParticle Physics Fellowship (July 2016 — Present)
- Einstein Postdoctoral Fellowship (July 2015 — June 2016)

University of Chicago

Chicago, IL

POSTDOCTORAL FELLOW

July 2013 — June 2015

- Einstein Postdoctoral Fellowship

Education

University of California, Santa Cruz

Santa Cruz, CA

PH.D. IN PHYSICS

September 2008 - June 2013

- Thesis: *Dark Matter Annihilation in the Galactic Center*
- Advisor: Stefano Profumo

Northwestern University

Evanston, IL

B.A. IN INTEGRATED SCIENCE PROGRAM, PHYSICS, MATHEMATICS

September 2004 — June 2008

Publications

64 articles and letters (58 accepted, 6 under review). Significant publications include:

Dark Kinetic Heating of Neutron Stars and An Infrared Window On WIMPs, SIMPs, and Pure Higgsinos

PRL 119, 131801

MASHA BARYAKHTAR, JOSEPH BRAMANTE, SHIRLEY WEISHI LI, TIM LINDEN, NIRMAL RAJ

arXiv: 1704.01577

Pulsar TeV Halos Explain the Diffuse TeV Excess Observed by Milagro

PRL 120, 121101

TIM LINDEN, BENJAMIN BUCKMAN

arXiv: 1707.01905

Cosmic-Ray Injection from Star-Forming Regions

PRL 117, 111101

ERIC CARLSON, TIM LINDEN, STEFANO PROFUMO

arXiv: 1510.04698

Detecting Dark Matter with Imploding Pulsars in the Galactic Center

PRL 113, 191301

JOSEPH BRAMANTE, TIM LINDEN

arXiv: 1405.1031

The Characterization of the Gamma-Ray Signal from the Central Milky Way: A Compelling Case for Annihilating Dark Matter

PDU 12 1 2016

TANSU DAYLAN, DOUG FINKBEINER, DAN HOOPER, TIM LINDEN, STEPHEN PORTILLO, NICK RODD, TRACY SLATYER

arXiv: 1402.6703

Probing the Pulsar Origin of the Anomalous Positron Fraction with AMS-02 and Atmospheric Cherenkov Telescopes

ApJ 772 18

TIM LINDEN, STEFANO PROFUMO

arXiv: 1304.1791

On the Origin of the Gamma Rays from the Galactic Center

PRD 84 123005

DAN HOOPER, TIM LINDEN

arXiv: 1110.0006

Accepted Proposals

Novel Diffuse Emission Models for the Central Molecular Zone

PRIMARY INVESTIGATOR

Fermi GI Cycle 10
October 2017 — September 2018

Using Fermi Dark Matter Annihilation Constraints to Probe the Early Universe

CO-INVESTIGATOR PI: ADRIENNE ERICKCEK

Fermi GI Cycle 10
October 2017 — September 2018

Revealing the Sun's Coronal Magnetic Fields with Gamma Rays

CO-INVESTIGATOR PI: ANNIKA PETER

Fermi GI Cycle 10
October 2017 — September 2018

Understanding Gamma-Ray Emission from the Galactic Center: Constraining the Millisecond Pulsar Population

CO-INVESTIGATOR PI: FABIO ANTONINI

Fermi GI Cycle 8
October 2015 — September 2016

The Smith Cloud: A High-Velocity Cloud Confined by Dark Matter

PRIMARY INVESTIGATOR

Fermi GI Cycle 6
August 2013 — July 2014

A Multiwavelength Model for Novel Physics in the Galactic Center

FELLOWSHIP RECIPIENT PI (CHICAGO): DAN HOOPER, PI (OHIO STATE): ANNIKA PETER

Einstein Fellowship
July 2013 — June 2016

The Small Magellanic Cloud - A Case Study of X-Ray Populations at Low Metallicity

CO-INVESTIGATOR PI: ANDREAS ZEZAS

Chandra Cycle 14
2013

Ultra-Luminous X-Ray Sources in the Most Metal-Poor Galaxies

CO-INVESTIGATOR PI: ANDREA PRESTWICH

Chandra Cycle 11
2010

Service & Outreach

Co-Chair of Local Organizing Committee

TEVPA 2016 INTERNATIONAL CONFERENCE

Fall 2017

Organizer and Lecturer

80TH COMPTON LECTURE SERIES

Fall 2014

Speaker

HUBBLE IMMERSION CIRCLE WEEKEND

Mar. 2014

Volunteer Scientist

ADLER PLANETARIUM

2013—14

Executive Committee Member

FERMILAB GRADUATE STUDENT ASSOCIATION

2010—11

Graduate Student Liason

FERMILAB USERS EXECUTIVE COMMITTEE

2010—11

Referee

PHYSICAL REVIEW LETTERS, PHYSICAL REVIEW D, THE ASTROPHYSICAL JOURNAL, MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, JOURNAL OF HIGH ENERGY PHYSICS, PHYSICS OF THE DARK UNIVERSE AND PHYSICS LETTERS B

2009 — Present

Teaching and Lecturing

80th Compton Lecture Series

Faculty Contact: Emil Martinec

LECTURER

Fall 2014

- Produced, organized, and presented nine weekly public lectures to approximately 75 people
- Lecture Series Title: *Shining Light on the Dark Side of the Universe*

Physics 116B (Mathematical Methods in Physics)

Primary Instructor: Stefano Profumo

TEACHING ASSISTANT

Winter 2012

- Led Weekly Recitation Sessions, held office hours, and graded exams.
- Topics included Differential Equations, Linear Algebra, Matrices, Eigenvectors and Eigenvalues

Physics 5A (Classical Mechanics)

Primary Instructor: David Smith

TEACHING ASSISTANT

Fall 2011

- Led Laboratory Portion of the Course, held office hours, and graded homework and exams.
- Topics Included kinematics, conservation of momenta and energy, simple harmonic motion.

Co-Advised Students

Ben Buckman

GRADUATE STUDENT, THE OHIO STATE UNIVERSITY

Faculty Advisor: Annika Peter

2015 — Present

Ke Fang

GRADUATE STUDENT, UNIVERSITY OF CHICAGO

Faculty Advisor: Angela Olinto

2014—2015

Miles Gray

UNDERGRADUATE STUDENT, UNIVERSITY OF CALIFORNIA, SANTA CRUZ

Faculty Advisor: Stefano Profumo

2012—2013

Eric Carlson

GRADUATE STUDENT, UNIVERSITY OF CALIFORNIA, SANTA CRUZ

Faculty Advisor: Stefano Profumo

2011—2016

References

Stefano Profumo

PROFESSOR OF PHYSICS — UNIVERSITY OF CALIFORNIA, SANTA CRUZ

- profumo@ucsc.edu
- (831) 459-3039

Thesis Advisor

John Beacom

PROFESSOR OF PHYSICS AND ASTRONOMY — THE OHIO STATE UNIVERSITY

- beacom.7@osu.edu
- (614) 247-8102

Dan Hooper

SCIENTIST — FERMILAB; ASSOCIATE PROFESSOR OF ASTRONOMY — UNIVERSITY OF CHICAGO

- dhooper@fnal.gov
- (630) 840-3758

Todd Thompson

PROFESSOR OF ASTRONOMY — THE OHIO STATE UNIVERSITY

- thompson@astronomy.ohio-state.edu
- (614) 292-7971

Full Presentation List

Slides from all talks are accessible at <http://trlinden.com/presentations.html>

4-11-18	”Towards Dark Matter Discovery” Workshop	<i>Chicago, IL</i>
4-4-18	HAWC General Meeting	<i>Online</i>
3-19-18	HEAD 2020 Decadal Meeting	<i>Chicago, IL</i>
3-6-18	University of Cincinnati HEP Seminar	<i>Cincinnati, OH</i>
2-22-18	2018 UCLA Dark Matter Workshop	<i>Los Angeles, CA</i>
1-31-18	University of Michigan LCTP Seminar	<i>Ann Arbor, MI</i>
1-10-18	American Astronomical Society 231st Meeting	<i>Washington D.C.</i>
11-28-17	University of Wisconsin, Madison NPAC Forum	<i>Madison, WI</i>
11-20-17	The Ohio State University HEP/AST Seminar	<i>Columbus, OH</i>
11-14-17	Michigan State University HEP/HET Seminar	<i>East Lansing, MI</i>
10-23-17	Three Elephants in the Gamma-Ray Sky Workshop	<i>Garmisch, Germany</i>
10-16-17	7th International Fermi Symposium	<i>Garmisch, Germany</i>
10-13-17	Columbus-Amsterdam-Paris-Stockholm Meeting	<i>Amsterdam, Netherlands</i>
8-8-17	TeVPA 2017	<i>Columbus, OH</i>
7-19-17	Radio Synchrotron Background Conference	<i>Richmond, VA</i>
7-6-17	Imperial College Brown Bag Seminar	<i>London, United Kingdom</i>
7-5-17	King’s College Astrophysics Seminar	<i>London, United Kingdom</i>
6-27-17	RISE Astrostatistics Meeting	<i>Heraklion, Greece</i>
6-20-17	Stockholm/Oskar Klein Colloquium	<i>Stockholm, Sweden</i>
6-14-17	LHC Results Forum	<i>Online</i>
6-13-17	GRAPPA Summer Seminar	<i>Amsterdam, Netherlands</i>
5-16-17	Baryon & Lepton Violation	<i>Cleveland, OH</i>
5-11-17	University of Maryland/JSI Special Seminar	<i>College Park, MD</i>
4-25-17	Solar Energetic Particles, Solar Modulation, and Space Radiation	<i>Washington D.C.</i>
3-3-17	Cosmic Rays, Pulsars, and Dark Matter	<i>Santa Fe, NM</i>
1-30-17	2017 APS April Meeting	<i>Washington D.C.</i>
11-03-16	Washington University Theory Seminar	<i>St. Louis, MO</i>
09-15-16	TeVPA 2016	<i>Geneva, Switzerland</i>
08-30-16	2016 Amsterdam Paris Stockholm Meeting	<i>Gouvieux, France</i>
08-16-16	CCAPP Summer Seminar	<i>Columbus, OH</i>
08-10-16	Cosmo 2016	<i>Ann Arbor, MI</i>
07-13-16	Gamma 2016	<i>Heidelberg, Germany</i>
07-07-16	CETUP 2016	<i>Deadwood, SD</i>
06-22-16	MACROS 2016	<i>State College, PA</i>
06-04-16	Workshop on Non-Standard Dark Matter	<i>Warsaw, Poland</i>
05-02-16	Dark Matter in the Milky Way	<i>Mainz, Germany</i>
02-18-16	12th UCLA Dark Matter Meeting	<i>Los Angeles, CA</i>
01-06-16	227th AAS Meeting	<i>Kissimmee, FL</i>
12-14-15	Aachen-Born-Heidelberg-Mainz Workshop	<i>Heidelberg, Germany</i>
12-07-15	Gamma Rays and Dark Matter	<i>Obergurgl, Austria</i>
11-23-15	University of California, Berkeley 4D Seminar	<i>Berkeley, CA</i>
11-16-15	Southern Methodist University High-Energy Seminar	<i>Online Seminar</i>
10-27-15	2015 Einstein Fellows Symposium	<i>Boston, MA</i>
10-06-15	Johns Hopkins University Cosmology Seminar	<i>Baltimore, MD</i>
09-24-15	Texas A&M Cosmology Seminar	<i>College Station, TX</i>
09-22-15	University of Illinois, Urbana-Champaign Astronomy Colloquium	<i>Urbana, IL</i>
06-16-15	CETUP 2015	<i>Deadwood, SD</i>
06-02-15	Recontres de Blois	<i>Blois, France</i>
04-29-15	Virginia Tech Center for Neutrino Physics Seminar	<i>Blacksburg, VA</i>
04-24-15	UC, Santa Cruz SCIPP 35th Anniversary Workshop	<i>Santa Cruz, CA</i>

02-05-15	Future Gamma-ray Observatories Workshop	<i>Greenbelt, MD</i>
01-20-15	Ohio State University CCAPP Seminar	<i>Columbus, OH</i>
11-21-14	15 Years of Chandra Symposium	<i>Boston, MA</i>
10-29-14	2014 Einstein Fellows Symposium	<i>Boston, MA</i>
10-24-14	5th International Fermi Symposium	<i>Nagoya, Japan</i>
10-17-14	Hong Kong University High Energy Physics Seminar	<i>Hong Kong, China</i>
10-15-14	Sungkyunkwan University High Energy Physics Seminar	<i>Suwon, South Korea</i>
10-10-14	IBS/MultiDark Dark Matter Workshop	<i>Daejeon, South Korea</i>
08-28-14	Cosmology 2014	<i>Chicago, IL</i>
08-18-14	High Energy Astrophysics Division Meeting 2014	<i>Chicago, IL</i>
07-04-14	International Conference on High Energy Physics	<i>Valencia, Spain</i>
06-27-14	TeVPA 2014	<i>Amsterdam, Netherlands</i>
06-16-14	University of Illinois, Urbana-Champaign TASC Seminar	<i>Urbana, IL</i>
05-22-14	2014 Sackler Symposium	<i>Boston, MA</i>
05-13-14	Latest Results in Dark Matter Searches	<i>Stockholm, Sweden</i>
04-15-14	Notre Dame High Energy Physics Seminar	<i>South Bend, IN</i>
04-14-14	University of Chicago High-Energy Physics Seminar	<i>Chicago, IL</i>
04-08-14	University of Chicago NSF Site Visit	<i>Chicago, IL</i>
03-13-14	KICP Executive Advisory Board Meeting	<i>Chicago, IL</i>
03-10-14	Fermilab Theory Seminar	<i>Batavia, IL</i>
02-27-14	Dark Matter 2014	<i>Los Angeles, CA</i>
02-18-14	University of Wisconsin, Madison High Energy Physics Seminar	<i>Madison, WI</i>
11-15-13	Kavli Institute for Cosmological Physics Postdoc Symposium	<i>Chicago, IL</i>
10-04-13	IAU 303: The Galactic Center	<i>Santa Fe, NM</i>
07-17-13	Probes of Dark Matter on Galaxy Scales	<i>Monterey, CA</i>
05-14-13	Kavli Institute for Theoretical Physics Dark Matter Workshop	<i>Santa Barbara, CA</i>
04-27-13	New Directions in Nuclear/Particle Physics and Cosmology	<i>Asilomar, CA</i>
04-22-13	University of California, Santa Cruz Cosmology Club	<i>Santa Cruz, CA</i>
03-06-13	Cosmic Frontiers / SNOMASS Workshop	<i>Palo Alto, CA</i>
01-30-13	Closing in on Dark Matter Workshop	<i>Aspen, CA</i>
12-05-12	McGill Astrophysics Seminar	<i>Montreal, Canada</i>
11-16-12	Kavli Institute of Cosmological Physics Seminar	<i>Chicago, IL</i>
11-12-12	Fermilab Astroparticle Seminar	<i>Batavia, IL</i>
11-08-12	Northwestern CIERA Seminar	<i>Evanston, IL</i>
11-02-12	4th International Fermi Symposium	<i>Monterey, CA</i>
10-12-12	Caltech TAPIR Seminar	<i>Pasadena, CA</i>
10-10-12	Irvine High Energy Astrophysics Seminar	<i>Irvine, CA</i>
07-24-12	Identification of Dark Matter	<i>Chicago, IL</i>
05-22-12	UC, Santa Cruz High Energy Physics Seminar	<i>Santa Cruz, CA</i>
05-07-12	Dark Matter Signatures in the Gamma-Ray Sky	<i>Austin, TX</i>
03-05-12	Pan-American Study Institute	<i>Buenos Aires, Argentina</i>
08-04-11	TeVPA 2011	<i>Stockholm, Sweden</i>
07-13-11	BeXRB 2011	<i>Valencia, Spain</i>
06-30-11	Fermilab Cross-Talk	<i>Batavia, IL</i>
05-10-11	3rd International Fermi Symposium	<i>Rome, Italy</i>
03-08-11	ESA Compact Binaries Conference	<i>Vina del Mar, Chile</i>
07-26-10	Identification of Dark Matter 2010	<i>Montpellier, France</i>
04-21-10	UC, Santa Cruz Cosmology Club	<i>Santa Cruz, CA</i>
04-13-10	Caltech TAPIR Seminar	<i>Pasadena, CA</i>
03-03-10	High Energy Astrophysics Division 2010	<i>Waikoloa, HI</i>
11-13-09	California APS Meeting	<i>Monterey, CA</i>
10-13-09	Inagural CCAPP Symposium	<i>Columbus, OH</i>
10-09-09	Northwestern University Astrophysics Seminar	<i>Evanston, IL</i>
09-23-09	Dark Matter and the Interstellar Medium	<i>Batavia, IL</i>

PUBLICATIONS – TIM LINDEN

- [1] Dan Hooper and Tim Linden, “Millisecond Pulsars, TeV Halos, and Implications For The Galactic Center Gamma-Ray Excess,” (2018), [arXiv:1803.08046 \[astro-ph.HE\]](#).
- [2] Tim Linden, Bei Zhou, John F. Beacom, Annika H. G. Peter, Kenny C. Y. Ng, and Qing-Wen Tang, “Evidence for a New Component of High-Energy Solar Gamma-Ray Production,” (2018), [arXiv:1803.05436 \[astro-ph.HE\]](#).
- [3] Dan Hooper and Tim Linden, “Measuring the Local Diffusion Coefficient with H.E.S.S. Observations of Very High-Energy Electrons,” (2017), [arXiv:1711.07482 \[astro-ph.HE\]](#).
- [4] Richard Bartels, Dan Hooper, Tim Linden, Siddharth Mishra-Sharma, Nicholas L. Rodd, Benjamin R. Safdi, and Tracy R. Slatyer, “Comment on ”Characterizing the population of pulsars in the Galactic bulge with the *Fermi* Large Area Telescope” [arXiv:1705.00009v1],” (2017), [arXiv:1710.10266 \[astro-ph.HE\]](#).
- [5] Tim Linden and Benjamin J. Buckman, “Pulsar TeV Halos Explain the TeV Excess Observed by Milagro,” *Phys. Rev. Lett.* **120**, 121101 (2018), [arXiv:1707.01905 \[astro-ph.HE\]](#).
- [6] Joseph Bramante, Tim Linden, and Yu-Dai Tsai, “Searching for dark matter with neutron star mergers and quiet kilonovae,” *Phys. Rev.* **D97**, 055016 (2018), [arXiv:1706.00001 \[hep-ph\]](#).
- [7] Dan Hooper, Ilias Cholis, and Tim Linden, “TeV Gamma Rays From Galactic Center Pulsars,” (2017), [arXiv:1705.09293 \[astro-ph.HE\]](#).
- [8] Ke Fang, Meng Su, Tim Linden, and Kohta Murase, “IceCube and HAWC constraints on very-high-energy emission from the Fermi bubbles,” *Phys. Rev.* **D96**, 123007 (2017), [arXiv:1704.03869 \[astro-ph.HE\]](#).
- [9] Masha Baryakhtar, Joseph Bramante, Shirley Weishi Li, Tim Linden, and Nirmal Raj, “Dark Kinetic Heating of Neutron Stars and An Infrared Window On WIMPs, SIMPs, and Pure Higgsinos,” *Phys. Rev. Lett.* **119**, 131801 (2017), [arXiv:1704.01577 \[hep-ph\]](#).
- [10] Tim Linden, Katie Auchettl, Joseph Bramante, Ilias Cholis, Ke Fang, Dan Hooper, Tanvi Karwal, and Shirley Weishi Li, “Using HAWC to Discover Invisible Pulsars,” *Phys. Rev.* **D96**, 103016 (2017), [arXiv:1703.09704 \[astro-ph.HE\]](#).
- [11] Dan Hooper, Ilias Cholis, Tim Linden, and Ke Fang, “HAWC Observations Strongly Favor Pulsar Interpretations of the Cosmic-Ray Positron Excess,” *Phys. Rev.* **D96**, 103013 (2017), [arXiv:1702.08436 \[astro-ph.HE\]](#).
- [12] Ilias Cholis, Dan Hooper, and Tim Linden, “Possible Evidence for the Stochastic Acceleration of Secondary Antiprotons by Supernova Remnants,” *Phys. Rev.* **D95**, 123007 (2017), [arXiv:1701.04406 \[astro-ph.HE\]](#).
- [13] Daryl Haggard, Craig Heinke, Dan Hooper, and Tim Linden, “Low Mass X-Ray Binaries in the Inner Galaxy: Implications for Millisecond Pulsars and the GeV Excess,” *JCAP* **1705**, 056 (2017), [arXiv:1701.02726 \[astro-ph.HE\]](#).

- [14] Tim Linden, “Star-Forming Galaxies Significantly Contribute to the Isotropic Gamma-Ray Background,” *Phys. Rev.* **D96**, 083001 (2017), [arXiv:1612.03175 \[astro-ph.HE\]](#).
- [15] Mattia Fornasa *et al.*, “Angular power spectrum of the diffuse gamma-ray emission as measured by the Fermi Large Area Telescope and constraints on its dark matter interpretation,” *Phys. Rev.* **D94**, 123005 (2016), [arXiv:1608.07289 \[astro-ph.HE\]](#).
- [16] Dan Hooper and Tim Linden, “The Gamma-Ray Pulsar Population of Globular Clusters: Implications for the GeV Excess,” *JCAP* **1608**, 018 (2016), [arXiv:1606.09250 \[astro-ph.HE\]](#).
- [17] Linda M. Carpenter, Russell Colburn, Jessica Goodman, and Tim Linden, “Indirect Detection Constraints on s and t Channel Simplified Models of Dark Matter,” *Phys. Rev.* **D94**, 055027 (2016), [arXiv:1606.04138 \[hep-ph\]](#).
- [18] Dan Hooper, Tim Linden, and Alejandro Lopez, “Radio Galaxies Dominate the High-Energy Diffuse Gamma-Ray Background,” *JCAP* **1608**, 019 (2016), [arXiv:1604.08505 \[astro-ph.HE\]](#).
- [19] Tim Linden, Nicholas L. Rodd, Benjamin R. Safdi, and Tracy R. Slatyer, “High-energy tail of the Galactic Center gamma-ray excess,” *Phys. Rev.* **D94**, 103013 (2016), [arXiv:1604.01026 \[astro-ph.HE\]](#).
- [20] Eric Carlson, Tim Linden, and Stefano Profumo, “Improved Cosmic-Ray Injection Models and the Galactic Center Gamma-Ray Excess,” *Phys. Rev.* **D94**, 063504 (2016), [arXiv:1603.06584 \[astro-ph.HE\]](#).
- [21] Bridget Bertoni, Dan Hooper, and Tim Linden, “Is The Gamma-Ray Source 3FGL J2212.5+0703 A Dark Matter Subhalo?” *JCAP* **1605**, 049 (2016), [arXiv:1602.07303 \[astro-ph.HE\]](#).
- [22] Joseph Bramante and Tim Linden, “On the r -Process Enrichment of Dwarf Spheroidal Galaxies,” *Astrophys. J.* **826**, 57 (2016), [arXiv:1601.06784 \[astro-ph.HE\]](#).
- [23] Ilias Cholis, Dan Hooper, and Tim Linden, “A Predictive Analytic Model for the Solar Modulation of Cosmic Rays,” *Phys. Rev.* **D93**, 043016 (2016), [arXiv:1511.01507 \[astro-ph.SR\]](#).
- [24] Eric Carlson, Tim Linden, and Stefano Profumo, “Cosmic-Ray Injection from Star-Forming Regions,” *Phys. Rev. Lett.* **117**, 111101 (2016), [arXiv:1510.04698 \[astro-ph.HE\]](#).
- [25] Tim Linden, “Known Radio Pulsars Do Not Contribute to the Galactic Center Gamma-Ray Excess,” *Phys. Rev.* **D93**, 063003 (2016), [arXiv:1509.02928 \[astro-ph.HE\]](#).
- [26] Ke Fang and Tim Linden, “Cluster Mergers and the Origin of the ARCADE-2 Excess,” *JCAP* **1610**, 004 (2016), [arXiv:1506.05807 \[astro-ph.HE\]](#).
- [27] Ilias Cholis, Carmelo Evoli, Francesca Calore, Tim Linden, Christoph Weniger, and Dan Hooper, “The Galactic Center GeV Excess from a Series of Leptonic Cosmic-Ray Outbursts,” *JCAP* **1512**, 005 (2015), [arXiv:1506.05119 \[astro-ph.HE\]](#).
- [28] Bridget Bertoni, Dan Hooper, and Tim Linden, “Examining The Fermi-LAT Third Source Catalog In Search Of Dark Matter Subhalos,” *JCAP* **1512**, 035 (2015), [arXiv:1504.02087 \[astro-ph.HE\]](#).

- [29] Dan Hooper and Tim Linden, “On The Gamma-Ray Emission From Reticulum II and Other Dwarf Galaxies,” *JCAP* **1509**, 016 (2015), [arXiv:1503.06209 \[astro-ph.HE\]](#).
- [30] Manoj Kaplinghat, Tim Linden, and Hai-Bo Yu, “Galactic Center Excess in γ Rays from Annihilation of Self-Interacting Dark Matter,” *Phys. Rev. Lett.* **114**, 211303 (2015), [arXiv:1501.03507 \[hep-ph\]](#).
- [31] Tassos Fragos, Tim Linden, Vassiliki Kalogera, and Panos Sklias, “On the Formation of Ultraluminous X-ray Sources with Neutron Star Accretors: the Case of M82 X-2,” *Astrophys. J.* **802**, L5 (2015), [arXiv:1501.02679 \[astro-ph.HE\]](#).
- [32] Ke Fang and Tim Linden, “Anisotropy of the extragalactic radio background from dark matter annihilation,” *Phys. Rev.* **D91**, 083501 (2015), [arXiv:1412.7545 \[astro-ph.HE\]](#).
- [33] Dan Hooper, Tim Linden, and Philipp Mertsch, “What Does The PAMELA Antiproton Spectrum Tell Us About Dark Matter?” *JCAP* **1503**, 021 (2015), [arXiv:1410.1527 \[astro-ph.HE\]](#).
- [34] Eric Carlson, Dan Hooper, and Tim Linden, “Improving the Sensitivity of Gamma-Ray Telescopes to Dark Matter Annihilation in Dwarf Spheroidal Galaxies,” *Phys. Rev.* **D91**, 061302 (2015), [arXiv:1409.1572 \[astro-ph.HE\]](#).
- [35] Ilias Cholis, Dan Hooper, and Tim Linden, “A Critical Reevaluation of Radio Constraints on Annihilating Dark Matter,” *Phys. Rev.* **D91**, 083507 (2015), [arXiv:1408.6224 \[astro-ph.HE\]](#).
- [36] Ilias Cholis, Dan Hooper, and Tim Linden, “Challenges in Explaining the Galactic Center Gamma-Ray Excess with Millisecond Pulsars,” *JCAP* **1506**, 043 (2015), [arXiv:1407.5625 \[astro-ph.HE\]](#).
- [37] Ilias Cholis, Dan Hooper, and Tim Linden, “A New Determination of the Spectra and Luminosity Function of Gamma-Ray Millisecond Pulsars,” *ArXiv e-prints* (2014), [arXiv:1407.5583 \[astro-ph.HE\]](#).
- [38] Tim Linden, “Circular Polarization of Pulsar Wind Nebulae and the Cosmic-Ray Positron Excess,” *Astrophys. J.* **799**, 200 (2015), [arXiv:1406.6060 \[astro-ph.HE\]](#).
- [39] Joseph Bramante and Tim Linden, “Detecting Dark Matter with Imploding Pulsars in the Galactic Center,” *Phys. Rev. Lett.* **113**, 191301 (2014), [arXiv:1405.1031 \[astro-ph.HE\]](#).
- [40] Alex Drlica-Wagner, German A. Gómez-Vargas, Jack W. Hewitt, Tim Linden, and Luigi Tibaldo, “Searching for Dark Matter Annihilation in the Smith High-velocity Cloud,” *ApJ* **790**, 24 (2014), [arXiv:1405.1030 \[astro-ph.HE\]](#).
- [41] Ke Fang, Toshihiro Fujii, Tim Linden, and Angela V. Olinto, “Is the Ultra-high Energy Cosmic-Ray Excess Observed by the Telescope Array Correlated with IceCube Neutrinos?” *ApJ* **794**, 126 (2014), [arXiv:1404.6237 \[astro-ph.HE\]](#).
- [42] Tansu Daylan, Douglas P. Finkbeiner, Dan Hooper, Tim Linden, Stephen K. N. Portillo, Nicholas L. Rodd, and Tracy R. Slatyer, “The characterization of the gamma-ray signal from the central Milky Way: A case for annihilating dark matter,” *Phys. Dark Univ.* **12**, 1–23 (2016), [arXiv:1402.6703 \[astro-ph.HE\]](#).

- [43] Eric Carlson, Adam Coogan, Tim Linden, Stefano Profumo, Alejandro Ibarra, and Sebastian Wild, “Anti-helium from dark matter,” *PRD* **89**, 076005 (2014), [arXiv:1401.2461 \[hep-ph\]](#).
- [44] Manoj Kaplinghat, Ryan E. Keeley, Tim Linden, and Hai-Bo Yu, “Tying Dark Matter to Baryons with Self-Interactions,” *Physical Review Letters* **113**, 021302 (2014), [arXiv:1311.6524](#).
- [45] Dan Hooper, Ilias Cholis, Tim Linden, Jennifer M. Siegal-Gaskins, and T. R. Slatyer, “Millisecond pulsars cannot account for the inner Galaxy’s GeV excess,” *PRD* **88**, 083009 (2013), [arXiv:1305.0830 \[astro-ph.HE\]](#).
- [46] Eric Carlson, Tim Linden, Stefano Profumo, and Christoph Weniger, “Clustering analysis of the morphology of the 130 GeV gamma-ray feature,” *PRD* **88**, 043006 (2013), [arXiv:1304.5524 \[astro-ph.HE\]](#).
- [47] Tim Linden and Stefano Profumo, “Probing the Pulsar Origin of the Anomalous Positron Fraction with AMS-02 and Atmospheric Cherenkov Telescopes,” *ApJ* **772**, 18 (2013), [arXiv:1304.1791 \[astro-ph.HE\]](#).
- [48] Eric Carlson, Dan Hooper, Tim Linden, and Stefano Profumo, “Testing the dark matter origin of the WMAP-Planck haze with radio observations of spiral galaxies,” *JCAP* **7**, 026 (2013), [arXiv:1212.5747 \[astro-ph.CO\]](#).
- [49] Andrea H. Prestwich, Maria Tsantaki, Andreas Zezas, Floyd Jackson, Timothy P. Roberts, Ryan Foltz, Tim Linden, and Vassiliki Kalogera, “Ultra-luminous X-Ray Sources in the Most Metal Poor Galaxies,” *ApJ* **769**, 92 (2013), [arXiv:1302.6203 \[astro-ph.HE\]](#).
- [50] Dan Hooper and Tim Linden, “Are lines from unassociated gamma-ray sources evidence for dark matter annihilation?” *PRD* **86**, 083532 (2012), [arXiv:1208.0828 \[astro-ph.HE\]](#).
- [51] Tim Linden and Stefano Profumo, “Exploring the Nature of the Galactic Center γ -Ray Source with the Cherenkov Telescope Array,” *ApJ* **760**, 23 (2012), [arXiv:1206.4308 \[astro-ph.HE\]](#).
- [52] Stefano Profumo and Tim Linden, “Gamma-ray lines in the Fermi data: is it a bubble?” *JCAP* **7**, 011 (2012), [arXiv:1204.6047 \[astro-ph.HE\]](#).
- [53] Tim Linden, Elizabeth Lovegrove, and Stefano Profumo, “The Morphology of Hadronic Emission Models for the Gamma-Ray Source at the Galactic Center,” *ApJ* **753**, 41 (2012), [arXiv:1203.3539 \[astro-ph.HE\]](#).
- [54] Dan Hooper, Alexander V. Belikov, Tesla E. Jeltema, Tim Linden, Stefano Profumo, and Tracy R. Slatyer, “The isotropic radio background and annihilating dark matter,” *PRD* **86**, 103003 (2012), [arXiv:1203.3547 \[astro-ph.CO\]](#).
- [55] Andrea H. Prestwich, Jose L. Galache, Tim Linden, Vassiliki Kalogera, Andreas Zezas, Timothy P. Roberts, Roy Kilgard, Anna Wolter, and Ginerva Trinchieri, “Chandra Observations of the Collisional Ring Galaxy NGC 922,” *ApJ* **747**, 150 (2012).
- [56] M. Ackermann and et al., “Anisotropies in the diffuse gamma-ray background measured by the Fermi LAT,” *PRD* **85**, 083007 (2012), [arXiv:1202.2856 \[astro-ph.HE\]](#).
- [57] Tim Linden, Francesca Valsecchi, and Vassiliki Kalogera, “On the Rarity of X-Ray Binaries with Naked Helium Donors,” *ApJ* **748**, 114 (2012), [arXiv:1111.5012 \[astro-ph.GA\]](#).

- [58] Dan Hooper and Tim Linden, “Origin of the gamma rays from the Galactic Center,” *PRD* **84**, 123005 (2011), [arXiv:1110.0006 \[astro-ph.HE\]](#).
- [59] Tim Linden, Dan Hooper, and Farhad Yusef-Zadeh, “Dark Matter and Synchrotron Emission from Galactic Center Radio Filaments,” *ApJ* **741**, 95 (2011), [arXiv:1106.5493 \[astro-ph.HE\]](#).
- [60] Dan Hooper and Tim Linden, “Gamma rays from the Galactic center and the WMAP haze,” *PRD* **83**, 083517 (2011), [arXiv:1011.4520 \[astro-ph.HE\]](#).
- [61] Tim Linden, Vassiliki Kalogera, Jeremy F. Sepinsky, Andrea Prestwich, Andreas Zezas, and Jay S. Gallagher, “The Effect of Starburst Metallicity on Bright X-ray Binary Formation Pathways,” *ApJ* **725**, 1984–1994 (2010), [arXiv:1005.1639 \[astro-ph.CO\]](#).
- [62] Tim Linden, Stefano Profumo, and Brandon Anderson, “Morphology of the Galactic dark matter synchrotron emission with self-consistent cosmic-ray diffusion models,” *PRD* **82**, 063529 (2010), [arXiv:1004.3998 \[astro-ph.GA\]](#).
- [63] Tim Linden and Stefano Profumo, “Systematic Effects in Extracting a ”Gamma-ray Haze” from Spatial Templates,” *ApJL* **714**, L228–L232 (2010), [arXiv:1003.0002 \[astro-ph.GA\]](#).
- [64] Tim Linden, Jeremy Sepinsky, Vassiliki Kalogera, and Krzysztof Belczynski, “Probing Electron-Capture Supernovae: X-Ray Binaries in Starbursts,” *ApJ* **699**, 1573–1577 (2009), [arXiv:0807.1097](#).