Ting Li

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Research Interests

Near-field Cosmology, Galactic Archaeology, Dark Matter, Dwarf Galaxies, Stellar Streams, Metal-poor Stars, Stellar Populations, Ground-based Instrumentation, Big Data and Survey Science.

Employment

Assistant Professor — 2021 –
Department of Astronomy and Astrophysics, University of Toronto
Toronto, Canada

NASA Hubble Fellowship Program Einstein Fellow, Carnegie-Princeton Fellow — 2019 – 2021
Carnegie Observatories, Carnegie Institution for Science
Pasadena, California, USA
Department of Astrophysical Sciences, Princeton University
Princeton, New Jersey, USA

Leon M. Lederman Fellow in Experimental Physics — 2016 – 2019
Fermi National Accelerator Laboratory
Batavia, Illinois, USA

Research Associate — 2011 – 2016
Department of Physics & Astronomy, Texas A&M University
College Station, Texas, USA

Education

Ph.D., Physics, Texas A&M University, Texas, USA — 2010 - 2016
Thesis: *Exploring Milky Way Halo Substructures with Large-area Sky Surveys*
Advisors: *Dr. Darren L. DePoy, Dr. Jennifer L. Marshall* (Co-chair)

M.S., Space Science and Technology (SpaceMaster – Erasmus Mundus Course) — 2008 - 2010
Luleå University of Technology, Kiruna, Sweden
Université Paul Sabatier Toulouse III, Toulouse, France
Thesis: *Design of the High Energy Particle Instrument for Electrons for the Energization and Radiation in Geospace Mission*
Advisor: *Masafumi Hirahana, University of Tokyo / JAXA*

B.S., Physics, Fudan University, Shanghai, China — 2004 - 2008
Thesis: *Study of Quasar Accretion Disk with Microlensing*
Advisor: *Feng Yuan, Shanghai Astronomical Observatory*

Minor, Diplomacy, Fudan University, Shanghai, China — 2004 - 2008

Grant

Science Projects

Canada NSERC Alliance International Catalyst Grant (PI, **$25,000 CAD**) 2023 – 2024
Towards a Unified Framework for Dwarf Galaxy Kinematics

Univ. of Toronto Data Science Institute Catalyst Grant (Co-PI, **$200,000 CAD**) 2023 – 2025
Spectroscopy by the Millions: A Fast, Reproducible Framework to Yield Chemical Compositions of 4 Million Stars

Univ. of Toronto Connaught New Researcher Grant (PI, **$20,000 CAD**) 2022 – 2024
Probe the Nature of Dark Matter with Milky Way's Satellite Galaxies

Australia research Council (Co-I, **$700,000 AUD**) 2022 – 2026
Seeing Dark with Light: Revealing the Milky Way with Stellar Stream

Canada NSERC Discovery Grant (PI, **$155,000 CAD**) 2022 – 2027
Near Field Cosmology w/ Milky Way's Satellite Galaxies & Stellar Streams

NASA Hubble Fellowship Program (Science PI, **$340,000 USD**) 2019 – 2021
Constraining Dark Matter with Stellar Streams and Dwarf Galaxies

Instrumentation Projects

Univ. of Toronto XSeed Joint Seed Grant (Co-PI, **$120,000 CAD**) 2023 – 2025
Constructing the human olfactory system ex vivo

Dunlap Seed Fund (Co-PI, **$75,000 CAD**) 2023 – 2024
Investigating Scientific CMOS Detectors for Astronomical Application

Canada CFI/JELF Grant (PI, **$350,000 CAD**) 2022 – 2027
An Advanced Optical Instrumentation Laboratory For the Development of the Next Generation Spectroscopic Surveys

Student Mentorship

Only students who have publications under my supervision are listed here. In addition to this list, I have mentored $\sim$ 10 undergrads at U. of Toronto in 2021-2024

Grace Yu (Undergrad at UToronto) 2022 –
- Publication 91 in "Selected Refereed Publication"

Mairead Heiger (Graduate at UToronto) 2022 –
- Publication 88 in "Selected Refereed Publication"

Jordan Bruce (Former undergrad at UToronto; now graduate at Indiana) 2021 – 2023
- Publication 80 in "Selected Refereed Publication" list

William Cerny (Former undergrad at UChicago; now graduate at Yale) 2020 –
- Publication 74 & 84 in "Selected Refereed Publication" list

Peter Ferguson (Former graduate at Texas A&M; now postdoc at UW Madison) 2019 – 2021
- Publication 64 in "Selected Refereed Publication" list

Sydney Jenkins (Former undergrad at UChicago; now graduate at MIT) 2018 – 2021
- Publication 60 in "Selected Refereed Publication" list

Nora Shipp (Former graduate at UChicago; now postdoc at MIT) 2017 – 2021
- Publication 26 & 38 & 62 in "Selected Refereed Publication" list

Daniel Nagasawa (Former graduate student at Texas A&M) 2015 – 2018
- Publication 23 in "Selected Refereed Publication" list

Honors & Awards

Dorothy Shoichet Women Faculty in Science Award of Excellence	2023
NASA Hubble Fellowship	2019 – 2021
Carnegie-Princeton Fellowship	2019 – 2021
KICP Associate Fellow, University of Chicago	2016 – 2019
Leon M. Lederman Fellow in Experiment Physics	2016 – 2019
Mitchell Institute Graduate Fellowship	2015 – 2016
Dr. Chia-Lai Wang Memorial Scholarship	2013 – 2014
Erasmus Mundus Scholarship	2008 – 2010
Graduated with First - Class Student, Fudan Univeristy	2008
People's Scholarship, Fudan University	2004 – 2008

Major Scientific Collaboration Involvement

Dark Energy Spectroscopic Instrument (DESI)
- Milky Way Working Group (WG) Chair 2022-now – a WG with about 50 active members
- Builder since 2023
- Member since 2016

Dark Energy Survey (DES)
- Milky Way Working Group Chair 2018-2021 – a WG with about 40 active members
- Builder since 2015
- Member since 2012

Southern Stellar Stream Spectroscopic Survey (S5)
- Leader/Founder since 2018 – a group of about 40 active members

Euclid Consortium
- Member since 2023

SDSS-V
- Member since 2021

DECam Local Volume Exploration (DELVE)
- Member since 2018

LSST Dark Energy Science Collaboration (DESC)
- Member since 2016

Service and Leadership

Roman 2022 Peer Review Penalist	2023
Canadian representative on the CFHT SAC	2023 – 2027
CASTOR Science Team Member	2022 –
Canadian Time Allocation Committee for Gemini and CFHT	2022 – 2024
HST Cycle 30 Peer Review Panelist	2022
DESI Publication Board	2021 – 2022
Canadian Rep on the MSE Science Advisory Group	2021 –
TMT/WFOS Science Team Member	2021 –
Group Leader, Dark Matter Group for Maunekea Spectroscopic Explorer	2018 – 2022
Group Leader, DES Chromatic Correction and Interstellar Reddening Task Force	2017 – 2019
DES Early Career Scientist Committee	2016 – 2018
Referee/reviewer for Nature, ApJ, ApJL, MNRAS, Astronomy & Astrophysics	2015 –

Public Outreach

Presenter, Astronomy on Tap	2018 – 2022
Lecturer, Fermilab Lifelong Learning Institute (LLI) Program	2018 – 2019
Lecturer, Fermilab Saturday Morning Physics for High School Students	2017 – 2019
Coordinator, Fermilab Saturday Morning Physics for High School Students	2016 – 2019
E/PO representative, Dark Energy Survey	2014 – 2016
Coordinator, Science Olympiad	2014
Instructor, "Expanding Your Horizons" Workshop	2012
Organizer, Texas A&M Physics and Astronomy Festival	2011 – 2014
Organizer, Texas A&M Star Parties	2011 – 2013

Observation, Data Reduction & Instrumentation Experience

Contribution to DES:
- Commissioning and Operation, Photometric Calibration, Data Release
- Designed and built the Atmospheric Transmission Monitoring Camera (aTmCam), including 100+ nights of prototype testing and instrument commissioning
- Earned **DES builder status (authorship)** and **personal data rights** since 2015

Contribution to DESI:
- Active Optics System on Focus and Alignment for DESI
- Target selection and survey planning for Milky Way Survey
- Earned **DESI external participant status** since 2019
- Earned **DESI Builder status** since 2023

Assembled over 80 Instrument Collimators of the Visible Integral-Field Replicable Unit Spectrographs for the Hobby-Eberly Telescope Dark Energy Experiment (HETDEX)

Extensive observing experience:
- Optical imaging: Blanco(4m)/DECam (80+ nights)
- Optical spectroscopy: Magellan(6.5m)/IMACS (60+ nights), Magellan(6.5m)/MIKE (20+ nights), Magellan(6.5m)/M2FS (8 nights); McDonald Observatory, 2.1m/ES2 (30+ nights), 2.7m/VIRUS-P (9 nights).
- **Served as PI or co-PI for over 100 nights on 4m–8m class telescopes, including 100+ nights on Anglo-Australian Telescope, 40+ nights on Magellan, and 100+ hours on VLT**

Selected Recent Conferences, Seminars, Colloquia (past 5 years)

43. Invited Astroseminar Talk, Waterloo Centre for Astrophysics, University of Waterloo, ON, Mar 2024
42. Colloquium, Department of Astronomy, Ohio State University, Columbus, OH, Jan 2024
41. Colloquium, Department of Astronomy and Physics, Saint Mary's University, Halifax, NS, Nov 2023
40. Colloquium, Department of Physics, Engineering Physics & Astronomy, Queen's University, Kingston, ON, Oct 2023
39. Colloquium, Department of Astronomy, UC Berkeley, Berkeley, CA, Sept 2023
38. Colloquium, IAS/Department of Astrophysical Sciences, Princeton University, Princeton, NJ, Sept 2023
37. Contributed Talk, Workshop "Great Lakes Clusters and Streams", University of Michigan, Ann Arbor, MI, Aug 2023
36. Contributed Talk, Conference "MODEST-23: Star Clusters in the Post-Pandemic Era", Northwestern University, Evanston, IL, Aug 2023

35. Invited Plenary Talk, DESI Collaboration Meeting, Durham University, Durham, UK, Jul 2023
34. Invited Seminar Talk, Durham University, UK, Jul 2023
33. Invited Seminar Talk, University of Surrey, UK, Jul 2023
32. Colloquium, Kapteyn Astronomical Institute, University of Groningen, the Netherlands, Jul 2023
31. Colloquium, Leiden Observatory, Leiden University, the Netherlands, Jul 2023
30. Invited Review Talk, Pollica Workshop "Self-Interacting Dark Matter: Models, Simulations and Signals", Pollica, Italy, Jun 2023
29. Colloquium, National Astronomical Observatories of China (NAOC), Beijing, China, Jun 2023
28. Colloquium, The Kavli Institute for Astronomy and Astrophysics (KIAA), Peking University, Beijing, China, Jun 2023
27. Invited Topical Talk, IAU Symposium 379 "Dynamical Masses of Local Group Galaxies", Potsdam, Germany, Mar, 2023
26. Invited Virtual (Science & Diversity) Seminar, AAS Division Dynamical Astronomy Community Seminar (Link to Talk), Mar 16, 2023
25. Invited Seminar, University of Victoria, Victoria, BC, Feb 2023
24. Invited Seminar, National Research Council of Canada's Herzberg Astronomy and Astrophysics Research Centre, Victoria, BC, Feb 2023
23. Colloquium, Department of Physics, University of Michigan, Ann Arbor, MI, Nov 2022
22. Astrophysics Colloquium, MIT Kavli Institute, Cambridge, MA, Nov 2022
21. Colloquium, Department of Physics, University of Toronto, Toronto, Canada, Sept 2022
20. Contributed Talk, DECam at 10 Years Workshop, Tucson, AZ, USA, Sept, 2022
19. Invited Seminar Talk, Texas A&M University, College Station, TX, Aug 2022
18. Invited Seminar Talk, University of Notre Dame, Notre Dame, IN, Apr 2022
17. (remote) Invited Plenary Talk, TeV Particle Astrophysics 2021 Conference, Chengdu, China, Oct 27, 2021
16. (remote) Colloquium, Indiana University, Bloomington, IN, USA, Oct 19, 2021
15. (remote) Colloquium, National Research Council of Canada's Herzberg Astronomy and Astrophysics Research Centre, Victoria, BC, Sept 28, 2021
14. (remote) Invited Seminar Talk at N3AS (Link to Talk), May 11, 2021
13. (remote) Colloquium, the University of British Columbia, Vancouver, Canada, Apr 19, 2021
12. (remote) Invited Seminar Talk, the University of Kentucky, Lexington, KY, Feb 3, 2021
11. (remote) Invited Seminar Talk, UC Davis, Davis, CA, Jan 28, 2021
10. (remote) Invited Seminar Talk, University College London, London, England, Nov 2 2020
9. (remote) Invited Seminar Talk, McGill Space Institute, Montreal, Canada, Oct 13 2020
8. iPoster, 235th AAS Meeting, Honolulu, Hawaii, Jan 2020
7. Colloquium, UC Santa Cruz, Santa Cruz, CA, Nov 2019
6. Colloquium, University of Toronto, Toronto, Canada, Oct 2019
5. Invited Talk, LSST Dark Matter Workshop, University of Chicago, Chicago, IL, Aug 2019
4. Invited Talk, IAU Symposium 353 "Galactic Dynamics in the Era of Large Surveys", Shanghai, China, Jul 2019
3. Invited Talk, Conference "Science in our own Backyard: Exploring the Galaxy and the Local Group with WFIRST", Caltech, Pasadena, CA, Jun 2019
2. Invited Talk, KITP Workshop "In the Balance: Stasis and Disequilibrium in the Milky Way", Santa Barbara, CA, Apr 2019
1. Invited Seminar Talk, Carnegie Mellon University, PA, Mar 2019

Selected Refereed Publications

Summary: 200+ refereed publications, including 10 1st author, 23 2nd/3rd author
h-index: 75
citations: 25000
For a complete publication list, please refer to:
https://ui.adsabs.harvard.edu/public-libraries/UGFGnC9bTu-vBkgMrqObgg
or
https://scholar.google.com/citations?user=JTGDv7MAAAAJ&hl=en
Papers led by students under my supervision are highlighted with underlines.

91. Yu, F., **Li, T. S.**, Speagle, J. S. et al., "The Power of High Precision Broadband Photometry: Tracing the Milky Way Density Profile with Blue Horizontal Branch stars in the Dark Energy Survey", 2024, submitted to ApJ, arXiv:2402.00104

90. Chiti, A., Mardini, M., Limberg, G. et al. (including **Li, T. S.**) "Enrichment by Extragalactic First Stars in the Large Magellanic Cloud", 2024, Nature Astronomy, in press, arXiv:2401.11307

89. Usman, S. A., Ji, A. P., **Li, T. S.**, "Multiple Populations and a CH Star Found in the 300S Globular Cluster Stellar Stream", 2024, MNRAS, in press, arXiv:2401.02476

88. Heiger, M. E., **Li, T. S.**, Pace, A. B. et al. "Reading Between the (Spectral) Lines: Magellan/IMACS spectroscopy of the Ultra-faint Dwarf Galaxies Eridanus IV and Centaurus I", 2024, ApJ, in press, arXiv:2308.08602

87. Smith, S. E. T., Cerny, W., Hayes, C. R. et al., (including **Li, T. S.**) "The Discovery of the Faintest Known Milky Way Satellite Using UNIONS", 2024, ApJ, 961, 92S

86. Pace, A. B., Koposov, S. E., Walker, M. G. et al. (including **Li, T. S.**) "The Kinematics, Metallicities, and Orbits of Six Recently Discovered Galactic Star Clusters with Magellan/M2FS Spectroscopy", 2023, MNRAS, 526, 1075P

85. Kent, S., Neilsen, E., Honscheid, K. et al. (including **Li, T. S.**) "Astrometric Calibration and Performance of the Dark Energy Spectroscopic Instrument Focal Plane", 2023, AJ, 166, 177K

84. Cerny, W., Drlica-Wagner, A., **Li, T. S.**, et al. "DELVE 6: An Ancient, Ultra-faint Star Cluster on the Outskirts of the Magellanic Clouds", 2023, ApJ, 953L, 21C

83. Cerny, W., Martínez-Vázquez, C. E., Drlica-Wagner, A., (including **Li, T. S.**) "Six More Ultra-Faint Milky Way Companions Discovered in the DECam Local Volume Exploration Survey", 2023, ApJ, 953, 1C

82. Koposov, S. E., Erkal, D., **Li, T. S.** et al. "S5: Probing the Milky Way and Magellanic Clouds potentials with the 6D map of the Orphan-Chenab stream", 2023, MNRAS, 521, 4936

81. Shipp, N., Panithanpaisal, N., Necib, L., (including **Li, T. S.**) "Streams on FIRE: Populations of Detectable Stellar Streams in the Milky Way and FIRE", 2023, ApJ, 949, 44S

80. Bruce, J., **Li, T. S.** Pace, A. B. et al. "Spectroscopic analysis of Milky Way outer halo satellites: Aquarius II and Bootes II", 2023, ApJ, 950, 167B

79. Hansen, T. T., Simon, J. D., **Li, T. S.** et al. "Evidence for multiple nucleosynthetic processes from carbon-enhanced metal-poor stars in the Carina dwarf spheroidal galaxy", 2023, A&A, 674A, 180H

78. Cooper, A. P., Koposov, S. E., Allende Prieto, C. et al. (including **Li, T. S.**) "Overview of the DESI Milky Way Survey", 2023, ApJ, 947, 37

77. Simon, J. D., Brown, T. M., Mutlu-Pakdil, B. et al. (including **Li, T. S.**) "Timing the r-process Enrichment of the Ultra-faint Dwarf Galaxy Reticulum II", 2023, ApJ, 944, 43

76. Dey, A., Najita, J. R., Koposov, S. E. et al. (including **Li, T. S.**) "DESI Observations of the Andromeda Galaxy: Revealing the Immigration History of Our Nearest Neighbor", 2023, ApJ, 944, 1

75. Lilleengen, S., Petersen, M. S., Erkal, D. et al. (including **Li, T. S.**) "The effect of the deforming dark matter haloes of the Milky Way and the Large Magellanic Cloud on the Orphan-Chenab stream", 2023, MNRAS, 518, 774

74. Cerny, W., Simon, J. D., **Li, T. S.** et al. "Pegasus IV: Discovery and Spectroscopic Confirmation of an Ultra-Faint Dwarf Galaxy in the Constellation Pegasus", 2023, ApJ, 942, 111

73. Pace, A. B., Erkal, D., **Li, T. S.**, "Proper Motions, Orbits, and Tidal Influences of Milky Way Dwarf Spheroidal Galaxies", 2022, ApJ, 940, 136

72. Chiti, A., Simon, J. D., Frebel, A., (including **Li, T. S.**) "Magellan/IMACS Spectroscopy of Grus I: A Low Metallicity Ultra-faint Dwarf Galaxy", 2022, ApJ, 939, 41

71. DESI Collaboration et al. (including **Li, T. S.**) "Overview of the Instrumentation for the Dark Energy Spectroscopic Instrument", 2022, AJ, 164, 207

70. Drlica-Wagner, A. et al. (including **Li, T. S.**) "The DECam Local Volume Exploration Survey Data Release 2", 2022, ApJS, 261, 38

69. Mau, S., Nadler, E. O., Wechsler, R. H., (including **Li, T. S.**) "Milky Way Satellite Census. IV. Constraints on Decaying Dark Matter from Observations of Milky Way Satellite Galaxies", 2022, ApJ, 932, 128

68. Yuan, Z., Malhan, K., Sestito, F., (including **Li, T. S.**) "The Complexity of the Cetus Stream Unveiled from the Fusion of STREAMFINDER and StarGO", 2022, ApJ, 930, 103

67. **Li, T. S.**, Ji, A. P., Pace, A. B. et al. "S^5: The Orbital and Chemical Properties of One Dozen Stellar Streams", 2022, ApJ, 928, 30

66. Vivas, A. K., Martinez-Vazquez, C. E., Walker, A. R., Belokurov, V., **Li, T. S.** et al. "Variable Stars in the Giant Satellite Galaxy Antlia 2", 2022, ApJ, 926, 78

65. Tavangar, K., Ferguson, P., Shipp, N., (including **Li, T. S.**) "From the Fire: A Deeper Look at the Phoenix Stream", 2022, ApJ, 925, 118

64. Ferguson, P. S., Shipp, N., Drlica-Wagner, A., **Li, T. S.** et al. "DELVE-ing into the Jet: A Thin Stellar Stream on a Retrograde Orbit at 30 kpc", 2022, AJ, 163, 18

63. Ji, A. P., Koposov, S. E., **Li, T. S.**, et al. "Kinematics of Antlia 2 and Crater 2 from the Southern Stellar Stream Spectroscopic Survey (S^5)", 2021, ApJ, 921, 32

62. Shipp, N., Erkal, D., Drlica-Wagner, A., **Li, T. S.**, et al. "Measuring the Mass of the Large Magellanic Cloud with Stellar Streams Observed by S^5", 2021, ApJ, 923, 149

61. Casey, A, R., Ji, A. P., Hansen, T. T., **Li, T. S.**, et al. "Signature of a Massive Rotating Metal-poor Star Imprinted in the Phoenix Stellar Stream", 2021, ApJ, 921, 67

60. Jenkins, S., **Li, T. S.**, Pace, A. B., et al. "VLT Spectroscopy of Ultra-Faint Dwarf Galaxies. 1. Boötes I, Leo IV, Leo V", 2021, ApJ, 920, 92J

59. Drlica-Wagner, A., Carlin, J. L., Nidever, D. L., et al. (including **Li, T. S.**) "The DECam Local Volume Exploration Survey: Overview and First Data Release", 2021, ApJS, 256, 2

58. Abbott, T. M. C., Adamów, M., Aguena, M. et al. (including **Li, T. S.**) "The Dark Energy Survey Data Release 2", 2021, ApJS, 255, 2, 20

57. Hansen, T. T., Ji, A. P., Da Costa, G. S., **Li, T. S.**, et al. "S^5: The Destruction of a Bright Dwarf Galaxy as Revealed by the Chemistry of the Indus Stellar Stream", 2021, ApJ, 915, 103

56. Lu, W., Fuller, J., Raveh, Y., Perets, H. B., **Li, T. S.**, et al. "The former companion of hyper-velocity star S5-HVS1", 2021, MNRAS, 503, 603

55. **Li, T. S.**, Koposov, S. E., Erkal, D., et al. "Broken into Pieces: ATLAS and Aliqa Uma as One Single Stream", 2021, ApJ, 911, 149

54. Nadler, E. O., Drlica-Wagner, A., Bechtol, K., et al. (including **Li, T. S.**) "Constraints on Dark Matter Properties from Observations of Milky Way Satellite Galaxies", 2021, PhRvL, 126, 1101

53. Cerny, W., Pace, A. B., Drlica-Wagner, A., et al. (including **Li, T. S.**) "Discovery of an Ultra-faint Stellar System near the Magellanic Clouds with the DECam Local Volume Exploration Survey", 2021, ApJ, 910, 18

52. Tanoglidis, D., Drlica-Wagner, A., Wei, K., **Li, T. S.**, et al. "Shadows in the Dark: Low-surface-brightness Galaxies Discovered in the Dark Energy Survey", 2021, ApJS, 252, 18

51. Simon, J. D., Brown, T. M., Drlica-Wagner, **Li, T. S.**, et al. "Eridanus II: A Fossil from Reionization with an Off-center Star Cluster", 2021, ApJ, 908, 18

50. Chang, J., Yuan, Z., Xue, X-X, Simion, I. T., Kang, X., **Li, T. S.**, et al. "Is NGC 5824 the Core of the Progenitor of the Cetus Stream?", 2020, ApJ, 905, 100

49. Ji, A. P., **Li, T. S.**, Hansen, T. T., et al. "The Southern Stellar Stream Spectroscopic Survey (S5): Chemical Abundances of Seven Stellar Streams", 2020, AJ, 160, 181

48. Hansen, T. T., Marshall, J. L., Simon, J. D., **Li, T. S.**, et al. "Chemical Analysis of the Ultrafaint Dwarf Galaxy Grus II. Signature of High-mass Stellar Nucleosynthesis", 2020, ApJ, 897, 183

47. Li, Z-Z; Qian, Y-Z; Han, J.; **Li, T. S.**, et al. "Constraining the Milky Way Mass Profile with Phase-space Distribution of Satellite Galaxies", 2020, ApJ, 894, 10

46. Nadler, E. O., Wechsler, R. H., Bechtol, K. et al. (including **Li, T. S.**), "Milky Way Satellite Census. II. Galaxy-Halo Connection Constraints Including the Impact of the Large Magellanic Cloud", 2020, ApJ, 893, 48

45. Drlica-Wagner, A., Bechtol, K., Mau, S., McNanna, M., Nadler, E. O., Pace, A. B., **Li, T. S.** et al., "Milky Way Satellite Census. I. The Observational Selection Function for Milky Way Satellites in DES Y3 and Pan-STARRS DR1", 2020, ApJ, 893, 47

44. Allende Prieto, C., Cooper, A. P., Dey, A., Gansicke, B. T., Koposov, S. E., **Li, T. S.**, et al. "Preliminary Target Selection for the DESI Milky Way Survey (MWS)", 2020, Research Notes of the AAS, 4, 10

43. Simon, J. D., **Li, T. S.**, Erkal, D., et al. "Birds of a Feather? Magellan/IMACS Spectroscopy of the Ultra-faint Satellites Grus II, Tucana IV, and Tucana V", 2020, ApJ, 892, 137

42. Wan, Z., Lewis, G. F., **Li, T. S.**, et al. "The tidal remnant of an unusually metal-poor globular cluster", 2020, Nature, 583, 768

41. Koposov, S. E., Boubert, D., **Li, T. S.**, et al. "Discovery of a nearby 1700 km/s star ejected from the Milky Way by Sgr A*", 2020, MNRAS, 491, 2465

40. Ji, A. P., **Li, T. S.**, Simon, J. D., et al. "Detailed Abundances in the Ultra-faint Magellanic Satellites Carina II and III", 2020, ApJ, 889, 27J

39. **Li, T. S.**, Koposov, S. E., Zucker, D. B., et al. "The Southern Stellar Stream Spectroscopic Survey (S^5): Overview, Target Selection, Data Reduction, Validation, and Early Science", 2019, MNRAS, 490, 3508

38. Shipp, N., **Li, T. S.**, Pace, A. B., et al. "Proper Motions of Stellar Streams Discovered in the Dark Energy Survey", 2019, ApJ, 885, 3

37. Torrealba, G., Belokurov, V., Koposov, S. E., **Li, T. S.**, et al. "The hidden giant: discovery of an enormous Galactic dwarf satellite in Gaia DR2", 2019, MNRAS, 488, 2743

36. Erkal, D., Belokurov, V., Laporte, C. F. P., Koposov, S. E., **Li, T. S.**, et al. "The total mass of the Large Magellanic Cloud from its perturbation on the Orphan stream", 2019, MNRAS, 487, 2685

35. Koposov, S. E., Belokurov, V., **Li, T. S.**, et al. "Piercing the Milky Way: an all-sky view of the Orphan Stream", 2019, MNRAS, 485, 4726

34. Wang, M. Y., de Boer, T., Pieres, A., **Li, T. S.**, et al. "The Morphology and Structure of Stellar Populations in the Fornax Dwarf Spheroidal Galaxy from Dark Energy Survey Data", 2019, ApJ, 881, 118

33. Pace, A. B. & **Li, T. S.**, "Proper motions of Milky Way Ultra-Faint satellites with *Gaia* DR2 $\times$ DES DR1", 2019, ApJ, 875, 77

32. Dey, Arjun et al. (including **Li, T. S.**), "Overview of the DESI Legacy Imaging Surveys", 2019, AJ, 157, 168

31. Wang, M. Y., Koposov, S., Drlica-Wagner, A., Pieres, A., **Li, T. S.**, "Rediscovery of the Sixth Star Cluster in the Fornax Dwarf Spheroidal Galaxy", 2019, ApJ, 875, 13

30. Abbott, B. P., et al. (including **Li, T. S.**), "The Dark Energy Survey: Data Release 1", 2018, ApJS, 239, 18

29. Erkal, D., **Li, T. S.**, Koposov, S. E., Belokurov, V., et al., "Modelling the Tucana III stream - a close passage with the LMC", 2018, MNRAS, 481, 3148.

28. **Li, T. S.**, Simon, J. D., Kuehn, K., et al., "The First Tidally Disrupted Ultra-Faint Dwarf Galaxy? - Spectroscopic Analysis of the Tucana III Stream", 2018, ApJ, 866, 22.

27. **Li, T. S.**, Simon, J. D., Pace, A. B., et al. "Ships Passing in the Night: Spectroscopic Analysis of Two Ultra-faint Satellites in the Constellation Carina", 2018, ApJ, 857, 145.

26. Shipp, N., Drlica-Wagner, A., Balbinot, E., Ferguson, P., Erkal, D., **Li, T. S.**, et al., "Stellar Streams Discovered in the Dark Energy Survey", 2018, ApJ, 862, 114.

25. Bernstein, G. M., Abbott, T. M. C., Armstrong, R., Burke, D. L., Diehl, H. T., Gruendl, R. A., Johnson, M. D., **Li, T. S.**, et al., "Photometric Characterization of the Dark Energy Camera", 2018, PASP, 130, 4501.

24. Bergemann, M., Sesar, B., Cohen, J., Serenelli, A. M., Sheffield, A. A., **Li, T. S.** et al., "Witnessing Galactic eviction – disc stars at extreme locations around our Galaxy", 2018, Nature, 555, 334.

23. Nagasawa, D. Q., Marshall, J. L., **Li, T. S.** et al. "Chemical Abundance Analysis of Three α-Poor, Metal-Poor Stars in the Ultra-Faint Dwarf Galaxy Horologium I", 2018, ApJ, 852, 99.

22. Torrealba, G. et al. (including **Li, T. S.**), "Discovery of two neighbouring satellites in the Carina constellation with MagLiteS", 2018, MNRAS, 475, 5085

21. Drlica-Wagner, A., et al. (including **Li, T. S.**), "Dark Energy Survey Year 1 Results: Photometric Data Set for Cosmology", 2018, ApJS, 235, 33.

20. Abbott, B. P., et al. (including **Li, T. S.**), "A gravitational-wave standard siren measurement of the Hubble constant", 2017, Nature, 551, 85.

19. Abbott, B. P., et al. (including **Li, T. S.**), "Multi-messenger Observations of a Binary Neutron Star Merger", 2017, ApJ, 848, L12.

18. Cowperthwaite, P. S., et al. (including **Li, T. S.**), "The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. II. UV, Optical, and Near-infrared Light Curves and Comparison to Kilonova Models", 2017, ApJ, 848, L17.

17. Soares-Santos, M., et al. (including **Li, T. S.**), "The Electromagnetic Counterpart of the Binary Neutron Star Merger LIGO/Virgo GW170817. I. Discovery of the Optical Counterpart Using the Dark Energy Camera", 2017, ApJ, 848, L16.

16. Johnston, K. V., Price-Whelan, A. M., Bergemann, M., Laporte, C., **Li, T. S.** et al., "Disk Heating, Galactoseismology, and the Formation of Stellar Halos", 2017, Galax, 5, 44.

15. **Li, T. S.**, Sheffield, A. A., Johnston, K. V., Marshall, J. L., Majewski, S. R. et al., "Exploring Halo Substructure with Giant Stars", 2017, ApJ, 844, 74.

14. Burke, D., Rykoff, E., et al. (including **Li, T. S.**), Forward Global Photometric Calibration of the Dark Energy Survey, 2018, AJ, 155, 41.

13. **Li, T. S.**, Simon, J. D., Drlica-Wagner, A., Bechtol, K., et al. "Farthest Neighbor: The Distant Milky Way Satellite Eridanus II", 2017, ApJ, 838, 8

12. Simon, J. D., **Li, T. S.**, Drlica-Wagner, A., Bechtol, K., et al. "Nearest Neighbor: The Low-mass Milky Way Satellite Tucana III", 2017, ApJ, 838, 44

11. Hansen, T. T., Simon, J. D., Marshall, J. L., **Li, T. S.**, et al. "An r-process Enhanced Star in the Dwarf Galaxy Tucana III", 2017, ApJ, 838, 11

10. **Li, T. S.**, DePoy, D. L., Marshall, J. L., Tucker, D. L., Bernstein, G. M., et al. "Assessment of Systematic Chromatic Errors that Impact Sub-1% Photometric Precision in Large-Area Sky Surveys", 2016, AJ, 151, 157

9. **Li, T. S.**, Balbinot, E., Mondrik, N., et al. "Discovery of a Stellar Overdensity in Eridanus-Phoenix in the Dark Energy Survey", 2016, ApJ, 817, 135

8. Balbinot, E., Yanny, B., **Li, T. S.**, et al. "The Phoenix stream: a cold stream in the Southern hemisphere", 2016, ApJ, 820, 58.

7. Melendez, J., Placco, V. M., Tucci-Maia, M., Ramirez, I., **Li, T. S.**, "2MASS J18082002-5104378: The Brightest (V=11.9) Ultra Metal-Poor Star", 2016, A&A, 585, 5

6. Simon, J. D., Drlica-Wagner, A., **Li, T. S.**, et al. "Stellar Kinematics and Metallicities in the Ultra-faint Dwarf Galaxy Reticulum II", 2015, ApJ, 808, 95

5. Drlica-Wagner, A., et al. (including **Li, T. S.**), "Eight Ultra-faint Galaxy Candidates Discovered in Year Two of the Dark Energy Survey", 2015, ApJ, 813, 109.

4. Drlica-Wagner, A., et al. (including **Li, T. S.**), "Search for Gamma-Ray Emission from DES Dwarf Spheroidal Galaxy Candidates with Fermi-LAT Data", 2015, ApJ, 809, L4
3. Bechtol, K., et al. (including **Li, T. S.**), "Eight New Milky Way Companions Discovered in First-year Dark Energy Survey Data", 2015, ApJ, 807, 50
2. Flaugher, B., et al. (including **Li, T. S.**), "The Dark Energy Camera", 2015, AJ, 150, 150
1. **Li, T. S.**, Marshall, J. L., Lépine, S., Williams, P., Chavez, J., "Optical BVRI Photometry of Common Proper Motion F/G/K+M Wide Separation Binaries", 2014, AJ, 148, 60

Selected Conference Proceedings

6. Meisner, A. M., et al. (including **Li, T. S.**), "Performance of Kitt Peak's Mayall 4-meter telescope during DESI commissioning", 2020, Proc. of SPIE Vol. 11447, 1144794
5. Drlica-Wagner, A., Marrufo Villalpando, E., O'Neil, J., Estrada, J., Holland, S., Kurinsky, N., **Li, T. S.**, "Characterization of skipper CCDs for cosmological applications", 2020, Proc. of SPIE Vol. 11454, 114541A
4. **Li, T. S.**, DePoy, D. L., Marshall, J. L., Nagasawa, D. Q., Carona, D. W., Boada, S., "Monitoring the atmospheric throughput at Cerro Tololo Inter-American Observatory with aTmCam", 2014, Proc. of SPIE Vol. 9147, 91476Z, arXiv:14077047
3. DePoy, D. L., Allen, R., **Li, T. S.**, Marshall, J. L., Papovich, C., Prochaska, T., Shectman, S., "An update on the wide field, multi-object, moderate-resolution, spectrograph for the Giant Magellan Telescope", 2014, Proc. of SPIE Vol. 9147, 914720
2. Marshall, J. L., DePoy, D. L., Prochaska, T., Allen, R.D., Williams, P., Rheault, J.-P., **Li, T. S.**, and 22 colleagues, "VIRUS instrument collimator assembly", 2014, Proc. of SPIE Vol. 9147, 91473S
1. **Li, T. S.**, DePoy, D. L., Kessler, R., Burke, D. L., Marshall, J. L., Wise, J., Rheault, J.-P., Carona, D. W., Boada, S., Prochaska, T., Allen, R., "aTmcam: a simple atmospheric transmission monitoring camera for sub 1% photometric precision", 2012, Proc. of SPIE Vol. 8446, 84462L, arXiv:14077047

Selected White Papers, Reports, Books

7. Facilitator for Snowmass CF03 white papers (arXiv:2203.06200, arXiv:2209.08215)
6. Author for 7 Astro2020 Science White Papers (including one leading author).
5. Chapter Leader, The Detailed Science Case for the Maunakea Spectroscopic Explorer, 2019 edition, 2019, arXiv:1904.04907 (entire document), arXiv: 1903.03155 (one chapter)
4. Chapter Author, Probing the Fundamental Nature of Dark Matter with the Large Synoptic Survey Telescope, 2019, arXiv:1902.01055
3. Organizer and Chapter Author, Petabytes to Science, 2019, arXiv:1905.05116
2. Chapter Author, GMT Science Book 2018: https://www.gmto.org/gallery/gmt-resources/#GMT_Science_Book_2018
1. Chapter Author, Maximizing Science in the Era of LSST: A Community-Based Study of Needed US Capabilities, 2016, arXiv:1610.01661