

Kristopher G. Klein

Department of Planetary Sciences, University of Arizona
431 Kuiper Space Sciences
1629 E University Blvd
Tucson, AZ 85721

Work: 520-621-2806
kgklein@lpl.arizona.edu
www.lpl.arizona.edu/faculty/kristopher-klein

EDUCATION **University of Iowa** **Iowa City, IA**
Doctor of Philosophy in Physics 2013
The Kinetic Plasma Physics of Solar Wind Turbulence 10.5281/zenodo.50471
Chair: Gregory Howes
Committee: Frederick Skiff, Craig Kletzing, Steven Spangler, Albert Ratner

Luther College **Decorah, IA**
Bachelor of Arts in Physics and Mathematics; Magna Cum Laude 2008
Departmental Honors
Advisor: Todd Pedlar

RESEARCH INTERESTS Space and Astrophysical Plasmas, Solar Wind Turbulence,
Damping and Dissipation of Kinetic Plasmas, Numerical Plasma Simulations

PUBLICATIONS **PEER REVIEWED JOURNAL ARTICLES** [26; H-INDEX 11]^{1,2}
Verscharen, D, **Klein, K. G.**, Chandran, B.D.G., Stevens, M.L., Salem, C.S., & Bale, S. D., *ALPS: The Arbitrary Linear Plasma Solver*, J. Plasma Phys. **84**, 905840403 2018, doi:10.1017/S0022377818000739

Wilson III, L. B., Stevens, M. L., Kasper, J. C., **Klein, K. G.**, Bale, S. D., Bowen, T., Pulupa, M. P., & Salem, C. S., *The Statistical Properties of Solar Wind Temperature Parameters Near 1 AU* ApJ Supp. **236** 41 2018, doi:10.3847/1538-4365/aab71c
Citations: 1

Klein, K. G., Alterman, B. L., Stevens, M. L., Vech, D., & Kasper, J. C. *Majority of Solar Wind Intervals Support Ion-Driven Instabilities* PRL **120**, 205102, 2018, doi:10.1103/PhysRevLett.120.205102

Kunz, M. W., Abel, I. G., **Klein, K. G.** & Schekochihin, A. A., *Astrophysical gyrokinetics: Turbulence in pressure-anisotropic plasmas at ion scales and beyond*, J. Plasma Phys. **84**, 715840201 2018, doi: 10.1017/S0022377818000296 **Citations: 4**

Vech, D, Mallet, A, **Klein, K. G.** & Kasper, J. C. *Magnetic Reconnection May Control the Ion-scale Spectral Break of Solar Wind Turbulence*, ApJL **855** L27 2018, doi: 10.3847/2041-8213/aab351 **Citations: 1**

Howes, G. G., McCubbin, A. J. & **Klein, K. G.**, *Spatial Localization of Particle Energization in Current Sheets Produced by Alfvén Wave Collisions*, J. Plasma Phys. **84** 905840105, 2018, doi:10.1017/S0022377818000053 **Citations: 2**

¹As of July 26, 2018 from SAO/NASA ADS: http://adsabs.harvard.edu/abstract_service.html

²ORCID ID: 0000-0001-6038-1923

Verniero, J. L., Howes, G. G., & **Klein, K. G.**, *Nonlinear energy transfer and current sheet development in localized Alfvén wavepacket collisions in the strong turbulence limit*, J. Plasma Phys. **84**, 905840103, 2018 doi:10.1017/S0022377817001003 **Citations: 2**

Vech, D., **Klein, K. G.**, & Kasper, J. C. *Nature of Stochastic Ion Heating in the Solar Wind: Testing the Dependence on Plasma Beta and Turbulence Amplitude*, ApJL **850** L11 2017, doi: 10.3847/2041-8213/aa9887 **Citations: 3**

Kasper, J., **Klein, K. G.**, Weber, T., Maksimovic, M., Zaslavsky, A., Bale, S., Maruca, B., Stevens, M. Case, T., *A Zone of Preferential Ion Heating Extends Tens of Solar Radii from the Sun* ApJ **849** 126, 2017 doi: 10.3847/1538-4357/aa84b1 **Citations: 4**

Klein, K. G., Kasper, J.C., Korreck, K.E., & Stevens, M.L. *Applying Nyquists Method for Stability Determination to Solar Wind Observations*, J. Geophys. Res. Space Physics, **122**, 2017 doi: 10.1002/2017JA024486 **Citations: 2**

Klein, K. G., Howes, G. G., & TenBarge, J.M., *Diagnosing collisionless energy transfer using field-particle correlations: gyrokinetic turbulence*, J. Plasma Phys. **83**, 535830401, 2017 doi:10.1017/S0022377817000563 **Citations: 4**

Klein, K. G., *Characterizing Fluid and Kinetic Instabilities using Field-Particle Correlations on Single-Point Time Series*, Phys. Plasmas **24**, 055901, 2017 doi: 10.1063/1.4977465 **Citations: 7**

Howes, G. G., **Klein, K. G.**, & Li, T. C. *Diagnosing Collisionless Energy Transfer Using Field-Particle Correlations: Vlasov-Poisson Plasmas*, J. Plasma Phys. **83**, 705830102, 2017 doi: 10.1017/S0022377816001197 **Citations: 8**

Li, T. C., Howes, G. G., **Klein, K. G.**, & TenBarge, J. M. *Energy Dissipation and Landau Damping in Two- and Three-Dimensional Plasma Turbulence*, ApJL **832** L24, 2016, doi: 10.3847/2041-8205/832/2/L24 **Citations: 13**

Verscharen, D., Chandran, B. D. G., **Klein, K. G.** & Quataert, E. *Collisionless Isotropization of the Solar Wind by Compressive Fluctuations and Plasma Instabilities*, ApJ **831** 128, 2016, doi:10.3847/0004-637X/831/2/128 **Citations: 14**

Klein, K. G. & Howes, G. G. *Measuring Collisionless Damping in Heliospheric Plasmas using Field-Particle Correlations*, ApJ Lett **826** L30, 2016, doi:10.3847/2041-8205/826/2/L30 **Citations: 13**

Klein, K. G. & Chandran, B. D. G. *Evolution of the Proton Velocity Distribution due to Stochastic Heating in the Near-Sun Solar Wind*, ApJ **820** 47, 2016, doi:10.3847/0004-637X/820/1/47 **Citations: 3**

Chandran, B. D. G., Perez, J. C., Verscharen, D., **Klein, K. G.**, & Mallet, A *On the Conservation of Cross Helicity and Wave Action in Solar-Wind Models with non-WKB Alfvén Wave Reflection*, ApJ **811** 50, 2015, doi:10.1088/0004-637X/811/1/50 **Citations: 1**

Klein, K. G. & Howes, G. G. *Predicted Impacts of Proton Temperature Anisotropy on Solar Wind Turbulence*, Phys. Plasmas, **22**, 032903, 2015, doi: 10.1063/1.4914933 **Citations: 16**

Klein, K. G., Perez, J. C., Verscharen, D., Mallet, A., & Chandran, B. D. G. *A Modified Version of Taylor's Hypothesis for Solar Probe Plus Observations* ApJ Lett, **801** L18, 2015, doi: 10.1088/2041-8205/801/1/L18 **Citations: 3**

Klein, K. G., Howes, G. G., & TenBarge, J. M. *The Violation of the Taylor Hypothesis in Measurements of Solar Wind Turbulence*, ApJ Lett, **790** L20, 2014, doi: 10.1088/2041-8205/790/2/L20 **Citations: 16**

Howes, G. G., **Klein, K. G.**, & TenBarge, J. M. *Validity of the Taylor Hypothesis for Linear Kinetic Waves in the Weakly Collisional Solar Wind*, ApJ, **789** 106, 2014, doi: 10.1088/0004-637X/789/2/106 **Citations: 31**

Klein, K. G., Howes, G. G., TenBarge, J. M., & Podesta, J. J. *Physical Interpretation of the Angle Dependent Magnetic Helicity Spectrum in the Solar Wind: The Nature of Turbulent Fluctuations near the Proton Gyroradius Scale* ApJ, **785** 138, 2014, doi: 10.1088/0004-637X/785/2/138 **Citations: 24**

Klein, K. G., Howes, G. G., TenBarge, J. M., Bale, S. D., Chen, C. H. K., & Salem, C. S. *Using Synthetic Spacecraft Data to Interpret Compressible Fluctuations in Solar Wind Turbulence*, ApJ, **755** 159, 2012, doi: 10.1088/0004-637X/755/2/159 **Citations: 54**

Howes, G. G., Bale, S. D., **Klein, K. G.**, Chen, C. H. K., Salem, C. S., & TenBarge, J. M. *The slow-mode nature of compressible wave power in solar wind turbulence*, ApJ Lett, **753** L19, 2012, doi: 10.1088/2041-8205/753/1/L19 **Citations: 90**

TenBarge, J. M., Podesta, J. J., **Klein, K. G.**, & Howes, G. G. *Interpreting Magnetic Variance Anisotropy Measurements in the Solar Wind*, ApJ **753** 107, 2012, doi: 10.1088/0004-637X/753/2/107 **Citations: 38**

CONFERENCE PROCEEDINGS [1]

Chen, C. H. K., Howes, G. G., Bonnell, J. W., Mozer, F. S., **Klein, K. G.**, & Bale, S. D. *Kinetic Scale Density Fluctuations in the Solar Wind* Solar Wind 13 Proceedings **1539** 143, 2013, doi: 10.1063/1.4811008 **Citations: 22**

ACCEPTED FOR PUBLICATION [1]

Vech, D., **Klein, K. G.** & Kasper, J. C. *A Simple Proxy to Diagnose Proton and Electron Heating in the Solar Wind* ApJL

SUBMITTED [3]

Kasper, J. C. & **Klein, K. G.** *Point of no return for waves in solar wind marks end of preferential ion heating*, Nature Astronomy

Chen, C. H. K., **Klein, K. G.**, Howes, G. G., *Evidence for Electron Landau Damping in Space Plasma Turbulence* PRL

Mallet, A., **Klein, K. G.**, Chandran, B.D.G., Groselj, D., Hoppock, I.W., Bowen, T.A., Salem, C.S., Bale, S.D. *Interplay between intermittency and dissipation in critically balanced plasma turbulence* PRL

IN PREPARATION [5]

Bert, C.M., Kasper, J. C., **Klein, K. G.**, Case, A. W., Maksimovic, M., & Zaslavsky, A. *Polytropic Index of Solar Wind in the Inner Heliosphere using the WIND Spacecraft GRL*

Tong, Y., TenBarge, J. M., **Klein, K. G.** & Bale, S. D. *Turbulent Cascade of Compressive Fluctuations in low- β plasma across proton kinetic scales*

Klein, K. G., Howes, G. G., TenBarge, J.M., & Valentini, F, *Diagnosing collisionless energy transfer using field-particle correlations: cyclotron turbulence*, J. Plasma Phys.

Verscharen, D., Parashar, T. N., & **Klein, K. G.**, *Kinetic Plasma Waves in Models with Artificially Large Electron-to-Proton Mass Ratios and Alfvén Speeds*, PoP

Howes, G. G., **Klein, K. G.**, & TenBarge, J. M. *The Quasilinear Premise for the Modeling of Plasma Turbulence*, arXiv:1404.2913 **Citations: 9**

RESEARCH

University of Arizona

Tucson, AZ

Department of Planetary Sciences

2018-present

Assistant Professor

- Studying *Parker Solar Probe* measurements of the near-Sun environment to determine what mechanisms are responsible for the heating and accelerating of the solar wind.
- Combining in situ observations from *Wind*, *MMS*, and other spacecraft with numerical simulations and analytic theories to constrain the nature of turbulent transport and dissipation.
- Implementing novel techniques for determining the stability of weakly collisional, magnetized plasmas.

University of Michigan

Ann Arbor, MI

Climate & Space Science & Engineering Department

2016-2018

Research Fellow

Mentor: Justin Kasper

- Provided theoretical support for the analysis of data from the *DSCOVR* spacecraft and in preparation for the *Parker Solar Probe* mission.
- Developed the **Arbitrary Linear Plasma Solver**, a numerical solver for the plasma response for arbitrary velocity distributions. ALPS will allow for the extension of plasma modeling and measurement interpretation beyond the assumption of a particular analytic form for the velocity distribution.
- Extended models of stochastic heating by low-frequency Alfvénic turbulence to novel parameter regimes, and compared these models to existing data from both the *Helios* and *Wind* spacecraft.

University of New Hampshire

Durham, NH

Space Science Center

2014-2016

NSF Atmospheric and Geospace Science Postdoctoral Research Fellow

Mentor: Benjamin Chandran

- Adapted Taylor's Hypothesis for interpreting turbulence measurements to the near-Sun environment, allowing techniques developed at 1 AU to be used for upcoming *Parker Solar Probe* observations.
- Modeled the radial evolution of ion velocity distributions due to stochastic heating by low-frequency Alfvén turbulence, providing an observable signature for a potential solar wind heating and acceleration mechanism.
- Calculated the time dependent evolution of velocity distributions due to wave-particle damping, producing a set of observable signatures for turbulent dissipation.

University of Iowa **Iowa City, IA**
Department of Physics and Astronomy 2013 - 2014
Postdoctoral Research Scholar
Mentor: Gregory Howes

- Studied simulations of kinetic velocity distributions, and began developing diagnostics for identifying Landau damping in solar wind turbulence and laboratory experiments.
- Extended my linear Vlasov-Maxwell dispersion solver PLUME (**P**lasma in a **L**inear **U**niform **M**agnetized **E**nvironment) to allow for an arbitrary number of plasma species and investigated the behavior of temperature anisotropy instabilities, demonstrating that a bi-Maxwellian velocity distribution does not qualitatively affect the nature of the large-scale turbulent cascade.

University of Iowa **Iowa City, IA**
Department of Physics and Astronomy 2009-2013
Graduate Research Assistant
Advisor: Gregory Howes

- Constructed synthetic time series from linear kinetic eigenmodes for comparison to satellite observations, which resulted in empirical constraints on solar wind turbulence at both inertial and dissipation scales.
- Created and verified PLUME, a numerical linear Vlasov-Maxwell dispersion solver for a plasma with Bi-Maxwellian ion and electron velocity distributions.
- Built analytic models for interpreting *in situ* measurements of the turbulent solar wind for which Taylor's Hypothesis may not be applicable.

University of Iowa **Iowa City, IA**
Department of Physics and Astronomy 2008-2009
Graduate Research Assistant
Advisor: Frederick Skiff

- Calculated drift wave behavior in the Hawkeye Linearly Magnetized Experiment, a laboratory plasma at the University of Iowa.
- Developed numerical algorithms for modeling the impulse response of plasmas in the Hawkeye Linearly Magnetized Experiment.

Luther College **Decorah, IA**
Department of Physics 2006 - 2008
Undergraduate Research Assistant
Advisor: Todd Pedlar

- Searched for the spin-singlet state of Bottomonium in Monte Carlo simulations and CLEO particle accelerator data.

HONORS AND AWARDS	National Academy of Science New Leaders in Space Physics	2016
	NASA LWS Jack Eddy Fellowship ³	2016
	NSF AGS Postdoctoral Research Fellow	2014
	University of Iowa Goertz/Nicholson Memorial Scholarship	2012
	Phi Beta Kappa - National Honor Society	2008
	Pi Mu Epsilon - National Mathematics Honor Society	2007
	<u>Sigma Pi Sigma - National Physics Honor Society</u>	2006

³My proposed project for this fellowship was selected, but I declined the fellowship as accepting it would

TEACHING	University of Michigan	2016-2018
	<ul style="list-style-type: none">• Took Postdoc Course on College Teaching in Science and Engineering• Mentored graduate research projects	U. Michigan U. Michigan
	University of New Hampshire	2014-2016
	<ul style="list-style-type: none">• Substitute taught undergraduate physics courses• Oversaw undergraduate research activities• Honors Thesis Examiner• Mentored graduate student simulation project	University of New Hampshire University of New Hampshire Swarthmore College University of California, Berkeley
	University of Iowa	2008-2011
	Teaching Assistant and Tutor: Graduate Quantum Mechanics, Statistical Mechanics, Undergraduate Calculus-based, and Algebra-based Physics	
	Luther College	2006-2008
	Lab Assistant, Tutor, and Grader for Undergraduate General Physics and Classical Physics	
SERVICE	Government Service	
	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION: Review Panelist - 2014; External Reviewer - 2015 NATIONAL SCIENCE FOUNDATION: Review Panelist - 2014, 2017; External Reviewer - 2016	
	Professional Service	
	SHINE Workshop Session Organizer: 2015-2018 American Geophysical Union Fall Meeting Session Organizer: 2017 American Physical Society, Division of Plasma Physics Miniconference Organizer: 2017 Member of American Geophysical Union, (2013-present) Member of American Physical Society, Division of Plasma Physics (2010-present) Parker Solar Probe Solar Wind Electrons Alphas and Protons (SWEAP) Science Team Turbulence Heating Observer (THOR) Science Team	
	Journal Referee [15]: Nature Communications[1], Journal of Plasma of Physics[1], Physics of Plasmas[4], The Astrophysical Journal Letters[3], The Astrophysical Journal[3], Annales Geophysicae[3]	
EXTERNAL FUNDING	<i>Assessing the Relative Importance of Stochastic and Resonant Ion Heating the Solar Wind</i> NASA Heliophysics Supporting Research Grant Principal Investigator \$377,000 total funding.	
	<i>Non-Maxwellian Distribution Functions in the Solar Wind: Dispersion Relations and Instabilities</i> NASA Heliophysics Supporting Research Grant Co-Investigator , 2016-2019, approx. \$505,000 total funding, sub-contract of \$150,000	
	<i>Understanding the Nature of Turbulent Fluctuations in the Near-Sun Solar Wind</i> NSF AGS Postdoctoral Research Fellowship Principal Investigator , 2014-2016, \$172,000 total funding	

conflict with my NASA HSR grant.

PRESENTATIONS

INVITED CONFERENCE PRESENTATIONS [9]

- Tracking Energization and Dissipation in the Near-Sun Environment with Parker Solar Probe* AGU TESS, May. 2018
- How Unstable is the Solar Wind? Evaluating in situ Observations using Nyquist's Criterion* 17th International Astrophysics Conference, Mar. 2018
- Using Velocity-Space Structure of Field-Particle Correlations to Characterize Energy Transfer in Space and Laboratory Plasmas* IPELS, June 2017
- Applying Field-Particle Correlations to Assess Turbulent Heating in the Solar Wind* EGU, Apr. 2017
- A General Method for Instability Identification in Solar Wind Observations Illustrated by Particular Application to WIND Measurements* 16th International Astrophysics Conference, Mar. 2017
- Identifying and Characterizing Kinetic Instabilities using Solar Wind Observations of Non-Maxwellian Plasmas* AGU, Dec. 2016
- A Field-Particle Correlation Technique to Explore the Collisionless Damping of Plasma Turbulence* APS-DPP, Nov. 2016
- Diagnostics for Comparing Turbulence in Solar Wind Observations and Numerical Simulations* AGU, Dec. 2014
- Quantitative Comparisons between Turbulence Simulations and Solar Wind Observations* SHINE Workshop, June 2014

CONTRIBUTED CONFERENCE PRESENTATIONS [35]

- Ion Free-Energy Sources Drive Instabilities in Half the Solar Wind* SHINE, July 2018
- Numerical Preparations Toward Identifying Heating Mechanisms using Distribution Function Measurements from SWEAP and Parker Solar Probe* AGU, Dec. 2017
- Reassessing Solar Wind Stability using Nyquist's Method* APS-DPP, Oct. 2017
- Numerical Support for Applying Field-Particle Correlations to Space and Laboratory Plasmas* APS-DPP, Oct. 2017
- An Automated Calculation of Plasma Instability for in situ Parker Solar Probe Measurements* Parker Solar Probe Science Working Group Meeting, Oct 2017
- Using the Arbitrary Linear Plasma Solver (ALPS) to characterize non-Maxwellian features in the solar wind* SHINE Workshop, July 2017
- Novel Plasma Instability Studies using the Nyquist Stability Criteria on Solar Wind Observations*, National Academy of Science & Chinese Academy of Sciences Forum for New Leaders in Space Science, Woods Hole, Mass. May 2017
- Applying an Efficient Method for Identifying Instabilities to Solar Wind Observations* EGU, Apr. 2017
- Application of Field-Particle Correlations to Space and Laboratory Plasmas* Bringing Space Down to Earth, UCLA, Apr. 2017
- Field-Particle Correlations as a Measure of Turbulent Damping in Collisionless Plasmas* AGU, Dec. 2016
- Observing the Kinetic Signature of Turbulent Damping in Numerical Simulations and Solar Wind Observations* National Academy of Science & Chinese Academy of Sciences Forum for New Leaders in Space Science, Beijing, China, Dec. 2016
- A Method of Measuring Turbulent Heating using Field-Particle Correlations from Single Spacecraft Observations*, Arcetri Workshop on Plasma Astrophysics, Oct. 2016
- Identifying Resonant Damping in Turbulence using Field-Particle Correlations*

- SHINE Workshop, July 2016
Secular Field-Particle Energy Transfer in a Turbulent, Gyrokinetic System
Fifth International Vlasovia Workshop, Calabria, Italy, May 2016
A Role for Stochastic Heating in the Near-Sun Environment AGU, Dec. 2015
Signatures of Heating via Landau Damping in Nearly Collisionless Plasmas
APS-DPP, Nov. 2015
Stochastic Heating and Diffusion in the Near-Sun Solar Wind APS-DPP, Nov. 2015
Stochastic Ion Heating in the Near-Sun Environment Turbulence and Dissipation in
Collisionless Astrophysical Plasmas, Cargese, France Sept. 2015
Predictions for Solar Probe Plus: The Applicability of the Taylor Hypothesis and
Signatures of Stochastic Ion Heating Joint Solar Probe Plus-Solar Orbiter Workshop,
Florence, Italy, Sept. 2015
Effects of Proton Temperature Anisotropy on Unstable Eigenmodes and Solar Wind
Turbulence SHINE Workshop, July 2015
Impact of Proton Temperature Anisotropy and Instability on Solar Wind Turbulence
Turbulence, Magnetic Fields, and Self-Organization in Laboratory and
Astrophysical Plasmas - Winter School, Les Houches, France, March 2015
Predictions for Near Sun Turbulent Spectra from Synthetic Time Series AGU, Dec. 2014
Predictions for in situ Observations of Turbulent Power Spectra within the
Alfvén Critical Point APS-DPP, Oct. 2014
Simulation of Alfvén Wave Distribution Function Structure SHINE Workshop, June 2014
How Will the Violation of Taylor's Hypothesis Alter the Turbulent Power Spectra Measured
by Solar Probe Plus? AGU, Dec. 2013
Effects of the Violation of Taylor's Hypothesis on Observed Turbulent Power Spectra in the
Solar Wind APS-DPP, Nov. 2013
Uses and Limitations of Synthetic Spacecraft Data for Studying Solar Wind Turbulence
Models, SHINE Workshop, June 2013
Identification of Linear Modes in the Solar Wind Dissipation Range Using Magnetic
Helicity The Future of Plasma Astrophysics, Feb. 2013
Using Plasma Metrics as a Diagnosis of Solar Wind Mode Composition
APS-DPP, Nov. 2012
Analyzing Compressive Fluctuations at Inertial and Dissipative Scales in Solar Wind
Turbulence using Linear Synthetic Data and Non-linear Simulations
SHINE Workshop, June 2012
Identification of Compressive Fluctuations in the Solar Wind Inertial Range
APS-DPP, Nov. 2011
Interpreting Compressive Solar Wind Fluctuations using Synthetic Spacecraft Data
SHINE Workshop, July 2011
Understanding Compressive Fluctuations in Solar Wind Turbulence using Synthetically
Generated Data APS-DPP, Nov. 2010
Numeric Solution of Plasma Impulse Response with Model Fokker-Planck Operator
American Physical Society-Prairie Section, Nov. 2009
Branching Fraction Measurements for Dipion Transitions
American Physical Society- April Meeting, April 2008
COAUTHORED CONFERENCE PRESENTATIONS [41]

COLLOQUIA AND SEMINARS [18]

- A Majority of Solar Wind Intervals Support Ion-Driven Instabilities*
Wind Science Telecon, April 2018
- Testing The Frequency of Ion-Driven Instabilities in the Solar Wind*
Parker Solar Probe Science Working Group, Jan. 2018
- A Rosetta Stone for Solar Probe Plus Heating Science*
SWEAP Science Team Meeting, Dec. 2016
- Can Field-Particle Correlations be used to Discern the Nature of Solar Wind Heating?*
Solar Probe Plus Theory Working Group, Nov. 2016
- Assessing Solar Wind Heating Through Measurement of Velocity Distribution Functions*
Solar Probe Plus Science Working Group, Sept. 2016
- Velocity Space Signatures of Turbulent Dissipation*
Space Science Seminar - University of New Hampshire, April 2016
- Reevaluating Taylor's Hypothesis in the Era of Solar Probe Plus*
Solar Probe Plus Science Working Group, Feb. 2016
- Characterizing Solar Wind Turbulence with Kinetic Plasma Physics*
Space & Planetary Physics Seminar - University of Michigan, Jan. 2016
- Observable Signatures of Stochastic Heating in the Near-Sun Solar Wind*
SWEAP Science Team Meeting - UC Berkeley, Dec. 2015
- Signatures of Kinetic Damping in Collisionless Plasmas*
FIELDS Science Team Meeting - UC Berkeley, Dec. 2015
- Applying Taylor's Hypothesis to Solar Probe Plus Perihelion Measurements*
FIELDS and STEREO/WAVES Science Team Meeting - UC Berkeley, Dec. 2014
- Understanding Solar Wind Turbulent Fluctuations using Linear Kinetic Physics*
Plasma Physics Seminar - University of Maryland, Oct. 2014
- Mapping the Kinetic Physics of Proton Temperature Anisotropies in Phase Space*
Space Plasma Physics Seminar - Goddard Space Flight Center, Oct. 2014
- Linear Kinetic Physics of Turbulent Fluctuations in the Solar Wind*
Space Science Seminar - University of New Hampshire, March 2014
- How Will the Violation of Taylor's Hypothesis Alter Turbulent Power Spectra Measured by Solar Probe Plus?*
SWEAP Science Team Meeting - UC Berkeley, Dec. 2013
- Identification of Compressive Fluctuations in the Solar Wind Inertial Range*
Plasma Physics Seminar- University of Iowa, Oct. 2012
- Using Synthetic Time Series to Understand Compressive Solar Wind Turbulence*
Plasma Physics Seminar- University of Iowa, March 2011
- Using MHD Theory to Understand Satellite Measurements in the Heliosphere*
Plasma Physics Seminar- University of Iowa, May 2010

Last updated: July 26, 2018