Papers and Presentations Supported by the Work Package Heating of the Magnetically Closed Corona[1]

Papers

1. *"Non-thermal Motions and Atmospheric Heating of Cool Stars," Airapetian, V. S., et al. 2023, ApJ, in press*

2. *"Reconstructing the XUV Spectra of Active Sun-like Stars Using Solar Scaling Relations with Magnetic Flux," Airapetian, V. S., et al. 2023, ApJ, 945, 147*

3. "Nonthermal Velocities in a Solar Active Region Observed by SERTS," Brosius, J. W, ApJ, submitted

4. "Advancing parabolic operators in thermodynamic MHD models II: Evaluating a Practical Time Step Limit for Unconditionally Stable Methods", Caplan, R. M., Johnston, C. D., Daldorff, L. K. S. and Linker, J. A. 2024, Journal of Physics: Conference Series, 2742, 012020

5. "Static and Dynamic Solar Coronal Loops with Cross-Sectional Area Variations," Cargill, P. J., Bradshaw, S. J., Klimchuk, J. A., & Barnes, W. T. 2022, MNRAS, 509, 4420

6. *"Solar Irradiance Variability for the Galileo Solar Space Telescope Mission: Concept and Challenges," Carlesso, F., Rogriguez Gomez, J. M., Barbosa, A., Vieira, L., & Dal Lago, A. 2022, Front. Phys., 10:869738*

7. "Planning the Future Space Weather Operations and Research Infrastructures," Cohen, C., Viall, N. M., et al. 2022, Proceedings of the Nat. Acad. Sci., Eng., Med.

8. "Impact of 3D Structure on Magnetic Reconnection," Daldorff, L. K. S., Leake, J. E., & Klimchuk, J. A. 2022, ApJ, 927, 196

9. "Heating and Cooling in Stellar Coronae: Coronal Rain on a Young Sun", Daley-Yates, S, Jardine, M. M. and Johnston, C. D. 2023, MNRAS, 526, 1646

10. "(When) Can Wave Heating Balance Optically Thin Radiative Losses in the Corona?", De Moortel, I., & Howson, T. A. 2022, ApJ, in press

11. "Probing the Physics of the Solar Atmosphere with the Multi-Slit Solar Explorer (MUSE): I. Coronal Heating," De Pontieu, B., De Moortel, I. et al. 2022, ApJ, 926, 52

[1] Entries for affiliate team members (not on the original proposal) are italicized

12. “Forward Modelling of Heating within a Coronal Arcade,” Fyfe, L. E. , Howson, T. A., De Moortel, I. 2021, A&A, 656, A120

13. *“The Transition Region of Solar Flare Loops,” Gontikakis, C., Antiochos, S. K. & Young, P. R., 2023, ApJ, 943, 120, doi: 10.3847/1538-4357/aca8a9*

14. “The Effects of Driving Time Scales on Coronal Heating in a Stratified Atmosphere,” Howson, T. A., & De Moortel, I. 2022, A&A, 661, A144

15. “Observational Signatures of Coronal Heating in MHD Simulations Without Radiation or a Lower Atmosphere,” Klimchuk, J. A., Knizhnik, K. K., & Uritsky, V. M. 2023, ApJ, 942, 10

16. “The Thickness of Current Sheets and Implications for Coronal Heating,” Klimchuk, J. A., Leake, J. E., Daldorff, L. K. S., & Johnston, C. D. 2023, Front. Phys., 11, 1198194, doi: 10.3389/fphy.2023.1198194

17. “The Location and Angle Distribution of Magnetic Reconnection in the Solar Corona,” Knizhnik, K. J., & Cabral-Pelletier, L. C. 2022, ApJ, 973, 93

18. “Modeling of Condensations in Coronal Loops Produced by Impulsive Heating with Variable Frequencies and Locations,” Kucera, T. A., Klimchuk, J. A., & Luna, M. 2024, ApJ, 965, 53

19. “Quasi-periodic Energy Release and Jets at the Base of Solar Coronal Plumes,” Kumar, P., Karpen, J., Uritsky, V., DeForest, C., Raouafi, N., & DeVore, C. R. 2022, ApJ, 933, 21

20. “The Effect of Nanoflare Flows on EUV Spectral Lines,” Lopez Fuentes, M., & Klimchuk, J. A. 2022, ApJ, 939, 17

21. “Modeling of Condensations in Coronal Loops Produced by Impulsive Heating with Variable Frequencies and Locations,” Kucera, T. A., Klimchuk, J. A., & Luna, M. 2024, ApJ, 965, 53

22. “The Onset of Magnetic Reconnection in Dynamically Evolving Coronal Current Sheets,” Leake, J. E., Daldorff, L. K. S., & Klimchuk, J. A. 2024, ApJ, 973, 21

23. “The Coronal Veil,” Malanushenko, A., Rempel, M., Cheung, M., DeForest, C., & Klimchuk, J. 2022, ApJ, 927, 1

24. “Investigating Coronal Loop Morphology and Dynamics from Two Vantage Points,” Mandal, S., Peter, H., Klimchuk, J. A., et al. 2023, AA, 682, L9

25. “Role of Small-Scale Impulsive Events in Heating the X-ray Bright Points of the Quiet Sun,” Mondal, B., Klimchuk, J. A., et al. 2023, ApJ, 945, 37

26. "Reconnection-generated Plasma Flows in the Quasi-separatrix Layer in Localized Solar Corona", Mondal S., Srivastava A.K., Mishra S.K., Sangal K., Kayshap P., Guo Y., Pontin

D.I., Uritsky V.M., Ofman L., Wang T., Yuan D., ApJ, 2023, 953, 84, doi: 10.3847/1538-4357/acd2da

27. "Data-Constrained Solar Modeling with GX Simulator," Nita, G. M., Schonfeld, S. J., Klimchuk, J. A., et al. 2023, ApJ, ApJ Supp, 267, 6, doi: 10.3847/1538-4365/acd343

28. "Flows in Enthalpy Based Thermal Evolution of Loops," Rajhans, A., Tripathi, D., Bradshaw, S. J., Kashyap, V. L., & Klimchuk, J. A. 2022, ApJ, 924, 13

29. "Center to Limb Variation of Transition Region Doppler Shift in Active Regions," Rajhans, A., Tripathi, A., Kashyap, V. L., & Klimchuk, J. A. 2023, ApJ, 944, 158, doi: 10.3847-4357/acb4ed

30. "Magnetic Reconnection as the Driver of the Solar Wind," Raouafi, N. E., Uritsky, V. M., Karpen, J. T., et al. 2023, ApJ, 945, 28

31. "Mass Flows in Expanding Coronal Loops", Reep, J.W., Scott, R.B., Chhabra, S., Unverferth, J., & Knizhnik, K.J., 2024 ApJ 967, 53

32. "Progress and Challenges in Understanding the Ambient Solar Magnetic Field, Heating, and Spectral Irradiance," Reiss, M. A., Arge, C. N., Henney, C. J., Klimchuk, J. A., Schonfeld, S., et al. 2023, Advances in Space Research, in press, doi: 10.1016/j.asr.2023.08.039

33. "Contribution of Spicules to Solar Coronal Emission," Sow Mondal, S., Klimchuk, J. A., & Sarkar, A. 2022, ApJ, 937, 71

34. "Universal Scaling Laws for Solar and Stellar Atmospheric Heating: Catalog of Power-law Index Between Solar Activity Proxies and Various Spectral Irradiances," Toriumi, S., Airapetian, V., Namekata, K., & Notsu, Y. 2022, ApJ Supp., 262, 46

35. "Universal Scaling Laws for Solar/Stellar Atmospheric Heating," Toriumi, S., & Airapetian, V. 2022, ApJ, 927, 179

36. "Self-similar Outflows at the Source of the Fast Solar Wind: A Smoking Gun of Multiscale Impulsive Reconnection?", Uritsky V.M., Karpen J.T., Raouafi N.E., Kumar P., DeVore C.R., DeForest C. E., ApJL, 2023 955, L38, doi: 10.3847/2041-8213/acf85c

37. "An Analysis of Spikes in Atmospheric Imaging Assembly (AIA)," Young, P. R., Viall, N. M., Kirk, M. S., Mason, E. I. & Chitta, L. P. 2021, SoPh, 296, 181

38. "Properties of EUV Imaging Spectrometer (EIS) Slot Observations," Young, P. R., & Ugarte-Urra, I. 2022, SoPh, 297, 87

39. "Scattered Light in the Hinode/EIS and SDO/AIA Instruments Measured from the 2012 Venus Transit," Young, P. R. & Viall, N. M. 2022, ApJ, 938, 27

Decadal Survey White Papers of Direct Relevance

1. "Cool Multiphase Plasma in Hot Environments," Antolin, P., Johnston, C. D., Klimchuk, J. A. et al.

2. "Quantifying the Sun's Magnetic Stress with the Photospheric Flows," Attie, R., Tremblay, B., Kirk, M., Schuck, P., Pesnell, D., Upton, L., Klimchuk, J., Viall, N., and Thompson, B.

3. "The Case for Comprehensive Spectroscopic Measurements of the Sun: Understanding Solar Flares and Coronal Heating," Brosius, J., Young, P., Klimchuk, J., Kucera, T., and Daw A.

4. "CLARO Solar Coronal Polarization Diagnostics with H I Ly-alpha," Cassini, R., Viall, N. M., et al.

5. "The Next Decade of Solar Ultraviolet Spectral Irradiance – Continuity, Modeling, and Physics," Chamberlin, P., Jones, A., Klimchuk, J., Kopp, G., Mason, J., Thiemann, E., Warren, H., Woods, T.

6. "Major Scientific Challenges and Opportunities in Understanding Magnetic Reconnection and Related Explosive Phenomena in Heliophysics and Beyond," Ji, H., Karpen, J., Klimchuk, J., et al.

7. "Heating of the Magnetically Closed Corona and Physical Models of Solar and Stellar Spectral Irradiances," Klimchuk, J., Work Package Team, others

8. "Measuring Nonthermal Properties of Weak Transients in the Quiescent Solar Corona," Mondal, S., Chen, B., Yu, S., Klimchuk, J., Chhabra, S., Chen, T.

9. "Observing Coronal Microscales and their Connection with Mesoscales," Rabin, D., Klimchuk, J., Viall, N., De Moortel, I., et al.

10. "Firefly: The Case for a Holistic Understanding of the Global Structure and Dynamics of the Sun and Heliosphere," Raouafi, N., Viall, N. M., et al.

11. "Fundamentals of Impulsive Energy Release in the Corona," Shih, A., Klimchuk, J., et al.

12. "Mesoscale Dynamics are the Key to Unlocking the Universal Physics of Multiscale Feedback," Kepko, L, Viall, N. M., et al.

Presentations[2]

[2] only those with team members as first author; many other presentations are not included

1. "Preliminary Application of EUNIS Soft X-Ray and EUV Imaging Spectroscopy to EIS Radiometric Calibration," Brosius, J., Daw, A., Landi, E., Rabin, D., and Schmit, D. (Hinode-14/IRIS-11 Joint Science Meeting; virtual at George Mason Univ.; 10/25/21)

2. "First Imaging Spectroscopy of 92-115 Angstrom Solar Soft X-rays by EUNIS: Implications for Solar Coronal Heating," Brosius, J., Daw, A., Rabin, D., Landi, E., and Schmit, D. (AGU Fall Meeting; New Orleans; 12/13/21)

3. "Application of EUV and SXR Spectra from the EUNIS Sounding Rocket to Solar Coronal Heating," Brosius, J., Daw, A., Rabin, D., Landi, E. (Goddard UV Symposium; 4/5/22)

4. "Application of EUV and SXR Spectra from the EUNIS Sounding Rocket to Solar Coronal Heating," Brosius, J., Daw, A., Rabin, D., Landi, E. & Schmit, D. (poster; Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)

5. "Nonthermal Velocities and Other Properties of a Quiescent Active Region Observed by EUNIS and EIS: Implication for Coronal Heating," Brosius, J., Daw, A., Rabin, D., Landi, E. & Schmit, D. (poster discussion session; AGU Fall Meeting; Chicago; 12/13/22)

6. "Nonthermal Velocities and Other Properties of a Quiescent Active Region Observed by EUNIS and EIS: Implications for Coronal Heating," Brosius, J. W., Daw, A. N., Rabin, D. M., Landi, E., & Schmit, D. (SPD Meeting; Minneapolis; 8/15/23)

7. "Nonthermal Velocities in a Quiescent Solar Active Region Observed by EUNIS and EIS," J. W. Brosius, A. N. Daw, D. M. Rabin, E. Landi, & D. Schmit (AGU Fall Meeting; San Francisco; 12/13/2023)

8. "The CubeSat Imaging X-ray Spectrometer (CubIXSS)," Caspi, A., Klimchuk, J. A. et al. (SPD meeting; Minneapolis; 8/15/23)

9. "The CubeSat Imaging X-ray Solar Spectrometer (CubIXSS): Science and Current Status of Implementation for a New Mission to Understand Heating of Coronal Plasma," A. Caspi, J. A. Klimchuk, et al. (TESS 2024; Dallas; 4/12/24)

10. *"Signatures of Type III Solar Radio Bursts from Nanoflares: Modeling," Chhabra, S., Klimchuk, J., & Gary, D. (invited; NASA MSFC Journal Club; 10/15/21)*

11. *"Study of Type III Radio Bursts in the Closed Corona and the Solar Wind from Small-Scale Reconnection: Observations (highlighted)," Chhabra, S., Klimchuk, J. A., Gary, D. E. (Fall AGU Meeting; New Orleans; 12/14/21)*

12. "Diagnosing Loops with Varying Cross-Sectional Area using Emission Measure", Chhabra, S., Reep, J., Knizhnik, K., Klimchuk, J.A. (SPD meeting; Minneapolis; 08/18/23)

13. "Diagnosing Loop Expansion in Active Regions using Emission Measure," S. Chhabra, J. W. Reep, K. Knizhnik, & J. A. Klimchuk (TESS 2024; Dallas; 4/12/24)

14. “Diagnosing Loop-Expansion in Active Regions Using Emission Measure,” S. Chhabra, J. Reep, K. Knizhnik, & J. A. Klimchuk (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/26/24)

15. “Magnetic Reconnection in 3D vs. 2D and Dependence on Magnetic Shear,” Daldorff, L., Leake, J., & Klimchuk, J. (Fall AGU Meeting; New Orleans; 12/14/21)

16. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona” Daldorff, L., Leake, J., & Klimchuk, J. (Magnetic Reconnection 2022; Monterey, CA; 5/16/22)

17. “Magnetic Reconnection in 3D vs. 2D and Dependence on Magnetic Shear,” Daldorff, L., Leake, J., & Klimchuk, J. (Triennial Earth-Sun Summit; Bellevue, WA; 8/9/22)

18. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona” Daldorff, L., Leake, J., & Klimchuk, J. (LWS team meeting; Huntsville, AL; 10/14/22)

19. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” Daldorff, L. K. S., Leake, J. E., & Klimchuk, J. A. (AGU meeting; Chicago; 12/15/22)

20. “Magnetic Reconnection in 3D vs. 2D and Dependence on Magnetic Shear,” Daldorff, L., Leake, J., & Klimchuk, J. (10th Coronal Loops Workshop; Paris; June 28 – July 1, 2022)

21. “Implication of Line-Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” Daldorff, L. K. S., Leake, J. E., & Klimchuk, J. A. (Magnetic Reconnection 2023 meeting; Ise-Shima, Japan; 6/28/23)

22. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” Daldorff, L. K. S., Leake, J. E., Klimchuk, J. A., & Johnston, C. D. (SPD meeting; Minneapolis; 8/17/23)

23. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” Daldorff, L. K. S., Leake, J. E., Klimchuk, J. A., & Johnston, C. D. (LWS team meeting; APL, Laurel, MD; 9/28/23)

24. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” L. K. S. Daldorff, J. E. Leake, J. A. Klimchuk, & C. D. Johnston (AGU Fall Meeting; San Francisco; 12/13/23)

25. “Implication of Line Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” L. K. S., Daldorff, J. E. Leake, J. A. Klimchuk, & C. D. Johnston (SpiroFest; Boulder; 2/29/24)

26. Implication of Line-Tied Magnetic Field on Magnetic Reconnection in the Closed Corona,” L. K. S., Daldorff, J. E. Leake, & J. A. Klimchuk (TESS 2024; Dallas; 4/12/24)

27. “Range of Scales in Active Regions and Their Influence on Energy Release,” L. K. S. Daldorff, C. D. Johnston, S. Sow Mondal, J. A. Klimchuk, J. E. Leake, & N. D. Kee (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/26/24)

28. "Hot Spectroscopy: Co-ordinated EUNIS-2021, IRIS, and Hinode Observations of AR 12824," Daw, A., Schmit, D., Rabin, D., Brosius, J., and Landi, E. (Hinode-14/IRIS-11 Joint Science Meeting; virtual at George Mason Univ.; 10/25/21)

29. “Aspects of MHD Wave Heating in the Complex Solar Atmosphere,” De Moortel, I. (seminar; Manchester Univ.; 2/16/22)

30. “Aspects of MHD Wave Heating in the Complex Solar Atmosphere,” De Moortel, I. (seminar; Leeds Univ.; 3/10/22)

31. “(When) Can Wave Heating Balance Optically Thin Radiative Losses in the Corona?”, De Moortel, I. (10th Coronal Loops Workshop; Paris; 6/29/22)

32. "Does the Coronal Heating Rate Depend on Microscopic Reconnection Physics?”, Y.-M. Huang & A. Bhattacharjee (SHINE Workshop; Juneau, Alaska; 8/12/24)

33. “A Fast and Accurate Method to Capture the Solar Corona/Transition Region Enthalpy Exchange in Multi-Dimensional Magnetohydrodynamic Simulations,” Johnston, C., De Moortel, I., Daldorff, L, Leake, J., Klimchuk, J., et al. (AGU Fall Meeting; New Orleans; 12/13/21)

34. “Multi-Dimensional Modeling of the Transition Region and Application to Thermal Non-Equilibrium,” Johnston, C. D. (Invited; Workshop on What Solar Observations Can Teach us about Multiphase Plasmas across Astrophysical Scales; Orléans, France; 6/15/22)

35. “A Fast Multi-Dimensional MHD Formulation of the Transition Region Adaptive Conductive (TRAC) Method,” Johnston, C. D., Hood, A. W., De Moortel, I., & Daldorff, L. K. S. (10th Coronal Loops Workshop; Paris; 6/28/22)

36. “A Fast and Accurate Method to Capture the Solar Corona/Transition Region Enthalpy Exchange in Multi-Dimensional Magnetohydrodynamic Simulations,” Johnston, C. D., Hood, A. W., De Moortel, I., & Daldorff, L. K. S. (Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)

37. “A Fast Multi-Dimensional MHD Formulation of the Transition Region Adaptive Conduction (TRAC) Method," Johnston, C. D., Hood, A. W., De Moortel, I & Daldorff, L. K. S. (Invited; 2022 Solar MHD Meeting; Eastbourne, UK; 8/9/22)

38. “Transition Region Adaptive Conduction (TRAC) Method: Application in Impulsive Heating and TNE Simulations,” Johnston, C. D., Barnes, W. T., Daldorff, L. K. S., & Daley-Yates, S. (invited; ISSI, Bern, Switzerland, 3/13/23)

39. “Self -Consistent Heating of the Magnetically Closed Corona: Generation of Nanoflares and Response of the Plasma,” Johnston, C. D., Daldorff, L. K. S., Klimchuk, J. A., Sow Mondal, S., & Leake, J. E. (SPD meeting; Minneapolis; 8/16/23)

40. “Self-Consistent Heating of the Magnetically Closed Corona: Generation of Nanoflares and Response of the Plasma,” C. D. Johnston, L.K.S. Daldorff, J. A. Klimchuk, J. E. Leake, & S. Sow Mondal (AGU Fall Meeting; San Francisco; 12/12/23)

41. “Self-Consistent Heating of the Magnetically Closed Corona: Generation of Nanoflares and Response of the Plasma,” C. D. Johnston, L. K. S. Daldorff, J. A. Klimchuk, S. Sow Mondal, & J. E. Leake (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/26/24)

42. “Self-Consistent Heating of the Magnetically Closed Corona: Generation of Nanoflares and Response of the Plasma,” C. D. Johnston, L. K. S. Daldorff, J. A. Klimchuk, J. E. Leake, & S. Sow Mondal (TESS 2024; Dallas; 4/10/24)

43. “LaRe3D Modeling 2,” C. D. Johnston, J. E. Leake, J. A. Klimchuk, L. K. S. Daldorff, & S. Sow Mondal (1st Meeting of ISWAT Team S2-6; APL/JHU, 7/29/24)

44. “Coronal Heating,” Klimchuk, J. A. (invited seminar; PMOD/WRC, Davos, Switzerland; 12/7/21)

45. “Coronal Heating: A Coupled Multi-Scale Problem,” Klimchuk, J. A. (**honorary Parker Lecture**; Fall AGU Meeting; New Orleans; 12/13/21)

46. “Computing Emission Signatures from Coronal MHD Models Without a Realistic Atmosphere,” Klimchuk, J. A., Knizhnik, K., & Uritsky, V. (Fall AGU Meeting; New Orleans; 12/16/21)

47. “Heating of the Magnetically Closed Corona,” Klimchuk, J., Daldorff, L., Brosius, J., & Johnston, C. (HISFM Showcase, 4/7/22)

48. “The Role of 3D Complexity in Magnetic Reconnection,” Klimchuk, J., Daldorff, L., & Leake, J. (invited; given by L. Daldorff as Klimchuk could not attend for medical reasons; Magnetic Reconnection 2022; Monterey, CA; 5/20/22)

49. “Alfven Waves From Interchange Reconnection at Streamer-Coronal Hole Boundaries,” Klimchuk, J. (invited; Viall Work Package Team Meeting; GSFC; 6/3/22)

50. “Cross Sections of Coronal Loop Flux Tubes,” Klimchuk, J., & DeForest, C. (10th Coronal Loops Workshop; Paris; 6/30/22)

51. “Observational Signatures of Coronal Heating in MHD Simulations Without Radiation or a Lower Atmosphere,” Klimchuk, J., Knizhnik, K., & Uritsky, V. (poster; 10th Coronal Loops Workshop; Paris; 6/28/22)

52. “Coronal Heating: A Coupled Multi-Scale Problem,” Klimchuk, J. (invited colloquium; Institut d’Astrophysique Spatiale, Paris; 7/4/22)

53. “Investigations of Coronal Heating at GSFC,” Klimchuk, J. (Solar Lab meeting; GSFC; 7/14/22)

54. “Observational Signatures of Coronal Heating in MHD Simulations Without Radiation or a Lower Atmosphere,” Klimchuk, J., Knizhnik, K., & Uritsky, V. (Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)

55. “Cross Sections of Coronal Loop Flux Tubes,” Klimchuk, J., & DeForest, C. (poster; Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)

56. “Magnetospheric Nanoflares?”, Klimchuk, J. (LWS team meeting; Huntsville, AL; 10/12/22)

57. “The Role of 3D Complexity in Magnetic Reconnection,” Klimchuk, J., Daldorff, L., & Leake, J. (LWS team meeting; Huntsville, AL; 10/14/22)

58. “Coronal Heating: Globally and Within Campfires,” Klimchuk, J. (invited; Solar Orbiter “Atmospheric Heating” Science Working Group; virtual; 10/17/22)

59. “The Role of 3D Complexity in Magnetic Reconnection,” Klimchuk, J., Daldorff, L., & Leake, J. (AGU Fall Meeting; Chicago; 12/12/22)

60. “Cross Sections of Coronal Loop Flux Tubes,” Klimchuk, J., & DeForest, C. (poster; GSFC Poster Party; 1/26/23)

61. “The Difference Between Thermal Non-equilibrium and Thermal Instability,” Klimchuk, J. A. (ISSI; Bern, Switzerland; 3/13/23)

62. “Condensation Formation with Nanoflare Heating,” Klimchuk, J., Kucera, T., & Luna, M. (ISSI; Bern, Switzerland; 3/16/23)

63. “The Unavoidable Thinning of Current Sheets,” Klimchuk, J., Leake, J., Daldorff, L., & Johnston, C., (work package team meeting; GSFC; 4/5/23)

64. “The Heating of the Magnetically Closed Corona,” Klimchuk, J. A., Johnston, C. D. (ISFM mid-term review; GSFC; 5/16/23)

65. “The Thickness of Electric Current Sheets and Implications for Coronal Heating,” Klimchuk, J. A. (STAMP meeting; GSFC; 6/2/23)

66. “Why is the Corona So Darned Hot?,” Klimchuk, J. A. (GSFC interns; 6/15/23)

67. “The Thickness of Electric Current Sheets and Implications for Coronal Heating,” Klimchuk, J. A., Leake, J., E., Daldorff, L. K. S., & Johnston, C. D. (Magnetic Reconnection 2023 meeting; Ise-Shima, Japan; 6/26/23)

68. “Advice to Students and Early-Career Scientists,” Klimchuk, J. A. (SPD meeting; Minneapolis; 8/17/23)

69. “Modeling the Solar Spectral Irradiance Using GX_Simulator,” Klimchuk, J. A. (ISFM work package team meeting; 9/6/23)

70. “Loss of Equilibrium in Current Sheets: A Pathway to Reconnection Onset,” Klimchuk, J. A. (LWS team meeting; APL, Laurel, MD; 9/26/23)

71. “The Thickness of Current Sheets and Implications for Coronal Heating,” J. A. Klimchuk, J. E. Leake, L. K. S. Daldorff, & C. D. Johnston (AGU Fall Meeting; San Francisco; 12/12/23)

72. “The Onset of Magnetic Reconnection in Thinning Current Sheets,” J. A. Klimchuk, J. E. Leake, L. K. S. Daldorff, C. D. Johnston, & S. Sow Mondal (AGU Fall Meeting; San Francisco; 12/15/23)

73. “Thermal Non-Equilibrium: As Fascinating and Important as Spiro Himself,” J. A. Klimchuk, T. A. Kucera, & M. Luna (SpiroFest; Boulder; 3/1/24)

74. “Loss of Current Sheet Equilibrium as a Pathway to Reconnection Onset,” J. A. Klimchuk, N. D. Kee, & J. E. Leake (TESS 2024; Dallas; 4/12/24)

75. “Thermal Non-Equilibrium: As Fascinating as it is Important,” J. A. Klimchuk (Coronal Cooling Conference; Leuven; 5/21/2024; invited)

76. “Loss of Current Sheet Equilibrium: the Nanoflare Trigger?”, J. A. Klimchuk, N. Dylan Kee, & J. E. Leake (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/26/24)

77. “Meeting Introduction and LaRe3D-hydro-GXsimulator Modeling Overview,” J. A. Klimchuk (1st Meeting of ISWAT Team S2-6; APL/JHU, 7/29/24)

78. “Physical Models of Solar Active Regions and the Solar Spectral Irradiance,” J. A. Klimchuk, C. D. Johnston, & S. Chhabra (Director’s Seminar; GSFC; 9/18/24; invited)

79. “Modeling of Condensations in Active Region Loops Produced by Nanoflares,” Kucera, T., Klimchuk, J., & Luna, M. (Solar Orbiter Science Meeting; Belfast; Sept 12-15, 2022)

80. “Simulations of Thermal Non-Equilibrium Caused by Nanoflares,” Kucera, T., Klimchuk, J., & Luna, M. (10th Coronal Loops Workshop; Paris; June 28 – July 1, 2022)

81. “Simulations of Thermal Non-Equilibrium Caused by Nanoflares,” Kucera, T., Klimchuk, J., & Luna, M. (poster; Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)

82. “The Role of UV in Heliophysics,” Kucera, T. (keynote; Goddard UV Symp.; Greenbelt, MD; 4/4/22)

83. “Modeling of Condensations in Coronal Loops Produced by Impulsive Heating with Variable Frequencies and Locations,” Kucera, T. A., Klimchuk, J. A., & Luna, M. (SPD meeting; Minneapolis; 8/17/23)

84. “Modeling of Condensations in Coronal Loops Produced by Impulsive Heating with Variable Frequencies and Locations,“ Therese Kucera, James Klimchuk, and Manuel Luna (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/25-28/24)

85. “Onset of Magnetic Reconnection in the Solar Corona,” Leake, J., Klimchuk, J., & Daldorff, L. (Fall AGU Meeting; New Orleans; 12/15/21)

86. “The Onset of Magnetic Reconnection in Dynamically Evolving Coronal Current Sheets,” Leake, J., Daldorff, L., & Klimchuk, J. (Triennial Earth-Sun Summit; Bellevue, WA; 8/9/22)

87. “The Onset of Magnetic Reconnection in Dynamically Evolving Current Sheets in the Solar Corona,” Leake, J. E., Daldorff, L. K. S., & Klimchuk, J. A. (Magnetic Reconnection 2023 meeting; Ise-Shima, Japan; 6/28/23)

88. “The Onset of Magnetic Reconnection in Dynamically Evolving Current Sheets in the Solar Corona,” Leake, J., E., Daldorff, L. K. S., & Klimchuk, J. A. (SPD meeting; Minneapolis; 8/17/23)

89. “The Onset of Magnetic Reconnection in Dynamically Evolving Coronal Current Sheets,” Leake, J., E., Daldorff, L. K. S., & Klimchuk, J. A. (LWS team meeting; APL, Laurel, MD; 9/28/23)

90. “The Onset of Magnetic Reconnection in the Solar Corona,” J. E. Leake, L. K. S. Daldorff, J. A. Klimchuk, & C. D. Johnston (TESS 2024; Dallas; 4/12/24)

91. “LaRe3D Modeling 1,” J. E. Leake, C. D. Johnston, J. A. Klimchuk, L. K. S. Daldorff, & S. Sow Mondal (1st Meeting of ISWAT Team S2-6; APL/JHU, 7/29/24)

92. *“The role of modeling and observations for a complete explanation of coronal heating,” Lopez Fuentes, M. (XVII Latin American Regional IAU Meeting; Montevideo, Uruguay; 11/27/23; invited)*

93. “The effect of cross-section expansion on the evolution of coronal loops,” Lopez Fuentes, M. & Klimchuk, J. A. (XVII Latin American Regional IAU Meeting; Montevideo, Uruguay; 11/29/23)

94. “Hydrodynamic modeling of coronal loops,” M. Lopez Fuentes & J. A. Klimchuk (66th Meeting of the Argentinian Aston. Assoc.; La Plata, Argentina; 9/16/24)

95. “Coronal Microscale Observatory (CMO),” Rabin, D., Viall, N. M., Klimchuk, J. A., et al. (UV Science at Goddard Workshop; Greenbelt)

96. “Stereoscopic Analysis of Coronal Loop Morphology and Dynamics,” S. Mandal, J. A. Klimchuk, et al. (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/25/24)

97. “Temporal and spatial evolution of nanoflare heating in solar AR,” B. Mondal, J. A. Klimchuk, A.R. Winebarger, P.S. Athiray, J. Liu; (11 th Coronal Loops Workshop; La Laguna, Canary Islands; 6/26/24)

98. “Long-Lived Active Regions: Identification and Heating Implications,” E. I. Mason, K. Kniezewski, C. Downs, N. M. Viall, W. T. Barnes, J. A. Klimchuk, & A. R. Winebarger (TESS 2024; Dallas; 4/10/24)

99. “The Coronal Microscale Observatory,” D. Rabin, J. A. Klimchuk, et al. (TESS 2024; Dallas; 4/10/24)

100. “Advancements in Understanding the Ambient Solar Magnetic Field, Heating, and Spectral Irradiance: A Roadmap Update from COSPAR ISWAT Cluster S2,” M. Reiss, C. N. Arge, J. Klimchuk, et al. (45th COSPAR Scientific Assembly; Busan, Korea, 7/13/24)

101. “A Study of Small-Scale Brightenings using EUV Data from SPICE onboard Solar Orbiter,” Rodriguez Gomez, J. M., Young, P., & Kucera, T. (EGU General Assembly 2022; Vienna; 5/23/22)

102. “Modeling EUV Intensity at the Top of the Transition Region Using SPICE Data Onboard Solar Orbiter,” Rodriguez Gomez, J. M., Kucera, T., Young, P., and the SPICE Team (SPICE Consortium Meeting and STW 36; Sorbonne University; Paris; 4/19/23

103. “Plasma Properties of Quiet Sun Small-scale Solar Dynamic Features in the Transition Region,” Rodriguez Gomez, J. M., Kucera, T., Young, P., and the SPICE Team (EGU General Assembly; 4/23/23)

104. “Modeling EUV Intensity at the Top of the Transition Region Using SPICE Data Onboard Solar Orbiter,” Rodriguez Gomez, J. M., Kucera, T., Young, P., and the SPICE Team (EGU General Assembly; 4/23/23

105. “On the Role of Spicules in Solar Coronal Emission,” Sow Mondal, S., Klimchuk, J. A., & Sarkar, A. (SPD meeting; Minneapolis; 8/17/23)

106. “Nanoflare Statistics in a Driven Magnetically Closed Corona,” S. Sow Mondal, L.K.S. Daldorff, J. A. Klimchuk, C. D. Johnston, & J. E. Leake (AGU Fall Meeting; San Francisco; 12/12/23)

107. “Nanoflare Statistics and Reconnection Onset in the Magnetically Closed Corona,” S. Sow Mondal, L. K. S. Daldorff, J. A. Klimchuk, C. D. Johnston, & J. E. Leake (TESS 2024; Dallas; 4/12/24)

108. “Nanoflare Frequency and Reconnection Onset in Driven Active Region Magnetic Fields,” S. Sow Mondal, C. D. Johnston, L. K. S. Daldorff, J. A. Klimchuk, J. E. Leake, & N. D. Kee (11th Coronal Loops Workshop; La Laguna, Canary Islands; 6/26/24)

109. “Nanoflare Statistics,” S. Sow Mondal, L. K. S. Daldorff, J. A. Klimchuk (671), & C. D. Johnston (1st Meeting of ISWAT Team S2-6; APL/JHU, 7/30/24)

110. “Answering the Outstanding Questions of Solar Wind Physics,” Viall, N. M. (invited; St. Andrews University; 3/16/22)

111. “Outstanding Questions of Coronal Heating and Solar Wind Physics,” Viall, N. M. (invited; Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)

112. “The Grand Challenge Questions of Solar Wind Physics,” Viall, N. M. (invited; Eddington Lecture, Inst. Astronomy, U. Cambridge, 3/9/23)

113. “The Grand Challenge Questions of Solar Wind Physics,” Viall, N. M. (invited; Royal Astron. Soc., London, 3/10/23)

114. “CHIANTI: An Atomic Database and Software Package for UV Spectroscopy,” Young, P. (Goddard UV Symposium; 4/4/22)

115. “An Analysis of Spikes in Atmospheric Imaging Assembly (AIA) Data,” Young, P., Viall, N. M., et al. (Triennial Earth-Sun Summit; Bellevue, WA; 8/8/22)