

Curriculum Vitae

Marc Kornbleuth

Born: 1990

Boston University, Department of Astronomy
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Email: kmarc@bu.edu

Education

Ph.D. Astronomy August 2020

Department of Astronomy, Boston University

Dissertation: Using Hydrogen Energetic Neutral Atoms to Study the Heliosphere

Advisor: Prof. Merav Opher

M.A. Astronomy September 2016

Department of Astronomy, Boston University

B.A. Astronomy & Physics with Honors Spring 2013

Department of Astronomy, Boston University

Dissertation: The Effect of Heating and Acceleration of Winds for Calculating Mass

Loss Rates of Stars

Advisor: Prof. Merav Opher

Research Appointments

Research Scientist

Department of Astronomy, Boston University October 2022-present

Deputy Director of Global Heliosphere (Research Thrust #1) Team, SHIELD Drive

Center April 2022-present

Department of Astronomy, Boston University, PI: Dr. Merav Opher

Postdoctoral Associate August 2020-September 2022

Department of Astronomy, Boston University, Advisor: Dr. Merav Opher

Graduate Researcher September 2014 – August 2020

Department of Astronomy, Boston University, Advisor: Dr. Merav Opher

Research Assistant September 2013 – August 2014

Harvard-Smithsonian Center for Astrophysics, Advisor: Dr. Bradford Wargelin

Undergraduate Student Researcher
Boston University, Advisor: Dr. Merav Opher September 2011 - May 2013

Research Awards & Honors

NASA DRIVE Center Grant (Co-I)	2022-present
Heliophysics Guest Investigator Grant (Scientific PI)	2022-present
Heliophysics Supporting Research Grant (Co-I)	2021-2022
NASA Earth and Space Science Fellowship	May 2018
NSF Graduate Research Fellowship - Honorable Mention	March 2016
Second Prize in Ionosphere/Magnetosphere category of the Community Coordinated Modeling Center Student Research Contest - NSF, CCMC	May 2014
Student Research Award - Boston University	Summer 2012

Teaching Appointments

Teaching Fellow PY 105 Elementary Physics I Department of Physics, Boston University	Summer 2018
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REU Seminar Coordinator Department of Astronomy, Boston University	Summer 2017
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Teaching Fellow AS 109 Cosmology Department of Astronomy, Boston University	Spring 2015
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Teaching Fellow AS 102 The Astronomical Universe Department of Astronomy, Boston University	Fall 2014
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Mentored Students

Ethan Bair	2022-present
Chika Onubogu	2021-present
Xiaohan Ma	2020-present
Erick Powell	2020-present
Warren Shelley	2020
Mark Hubbert	2017
Matthew Schueler	2017
Christopher Bambic	2016

Public Outreach, Service, and Teams

AGU23 Fall Meeting Session Primary Convener (SH43D/53A)	2023
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OH-VLISM Online Seminar Primary coordinator	2023-
2023 SHINE Workshop Session Co-Convener	2023
SHIELD Summer School Lecturer ('Basics of the Heliosphere')	2023
AGU22 Fall Meeting Session Co-Convener (SH45G)	2022
Senior Review - Voyager	2022
OH-VLISM Online Seminar Co-coordinator	2021-2023
ISSI Space Science Team (Early Career Scientist)	2021-
30th Anniversary of the Center for Space Physics	2018
Boston University Astronomy Department Twitter Account	2016 – 2020
Boston University Public Open Nights	2016 – 2019
Boston University Natural Sciences Curriculum Committee	Fall 2016

Professional Memberships

American Geophysical Union (AGU)

Refereed Publications

1. **Kornbleuth, M.**, Opher, M., Dayeh, M. A., Sokol, J. M., Turner, D. L., Baliukin, I. B., Dialynas, K., Izmodenov, V. (2024), *Inferring the Interstellar Magnetic Field Direction from Energetic Neutral Atom Observations of the Heliotail*, *Astrophysical Journal Letters*, Submitted
2. Turner, D. L., Michael, A. T., Provornikova, E., **Kornbleuth, M.**, Opher, M., et al. (2024), *Evidence of a Thick Heliopause Boundary Layer Resulting from Active Magnetic Reconnection with the Interstellar Medium*, *Astrophysical Journal*, 960, 130, doi:10.3847/1538-4357/ad05d3
3. Powell, E., Opher, M., **Kornbleuth, M.**, Baliukin, I., Michael, A. T., Wood, B. E., Izmodenov, V., Toth, G., Tenishev, V. (2024), *Lyman-alpha Absorption in a "Croissant-like" Heliosphere*, *Astrophysical Journal*, Accepted
4. Spitzer, S. A., **Kornbleuth, M.**, Opher, M., Gilbert, J. A., Raines, J. M., Lepri, S. T. (2024), *Complementary Interstellar Detections from the Heliotail*, *Frontiers in Astronomy and Space Sciences*, Accepted
5. Opher, M., **Kornbleuth, M.**, Decker, R., Richardson, J. D., Bair, E., Dialynas, K., Nikoukar, R., Hill, M., Florinski, V. (2024), *Flow Anisotropies in the Heliosheath*, *Astrophysical Journal*, Submitted
6. Galli, A., Baliukin, I., **Kornbleuth, M.**, Opher, M., Fuselier, S. A., Sokol, J. M., Dialynas, K., Dayeh, M. A., Izmodenov, V. V., Richardson, J. D. (2023), *The Discrepancy between Observed and Predicted Heliospheric Energetic Neutral Atoms*

- below Solar Wind Energy*, Astrophysical Journal Letters, 954, L24, doi:10.3847/2041-8213/aced9b
7. Opher, M., Richardson, J., Zank, G., Florinski, V., Giacalone, J., Solol, J. M., Toth, G., Buxner, S., **Kornbleuth, M.**, et al. (2023), *Solar Wind with Hydrogen Ion charge Exchange and Large-Scale Dynamics (SHIELD) DRIVE Science Center*, Frontiers in Astronomy and Space Sciences, 10, 1143909, doi:10.3389/fspas.2023.1143909
 8. **Kornbleuth, M.**, Opher, M., Dialynas, K., Zank, G. P., Wang, B. B., Baliukin, I., Gkioulidou, M., Giacalone, J., Izmodenov, V., Sokol, J. M., Dayeh, M. A. (2023), *Probing the Length of the Heliospheric Tail with ENAs from 0.52-80 keV*, Astrophysical Journal Letters, 945, L15, doi: 10.3847/2041-8213/acbc73
 9. **Kornbleuth, M.**, Opher, M., Zank, G. P., Wang, B. B., Giacalone, J., Gkioulidou, M., Dialynas, K. (2023), *An Anomalous Cosmic Ray Mediated Termination Shock: Implications for Energetic Neutral Atoms*, Astrophysical Journal Letters, 944, L47, doi:10.3847/2041-8213/acb9e0
 10. Dialynas, K., Sterken, V. J., Brandt, P. C., Burlaga, L., Berdichevsky, D. B., Decker, R. B., Della Torre, S., DeMajistre, R., Galli, A., Gkioulidou, M., Hill, M. E., Krimigis, S. M., **Kornbleuth, M.**, Kurth, W., Lavraud, B., et al. (2023), *A Future Interstellar Probe on the Dynamic Heliosphere and its Interaction with the Very Local Interstellar Medium: In-situ Particle and Fields Measurements and Remotely Sensed ENAs*, Frontiers in Astronomy and Space Sciences, 10, 1061969
 11. Lavraud, B., Opher, M., Dialynas, K., Turner, D. L., Eriksson, S., Provornikova, E., **Kornbleuth, M.**, Mostafavi, P., Fedorov, A., Richardson, J. D., Fuselier, S. A., Drake, J., Swisdak, M., Eubanks, M., Chen, T. Y., Kucharek, H., et al. (2023), *What is the Heliopause? Importance of Magnetic Reconnection and Measurement Requirements*, Frontiers in Astronomy and Space Sciences, 10, 1060618
 12. Wang, B. B., Zank, G. P., Shrestha, B. L., **Kornbleuth, M.**, Opher, M. (2023), *Relating Energetic Ion Spectra to Energetic Neutral Atoms (ENAs)*, Astrophysical Journal, 944, 198, doi:10.3847/1538-4357/acb437
 13. Galli, A., Baliukin, I., Bzowski, M., Izmodenov, V., **Kornbleuth, M.**, Kucharek, H., Mobius, E., Opher, M., Reisenfeld, D., Schwadron, N. A., Swaczyna, P. (2022), *The Heliosphere and Local Interstellar Medium from Neutral Atom Observations at Energies below 10 keV*, Space Science Reviews, 218, 31, doi:10.1007/s11214-022-00901-7
 14. Kleimann, J. Dialynas, K., Fraternali, F., Galli, A., Heerikhuisen, J., Izmodenov, V., **Kornbleuth, M.**, Opher, M. Pogorelov, N. (2022), *The Structure of the Large-Scale*

Heliosphere as Seen by Current Models, Space Science Reviews, Space Science Reviews, 218, 36, doi:10.1007/s11214-022-00902-6

15. Sokol, J. M., Kucharek, H., Baliukin, I., Izmodenov, V. V., **Kornbleuth, M.**, Mostafavi, P., Opher, M., Park, J., Pogorelov, N., Quinn, P., Smith, C. W., Zank, G., Zhang, M. (2022), *Interstellar Neutrals, Pickup Ions, and Energetic Neutral Atoms Throughout the Heliosphere: Present Theory and Modeling Overview*, Space Science Reviews, 218, 18, doi:10.1007/s11214-022-00883-6
16. Gkioulidou, M., Opher, M., **Kornbleuth, M.**, Dialynas, K., Giacalone, J., Richardson, J. D., Zank, G. P., Fuselier, S. A., Mitchell, D. G., Krimigis, S. M., Roussos, E., Baliukin, I. (2022), *First Comparison of Composite 0.52-55 keV ENA Spectra Observed by IBEX and Cassini/INCA with Simulated ENAs Inferred by Proton Hybrid Simulations Downstream of the Termination Shock*, Astrophysical Journal Letters, Accepted
17. **Kornbleuth, M.**, Opher, M., Baliukin, I., Gkioulidou, M., Richardson, J. D., Zank, G. P., Michael, A. T., Toth, G., Tennishev, V., Izmodenov, V., Alexashov, D., Fuselier, S., Drake, J. F., Dialynas, K. (2021), *The Development of a Split-Tail Heliosphere and the Role of Non-ideal Processes: A Comparison of the BU and Moscow Models*, Astrophysical Journal, 923, 179, doi: 10.3847/1538-4357/ac2fa6
18. **Kornbleuth, M.**, Opher, M., Baliukin, I., Dayeh, M. A., Zirnstein, E. J., Gkioulidou, M., Dialynas, K., Galli, A., Richardson, J. D., Izmodenov, V., Zank, G. P., Fuselier, S. P. (2021), *Signature of a Heliotail Organized by the Solar Magnetic Field and the Role of Non-ideal Processes in Modeled IBEX ENA Maps: A Comparison of the BU and Moscow MHD Models*, Astrophysical Journal, 921, 164, doi: 10.3847/1538-4357/ac1e2a
19. Opher, M., Drake, J. F., Zank, G., Powell, E., Shelley, W., **Kornbleuth, M.**, Florinski, V., Izmodenov, V., Giacalone, J., Fuselier, S., Dialynas, K., Loeb, A., Richardson, J. (2021), *A Turbulent Heliosheath Driven by the Rayleigh-Taylor Instability*, Astrophysical Journal, 922, 181, doi: 10.3846/1538-4357/ac2d2e
20. Fuselier, S. A., Galli, A., Richardson, J. D., Reisenfeld, D. B., Zirnstein, E. J., Heerikhuisen, J., Dayeh, M. A., Schwadron, N. A., McComas, D. J., Elliot, H. A., Gomez, R. G., Starkey, M. J., **Kornbleuth, M. Z.**, Opher, M., Dialynas, K. (2021) *Energetic Neutral Atom Fluxes from the Heliosheath: Constraints from in situ Measurements and Models*, Astrophysical Journal Letters, 915, L26, doi: 10.3847/2041-8213/ac0d5c
21. **Kornbleuth, M.**, M. Opher, A. T. Michael, J. M. Sokół, G. Toth, V. Tennishev, and J. F. Drake (2020), *The Confinement of the Heliosheath Plasma by the Solar Magnetic*

Field as Revealed by Energetic Neutral Atoms, Astrophysical Journal Letters, 895, L26, 10.3847/2041-8213/ab922b.

22. **Kornbleuth, M.**, M. Opher, A. T. Michael, and J. F. Drake (2018), *Globally Distributed Energetic Neutral Atoms for the 'Croissant' Heliosphere*, Astrophysical Journal, 865, 84, doi:10.3847/1538-4357/aadbac.
23. Kay, C., M. Opher, and **M. Kornbleuth** (2016), *Probability of CME Impact on Exoplanets Orbiting M Dwarfs and Solar-like Stars*, Astrophysical Journal, 826, 195, doi:10.3847/0004-637X/826/2/195.
24. Wargelin, B.J., **M. Kornbleuth**, P. L. Martin, and M. Juda (2014), *Observation and Modeling of Geocoronal Charge Exchange X-Ray Emission during Solar Wind Gusts*, Astrophysical Journal, 796,28, doi:10.1088/0004-637X/796/1/28.

Non-Refereed Publications

1. **Kornbleuth, M.**, Chen, T. Y., Drake, J. F., et al. (2023), *The Importance of Understanding the Solar Magnetic Field in the Heliosphere using the Interstellar Probe*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 222, doi: 10.3847/25c2cfcb.cdeb90fd
2. Sokol, J., Dayeh, M. A., Dialynas, K., ..., **Kornbleuth, M.**, et al. (2023), *Measurements Beyond 1 au are Necessary for Exploration of the Outer Heliosphere and Local Interstellar Medium*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 373, doi: 10.3847/25c2cfcb.5b6c799b
3. Mayyasi, M., Clarke, J., Quemerais, E., ..., **Kornbleuth, M.**, et al. (2023), *Measuring Neutral Hydrogen Properties in the Interplanetary Medium*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 275, doi: 10.3847/25c2cfcb.86565aec
4. Lavraud, B., **Kornbleuth, M.**, Wimmer-Schweingruber, R. F., et al. (2023), *What is the Heliopause? Importance of magnetic reconnection and measurement requirements*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 230, doi: 10.3847/25c2cfcb.771c2729
5. Dialynas, K., Brandt, P. C., Burlaga, L., ..., **Kornbleuth, M.**, et al. (2023), *A future Interstellar Probe on the dynamic heliosphere and its interaction with the very local interstellar medium*, Decadal Survey for Solar and Space Physics (Heliosphysics)

2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 096, doi: 10.3847/25c2cfcb.e3624787

6. DeMajistre, R., Mitchell, D., McNutt, R., ..., **Kornbleuth, M.**, et al. (2023), *Seeing the Shape, Dynamics, and Global Structure of the Heliosphere*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 091, doi: 10.3847/25c2cfcb.f85303df
7. Brandt, P., Alterman, B., Alvarez, E., ..., **Kornbleuth, M.**, et al. (2023), *Pushing the Frontier of Solar & Space Physics: Exploration of the Heliosphere and the Very Local Interstellar Medium by an Interstellar Probe*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, Bulletin of the American Astronomical Society, 55, 038, doi: 10.3847/25c2cfcb.e0bf48d5
8. Opher, M., Richardson, J., Giacalone, J., **Kornbleuth, M.**, et al. (2023), *Our Heliospheric Shield, a Case of a Habitable Astrosphere: Need to Revisit this region with In-Situ Measurements with Modern Instrumentation*, Decadal Survey for Solar and Space Physics (Heliosphysics) 2024-2033 white paper, 304

Conference Abstracts

1. *Inferring the Interstellar Magnetic Field Direction from Energetic Neutral Atom Observations of the Heliotail*, **Kornbleuth, M.**, Opher, M., Dayeh, M., et al., AGU Fall Meeting Abstracts, December 2023, eLightning Presentation, SH51H-07
2. *Lyman-alpha Absorption in a "Croissant-like" Heliosphere*, Powell, E., Opher, M., **Kornbleuth, M.**, et al., AGU Fall Meeting Abstracts, December 2023, Oral Presentation, SH53A-08
3. *Flow Anisotropies in the Heliosheath*, Opher, M., **Kornbleuth, M.**, Decker, R. B., et al., AGU Fall Meeting Abstracts, December 2023, Oral Presentation, SH53A-05
4. *Modeling Galactic Cosmic Ray Propagation Through the Heliosphere Using Stochastic Monte Carlo Methods and an Adaptive Mesh Refined Grid*, Guzman, J. G. A., Florinski, V. A., Toth, G., Opher, M., Opher, M., **Kornbleuth, M.**, AGU Fall Meeting Abstracts, December 2023, eLightning Presentation, SH11G-06
5. *Globally Distributed Flux of ENAs at Energies Below 2 keV*, Sokol, J., Fuselier, S. A., Galli, A., Mostafavi, P., Baliukin, I., **Kornbleuth, M.**, Fairchild, K., AGU Fall Meeting Abstracts, December 2023, eLightning Presentation, SH51H-04
6. *Heating of Energetic Pickup Ions in the Supersonic Solar Wind Region by Shock Waves: Observations and Modeling*, Mostafavi, P., Zank, G. P., Hill, M., Opher, M.,

- Brandt, P., **Kornbleuth, M.**, et al., AGU Fall Meeting Abstracts, December 2023, Poster Presentation, SH43D-3181
7. *The Resilience of the “Croissant” Heliosphere Under Solar-Cycle Varying Conditions*, Onubogu, C., Opher, **M.**, **Kornbleuth, M.**, et al., AGU Fall Meeting Abstracts, December 2023, Poster Presentation, SH43D-3193
 8. *Development Conditions of Rayleigh-Taylor Instability in Heliosheath*, Ma, X., Opher, M., **Kornbleuth, M.**, et al., AGU Fall Meeting Abstracts, December 2023, Poster Presentation, SH43D-3179
 9. *Consequences of Hot Electrons for the Structure of the Outer Heliosphere*, Bair, E., Opher, M., **Kornbleuth, M.**, et al., AGU Fall Meeting Abstracts, December 2023, Poster Presentation, SH43D-3177
 10. *Inferring the Interstellar Magnetic Field Direction from Energetic Neutral Atom Observations of the Heliotail*, **Kornbleuth, M.**, Opher, M., Dayeh, M., et al., Solar Heliospheric and Interplanetary Environment (SHINE) Workshop, August 2023, Poster, 250
 11. *Comparison of heliosphere models with IBEX-Lo observations of Energetic Neutral Atoms at 50 eV- 2 keV energy*, Galli, A., Baliukin, I., **Kornbleuth, M.**, Fuselier, S. A., Sokol, J. M., Opher, M., 25th EGU General Assembly, April 2023, Poster Presentation, EGU-5688
 12. *An ACR Mediated Termination Shock*, **Kornbleuth, M.**, Opher, M., Zank, G. P., Wang, B. B., Giacalone, J., Gkioulidou, M., Dialynas, K., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45G-2404
 13. *Development and Consequences of Rayleigh-Taylor-Like Driven Instability in the Heliosheath with a Multi-Ion Treatment*, Ma, X., Opher, M., **Kornbleuth, M.**, Drake, J. F., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45G-2402
 14. *Comparison of Lyman Alpha Absorptions in the BU and Moscow Models*, Powell, E., Opher, M., **Kornbleuth, M.**, Izmodenov, V., Baliukin, I., Wood, B. E., Toth, G., Tenishev, V., Titova, A., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45G-2399
 15. *Effect of Photoionization on the BU Global Model of the Heliosphere*, Onubogu, C., Opher, M., **Kornbleuth, M.**, Toth, G., Sokol, J., Michael, A., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45G-2398
 16. *A 3D Global Simulation of the Heliosphere with Hot Electrons*, Bair, E., Opher, M., **Kornbleuth, M.**, Zieger, B., Toth, G., van der Holst, B., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45G-2397

17. *Relating the Origin of Energetic Ions to Energetic Neutral Atoms (ENAs)*, Wang, B. B., Zank, G. P., Shrestha, B., Kornbleuth, M., Opher, M., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45G-2396
18. *On the Energization of Pickup Ions Downstream of the Heliospheric Termination Shock by Comparing 0.52-55 keV Observed Energetic Neutral Atom Spectra to Ones Inferred from Proton Hybrid Simulations*, Gkioulidou, M., Opher, M., **Kornbleuth, M.**, Dialynas, K., Giacalone, J., Richardson, J. D., Zank, G. P., Fuselier, S. A., Mitchell, D. G., Krimigis, S. M., Roussos, E., Baliukin, I., AGU Fall Meeting Abstracts, December 2022, Poster Presentation, SH45E-2390
19. *An ACR Mediated Termination Shock*, **Kornbleuth, M.**, Opher, M., Zank, G. P., Wang, B. B., Giacalone, J., Gkioulidou, M., Dialynas, K., 20th Annual International Astrophysics Conference, November 2022, Oral Presentation
20. *On the Energization of Pickup Ions Downstream of the Heliospheric Termination Shock by Comparing 0.52-55 keV Observed ENA Spectra to Simulated ENAs Inferred from Proton Hybrid Simulations*, Gkioulidou, M., Opher, M., **Kornbleuth, M.**, Dialynas, K., Giacalone, J., Richardson, J. D., Zank, G. P., Fuselier, S. A., Mitchell, D. G., Krimigis, S. M., Roussos, E., Baliukin, I., 44th COSPAR Scientific Assembly, July 2022, Oral Presentation, D1.7-0015-22
21. *Considerations of the Global Heliopause Boundary Using Macroscopic Multipoint Voyager Observations in the Context of Microscopic, Multipoint MMS Observations at Earth's Magnetopause*, Turner, D., Eriksson, S., Lavraud, B., Provornikova, E., Michael, A., Mostafavi, P., Opher, M., **Kornbleuth, M.**, Schwadron, N., McComas, D., Hill, M., Brandt, P., Clark, G., Cohen, I., Westlake, J., 44th COSPAR Scientific Assembly, July 2022, Oral Presentation, D1.7-0014-22
22. *A Comparison of Heliotail Configurations Arising from Different Treatments of Non-ideal MHD Effects with ENA Maps at IBEX Energies*, **Kornbleuth, M. Z.**, Opher, M., Baliukin, I., Dayeh, M., Zirnstien, E., Gkioulidou, M., Dialynas, K., Galli, A., Richardson, J. D., Izmodenov, V., Zank, G. P., Fuselier, S. A., Michael, A., Toth, G., Tenishev, V., Alexashov, D., Drake, J. F., AGU Fall Meeting Abstracts, December 2021, Oral Presentation, SH21B-02
23. *A Turbulent Heliosheath Driven by Rayleigh-Taylor Instability*, Opher, M., Drake, J. F., Zank, G. P., Toth, G., Powell, E., **Kornbleuth, M. Z.**, Florinski, V. A., Izmodenov, V., Giacalone, J., Fuselier, S., Dialynas, K., Loeb, A., Richardson, J. D., AGU Fall Meeting Abstracts, December 2021, Oral Presentation, SH21B-06
24. *Interplanetary Hydrogen Properties as Probes into the Heliospheric Interface*, Mayyasi, M., Clarke, J. T., Quemerais, E., Katushkina, O. A., Izmodenov, V., Provornikova, E., Sokol, J. M., Brandt, P. C., Galli, M., Opher, M., **Kornbleuth, M.**

- Z.**, Linsky, J. L., Wood, B. E., AGU Fall Meeting Abstracts, December 2021, Poster, SH15F-2069
25. *A Time-Dependent Split Tail Heliosphere*, Powell, E., Opher, M., Toth, G., Tenishev, V., Michael, A., **Kornbleuth, M.**, Richardson, J. D., AGU Fall Meeting Abstracts, December 2021, Poster, SH15F-2075
 26. *The Structure of the Heliosphere as Revealed by Modeled ENA Maps at IBEX Energies*, **Kornbleuth, M.**, Opher, M., Toth, G., Tenishev, V., Izmoddenov, V., Baliukin, I., Michael, A., 43rd COSPAR Scientific Assembly, January 2021, Oral Presentation, D1.3-0013-21
 27. *Structure of the Heliotail*, Opher, M., Richardson, J., Krimigis, S., Toth, G., Tenishev, V., Zank, G., Drake, J., Izmodenov, V., Fuselier, S., Dialynas, K., Baliukin, I., Dayeh, M., Zieger, B., Michael, A., **Kornbleuth, M.**, Gkioulidou, M., 43rd COSPAR Scientific Assembly, January 2021, Oral Presentation, D1.2-0014-21
 28. *The Effect of Changing Solar Magnetic Field Intensity on ENA Maps*, **Kornbleuth, M. Z.**, Opher, M., Michael, A. T., Sokol, J. M., Toth, G., Tenishev, V., AGU Fall Meeting Abstracts, December 2020, Poster, SH023-0008
 29. *Heliospheric Ly alpha Absorption in a Split Tail Heliosphere*, Powell, E., Opher, M., Michael, A. T., **Kornbleuth, M. Z.**, Wood, B. E., Izmodenov, V., Toth, G., Tenishev, V., Richardson, J. D., AGU Fall Meeting Abstracts, December 2020, Poster, SH017-0013
 30. *The Confinement of the Heliosheath Plasma by the Solar Magnetic Field as Revealed by ENAs*, **Kornbleuth, M.**, Opher, M., Michael, A.T., & Sokół. J.M., AGU Fall Meeting Abstracts, December 2019, Poster, SH51C-3335
 31. *Energetic Neutral Atom Maps from the 'Croissant-like' Heliosphere*, **Kornbleuth, M.**, Opher, M., Michael, A.T., & Drake, J.F., AGU Fall Meeting Abstracts, December 2018, Poster, SH33C-3664
 32. *The Energetic Neutral Atom Maps of the 'Croissant-like' Heliosphere with Jets*, **Kornbleuth, M.**, Opher, M., & Michael, A.T., AGU Fall Meeting Abstracts, December 2017, Poster, SH51D-2535
 33. *The Structure of the Heliosphere with Solar Cycle and Its Effect on the Conditions in the Local ISM*, Opher, M., Drake, J.F., Toth, G., Swisdak, M., Michael, A., **Kornbleuth, M.Z.**, & Zieger, B., AGU Fall Meeting Abstracts, December 2017, Oral Presentation, SH54B-04

34. *Understanding the Heliosphere with Jets Using Energetic Neutral Atoms*, **Kornbleuth, M.**, Opher, M., & Michael, A.T., Solar Heliospheric and Interplanetary Environment (SHINE) Workshop, July 2017, Poster, 167
35. *Investigating the Effect of the Heliosphere with Jets on ENAs*, **Kornbleuth, M.**, Opher, M., Michael, A.T., & Zieger, B., AGU Fall Meeting Abstracts, December 2016, Poster, SH31A-2535
36. *Probing the Nature of Pick-up Ions (and Kappa Distribution) in the Heliosheath through Global ENA Measurements and In-site Measurements*, Opher, M., Zieger, B., Drake, J.F., **Kornbleuth, M.Z.**, & Toth, G., AGU Fall Meeting Abstracts, December 2016, Oral Presentation, SH13D-01
37. *The Heliosphere with Jets and its implications for the global Energetic Neutral Atoms Maps throughout the Solar Cycle and its impact on the large-scale draping of the interstellar magnetic field*, Opher, M., Drake, J.F., **Kornbleuth, M.Z.**, Michael, A., Zieger, B., Swisdak, M., & Toth, G., AGU Fall Meeting Abstracts, December 2016, Oral Presentation, SH23A-05
38. *Investigating the Effect of the Heliosphere with Jets on ENAs*, **Kornbleuth, M.**, Opher, M., Michael, A.T., & Zieger, B., Solar Heliospheric and Interplanetary Environment (SHINE) Workshop, July 2016, Poster, 124
39. *The Effect of the Heating and Acceleration of Winds on the Conditions Ahead of Hot Jupiters: Solar and V374 Peg Cases*, **Kornbleuth, M.**, Opher, & Evans, R.M., Solar Heliospheric and Interplanetary Environment (SHINE) Workshop, July 2015, Poster, 88
40. *Chandra Observations and Modeling of Geocoronal Charge Exchange X-Ray Emission During Solar Wind Gusts*, **Kornbleuth, M.**, Wargelin, B.J., & Juda, M., Geospace Environment Modeling (GEM) Workshop, June 2014, Poster
41. *Chandra Observations and Modeling of Geocoronal Charge Exchange X-Ray Emission During Solar Wind Gusts*, **Kornbleuth, M.**, Wargelin, B.J., & Juda, M., American Astronomical Society, AAS Meeting #224, June 2014, Poster, 321.03

Seminars and Contributed Talks

1. *New Horizons Modeling Review: Voyager Termination Shock Crossings*, January 2024, New Horizons Science Team Meeting #55, Johns Hopkins Applied Physics Laboratory, Laurel, MD (Remote talk)

2. *Inferring the Interstellar Magnetic Field Direction from Energetic Neutral Atom Observations of the Heliotail*, Voyager SSG Meeting, September 2023, NASA Goddard, Greenbelt, MD (Remote talk)
3. *Probing the Length of the Heliospheric Tail with Energetic Neutral Atoms (ENAs) from 0.52 to 80 keV*, May 2023, New Horizons Science Team Meeting #53, Johns Hopkins Applied Physics Laboratory, Laurel, MD (Remote talk)
4. *Probing the Length of the Heliospheric Tail with Energetic Neutral Atoms (ENAs) from 0.52 to 80 keV*, April 2023, Solar and Space Physics Seminar, Johns Hopkins Applied Physics Laboratory, Laurel, MD
5. *An Anomalous Cosmic Ray Mediated Termination Shock: Implications for Energetic Neutral Atoms*, March 2023, Voyager SSG Meeting, Caltech, Pasadena, CA (Remote talk)
6. *Using SHIELD to Study our Heliospheric Shield*, November 2020, Space Physics Seminar Series, Boston University, Boston, MA
7. *Predicting the ENAs from the Croissant Heliosphere*, November 2018, New England Space Science Consortium Meeting #27, Lowell, MA
8. *CCMC Modeling*, GEM Student Tutorial Presentation, June 2014, Geospace Environment Modeling Summer Workshop 2014, Portsmouth, VA, Invited Talk

Panels

1. High Energy ENA Facilitator, Session 6: Outer Heliosphere and Interstellar, May 5 2021, Helio 2050 Workshop

Press

1. 10 Holiday Gift Ideas for Kids, from BU Experts, BU Today, 13 December 2023, <https://www.bu.edu/articles/2023/10-holiday-gift-ideas-for-kids-from-bu-experts/>
2. Want to See Five Planets with Your Naked Eye This Week?, BU Today, 22 June 2022, <https://www.bu.edu/articles/2022/see-five-planets-with-your-naked-eye-this-week/>
3. Office Artifacts: Marc Kornbleuth, BU Today, 27 April 2022, <https://www.bu.edu/articles/2022/office-artifacts-marc-kornbleuth/>

4. NSF Program Brings Budding Astronomers to BU, BU Today, 21 July 2017, <https://www.bu.edu/articles/2017/nsf-program-astronomy-mentorship>
5. Under Pressure: Extreme Atmosphere Stripping May Limit Exoplanets' Habitability, Phys.org, 3 July 2017, <https://phys.org/news/2017-07-pressure-extremeatmosphere-limit-exoplanets.html>