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Lynn B. Wilson III

- [60] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2020), Electron energy partition across interplanetary shocks: III. Analysis, *Astrophys. J.*, **893**(22), [10.3847/1538-4357/ab7d39](https://doi.org/10.3847/1538-4357/ab7d39).
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- [201] Adrian, M. L., O. C. St Cyr, L. B. Wilson III, C. Schiff, L. W. Sacks, D. J. Chai, S. Z. Queen, and J. E. Sedlak (2017), The Distribution of Interplanetary Dust Near 1-AU: An MMS Perspective, *AGU Fall Meeting Abstracts*, pp. SH51C–2515, Dec. 11–15, 2017, New Orleans, LA.
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- [207] Koval, A., L. B. Wilson III, A. Szabo, M. L. Stevens, J. C. Kasper, and D. A. Biesecker (2017), Magnetosonic-whistler Precursor Waves at Quasi-perpendicular Interplanetary Shocks: DSCOVR and Wind observations, *AGU Fall Meeting Abstracts*, pp. SH51A–2476, Dec. 11–15, 2017, New Orleans, LA.
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- [216] Collinson, G., L. B. Wilson III, N. Omid, D. G. Sibeck, J. Espley, C. Fowler, D. Mitchell, J. Grebowsky, C. Mazelle, S. Ruhunusiri, J. Halekas, R. Frahm, T. Zhang, Y. Futaana, B. Jakosky, and R. Lillis (2018), Shaking the sky of Mars: Ionospheric compression, energization, and escape resulting from the impact of ultra-low frequency magnetosonic waves in the solar wind, *AOGS-AGU (WPGM) Joint Assembly*, p. PS17, June 3–8, 2018, Honolulu, Hawaii.
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- [221] Wilson III, L. B. (2018), Scene setting talk for session ‘Global implications of kinetic-scale particle acceleration throughout the heliosphere’, *2018 SHINE Conference*, July 30th – Aug. 3rd, 2018, Cocoa Beach, FL.
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- [223] Bessho, N., L.-J. Chen, S. Wang, L. B. Wilson III, and M. Hesse (2018), PIC simulation studies of magnetic reconnection in the shock transition and downstream regions of

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- [233] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, *2019 SHINE Conference*, Aug. 5th - 9th, 2019, Boulder, CO.

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- [234] Farrugia, C. J., N. Lugaz, B. J. Vasquez, W. Yu, K. Paulson, R. B. Torbert, L. B. Wilson III, and F. T. Gratton (2019), A Study of a Magnetic Cloud Propagating through Large-Amplitude Alfvén Waves, *2019 SHINE Conference*, Aug. 5th – 9th, 2019, Boulder, CO.
- [235] Chen, L.-J., S. Wang, J. Ng, A. Rager, L. B. Wilson III, and B. L. Giles (2019), Electron dynamics driven by nonlinear lower hybrid waves in a magnetic reconnection layer, in *APS Meeting Abstracts*, p. GO4.00002, 61st Annual Meeting of the APS Division of Plasma Physics, Oct. 21–25, 2019, Fort Lauderdale, FL.
- [236] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, B. L. Giles, T. Moore, C. T. Russell, R. B. Torbert, and J. L. Burch (2019), Magnetic reconnection observation in the Earth’s bow shock transition region, in *APS Meeting Abstracts*, p. PP10.00014, 61st Annual Meeting of the APS Division of Plasma Physics, Oct. 21–25, 2019, Fort Lauderdale, FL.
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- [243] Koval, A., L. B. Wilson III, and A. Szabo (2019), Multi-point observations of quasi-perpendicular interplanetary shock structures by the Wind and DSCOVR spacecraft during 2015-2019, *AGU Fall Meeting Abstracts*, pp. SH23B–3379, Dec. 9–13, 2019, San Francisco, CA.

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- [245] Oka, M., F. Otsuka, S. Matsukiyo, L. B. Wilson III, T. D. Phan, T. Amano, M. Hoshino, M. R. Argall, O. Le Contel, D. J. Gershman, J. L. Burch, R. B. Torbert, J. C. Dorelli, B. L. Giles, R. E. Ergun, C. T. Russell, and P.-A. Lindqvist (2019), Electron Scattering by Low-Frequency Whistler Waves at Earth’s Bow Shock, *AGU Fall Meeting Abstracts*, pp. SH21A–06, Dec. 9–13, 2019, San Francisco, CA.
- [246] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, *AGU Fall Meeting Abstracts*, pp. SH23B–3394, Dec. 9–13, 2019, San Francisco, CA.
- [247] Lario, D., L. Berger, L. B. Wilson III, R. B. Decker, and E. C. Roelof (2020), A long-lasting field-aligned suprathermal proton beam upstream of a transient interplanetary shock, *The 19th Annual International Astrophysics Conference: From the Sun’s atmosphere to the edge of the galaxy: A story of connections*, Santa Fe, New Mexico, Mar. 8–13, 2020.
- [248] Wilson III, L. B. (2020), Electron velocity distribution functions near interplanetary shocks, *Royal Astronomical Society Specialist Discussion Meeting: The near-Sun solar wind at solar minimum*, on Mar. 13, 2020, Burlington House, Piccadilly, London, UK **Cancelled: COVID-19**.
- [249] Wilson III, L. B. (2020), Electron velocity distribution functions near interplanetary shocks, *Parker One*, on Mar. 23–27, 2020, The Johns Hopkins University, Applied Physics Lab, Laurel, MD, USA **Postponed: COVID-19**.
- [250] Ofman, L., L. B. Wilson III, A. Koval, and A. Szabo (2020), Exploring the effects of α particles on heliospheric oblique shocks, *Isradynamics 2020: Dynamical Processes in Space Plasmas*, held Apr. 19–26, 2020, Eilat, Israel.
- [251] Bessho, N., L.-J. Chen, J. Ng, S. Wang, M. Hesse, and L. B. Wilson III (2020), Reconnecting and non-reconnecting current sheets in the Earth’s quasi-parallel bow shock, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15–16, 2020, Virtual Meeting.
- [252] Chen, L.-J., S. Wang, O. Le Contel, A. Rager, J. Ng, M. Hesse, J. Drake, J. Dorelli, N. Bessho, D. Graham, L. B. Wilson III, T. E. Moore, B. L. Giles, W. R. Paterson, B. Lavraud, K. Genestreti, R. Nakamura, Y. V. Khotyaintsev, R. E. Ergun, R. B. Torbert, J. L. Burch, C. Pollock, C. Russell, P.-A. Lindqvist, and L. A. Avanov (2020), Lower hybrid drift (LHD) waves in a magnetotail EDR, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15–16, 2020, Virtual Meeting.
- [253] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), d_i -scale current structures in SLAMS as energy conversion sites, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15–16, 2020, Virtual Meeting.

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- [255] Wilson III, L. B. (2020), Electron energy partition across interplanetary shocks near 1 AU, *Parker Solar Probe Theory Group Telecon*, on Apr. 23, 2020.
- [256] Wilson III, L. B. (2020), Energy partition across interplanetary shocks, *MMS FPI Team Telecon*, on Jul. 9, 2020.
- [257] Wilson III, L. B. (2020), Electron energy partition at interplanetary shocks, *2020 Virtual GEM Conference*, online Jul. 21–23, 2020.
- [258] Bessho, N., L.-J. Chen, S. Wang, J. Ng, M. Hesse, and L. B. Wilson III (2020), Kinetic instabilities and magnetic reconnection in the Earth’s quasi-parallel bow shock, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
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- [260] Madanian, H., D. L. Turner, D. J. Gershman, B. L. Giles, L. B. Wilson III, et al. (2020), Modulation of the quasi-perpendicular shock structure by reflected ions at high Mach numbers, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [261] Roytershteyn, V., L.-J. Chen, and L. B. Wilson III (2020), Waves and Instabilities in High-resolution PIC Simulations of Oblique Shocks, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [262] Turner, D. L., D. J. Gershman, L. B. Wilson III, et al. (2020), Direct multipoint observations capturing the formation of a collisionless, supercritical, fast magnetosonic shock, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [263] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2020), The structure of reconnection layers in Earth’s quasi-parallel bow shock, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.
- [264] Bessho, N., L.-J. Chen, S. Wang, J. Ng, M. Hesse, and L. B. Wilson III (2020), Kinetic waves and reconnecting current sheets in a quasi-parallel shock, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.
- [265] Bessho, N., L.-J. Chen, S. Wang, J. Ng, M. Hesse, and L. B. Wilson III (2020), Kinetic instabilities and magnetic reconnection in the Earth’s quasi-parallel bow shock, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.
- [266] Madanian, H., M. I. Desai, S. J. Schwartz, L. B. Wilson III, S. A. Fuselier, J. L. Burch, O. Le Contel, D. L. Turner, K. Ogasawara, A. L. Brosius, C. T. Russell, R. E. Ergun, N. Ahmadi, D. J. Gershman, and P.-A. Lindqvist (2020), What makes a shock layer?, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.

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- [268] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. E. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), Reconnection observed at Earth's bow shock, in *APS Meeting Abstracts*, p. GM14.00003, 62nd Annual Meeting of the APS Division of Plasma Physics, Nov. 9–13, 2020, Virtual.
- [269] Bessho, N., L.-J. Chen, S. Wang, J. Ng, L. B. Wilson III, and M. Hesse (2020), Kinetic instabilities in the shock transition region and magnetic reconnection in the Earth's quasi-parallel bow shock, *AGU Fall Meeting Abstracts*, pp. SM036–03, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [270] Brosius, A. L., L. B. Wilson III, A. Szabo, and A. Koval (2020), Minimum Variance Analysis of Planetary and Interplanetary Plasmas, *AGU Fall Meeting Abstracts*, pp. SH042–0017, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [271] Farrugia, C. J., N. Lugaz, L. B. Wilson III, D. G. Sibeck, N. Erkaev, B. J. Vasquez, and R. B. Torbert (2020), Wind Observations of an Unexpected Precursor to Flapping of the Distant Tail, *AGU Fall Meeting Abstracts*, pp. SH042–0015, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [272] Fordin, S., M. Shay, L. B. Wilson III, and B. A. Maruca (2020), Identifying and Characterizing Whistler Waves in the Solar Wind Using Machine Learning, *AGU Fall Meeting Abstracts*, pp. NG004–0023, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [273] Koval, A., L. Ofman, L. B. Wilson III, and A. Szabo (2020), Oblique High Mach Number Heliospheric Shocks: the Role of Alpha Particles, *AGU Fall Meeting Abstracts*, pp. SH042–0012, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [274] Roytershteyn, V., L. B. Wilson III, and L.-J. Chen (2020), Waves and Instabilities in High-Resolution PIC simulations of Oblique Shocks, *AGU Fall Meeting Abstracts*, pp. SH047–05, Dec. 7–11, 2020, San Francisco, CA, Virtual.
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- [279] Starkey, M. J., S. A. Fuselier, M. I. Desai, S. J. Schwartz, C. T. Russell, H. Wei, H. Madanian, J. Mukherjee, and L. B. Wilson III (2021), MMS observations of Accelerated He⁺ Pickup Ions at Quasi-perpendicular Shocks, *MMS Spring 2021 Science Working Team Meeting*, on Apr. 5-9, 2021, Virtual Meeting.
- [280] Turner, D. L., K. Goodrich, L. B. Wilson III, I. J. Cohen, and S. J. Schwartz (2021), Future goals and ideas for collisionless shock research with MMS and beyond, *MMS Spring 2021 Science Working Team Meeting*, on Apr. 5-9, 2021, Virtual Meeting.
- [281] Liu, M., L. B. Wilson III, et al. (2021), Properties of A Supercritical Quasi-Perpendicular Interplanetary Shock Propagating in Super-Alfvenic Solar Wind: from MHD to Kinetic Scales, in *EGU General Assembly Conference Abstracts, EGU General Assembly Conference Abstracts*, vol. 23, pp. EGU21–4908, April 13 – 30, 2021, Virtual.
- [282] Malaspina, D. M., L. B. Wilson III, et al. (2021), Plasma Waves Near the Electron Cyclotron Frequency in the Near Sun Solar Wind: Wave Mode Identification and Driving Instabilities, in *EGU General Assembly Conference Abstracts, EGU General Assembly Conference Abstracts*, vol. 23, pp. EGU21–955, April 13 – 30, 2021, Virtual.
- [283] Allen, R. C., S. K. Vines, L. B. Wilson III, J. Borovsky, G. C. Ho, L. K. Jian, G. Li, N. Lugaz, B. Maruca, D. Verscharen, J. Vievering, and R. F. Wimmer-Schweingruber (2021), The Need to Investigate the Variability and Multi-Scale Nature of the Solar Wind and Its Impact on Energetic Particles, *Heliophysics 2050 Workshop*, p. 2109, on May 3–7, 2021, Virtual Meeting.
- [284] Alterman, B. L., J. C. Kasper, R. J. Leamon, S. W. McIntosh, M. L. Stevens, and L. B. Wilson III (2021), Solar Wind Helium Measurements Demonstrate the Importance of Unified and Consistent Long Duration In Situ Plasma Data, *Heliophysics 2050 Workshop*, p. 2064, on May 3–7, 2021, Virtual Meeting.
- [285] Chen, L.-J., M. Samara, R. Michell, J. Collier, M. Dorelli, S. Fung, D. Gershman, J. Karpen, J. Ng, D. Rowland, D. Sibeck, S. Wang, A. Halford, E. Zesta, B. Giles, I. Vasko, J. E. Stawarz, D. L. Turner, W. Paterson, H. Madanian, and L. B. Wilson III (2021), Kinetic Effects of Solar Driving on Magnetospheres, *Heliophysics 2050 Workshop*, p. 2122, on May 3–7, 2021, Virtual Meeting.
- [286] Gopalswamy, N., T. A. Kucera, J. E. Leak, R. J. MacDowall, L. B. Wilson III, S. G. Kanekal, Q. Gong, L. Golub, E. DeLuca, S. S. K. Tadikonda, D. B. Seaton, S. Savage, A. R. Winebarger, K. Reeves, C. DeForest, A. Pevtsov, N. Hurlburt, M. Desai,

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List of Non-refereed Talks/Presentations

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- T. Bastian, J. Lazio, E. A. Jensen, W. C. Manchester, B. Wood, J. Kooi, D. B. Wexler, S. D. Bale, S. C. Tripathi, and L. K. Jian (2021), The Multiview Observatory for Solar Terrestrial Science (MOST), *Heliophysics 2050 Workshop*, p. 2039, on May 3–7, 2021, Virtual Meeting.
- [287] Halford, A. J., K. Garcia-Sage, M. Samara, D. Welling, B. Walsh, M. S. F. Kirk, B. J. Thompson, Y. J. Rivera, S. Lejosne, R. M. McGranaghan, E. MacDonald, D. L. Turner, R. C. Allen, A. N. Jaynes, S. K. Vines, R. Nikoukar, K. LLera, J. E. Stawarz, I. Gingell, K. J. Genestreti, L. Blum, R. J. Filwett, A. A. Saikin, D. Sibeck, J. Vievering, A. K. Higginson, P. Mostafavi, M. D. Hartinger, E. A. Atz, A. D. Greeley, L. B. Wilson III, et al. (2021), Enabling and Advancing Scientific Innovation Through Cultivating a Collaborative, Inclusive, Diverse, and Safe Community Culture, *Heliophysics 2050 Workshop*, p. 2130, on May 3–7, 2021, Virtual Meeting.
- [288] Jaynes, A. N., I. Cohen, A. Ridley, P. J. Erickson, B. L. Alterman, L. B. Wilson III, A. J. Halford, R. M. McGranaghan, R. J. Filwett, L. H. Regoli, F. Gasperini, K. LLera, R. Nikoukar, M. D. Hartinger, J. E. Stawarz, B. Ferdousi, M. R. Argall, J. Bortnik, L. V. Goodwin, D. L. Turner, S. G. Claudepierre, and A. Keesee (2021), An Open-Access Community: Why We Need to Prioritize Our Scientific Environment as a Welcoming Space, *Heliophysics 2050 Workshop*, p. 2140, on May 3–7, 2021, Virtual Meeting.
- [289] Turner, D. L., I. J. Cohen, M. Gkioulidou, G. Clark, P. Brandt, A. Rymer, J. Vievering, A. Chartier, V. Merkin, E. Provornikova, A. Ukhorskiy, J. Westlake, R. Nikoukar, L. Paxton, R. Millan, J. Slavin, F. Bagenal, J. Bortnik, A. N. Jaynes, L. B. Wilson III, G. A. DiBraccio, D. Gershman, E. L. Kepko, J. Goldstein, R. M. McGranaghan, S. G. Claudepierre, and C. Gabrielse (2021), Re-Envisioning Heliophysics for 2050: A Compelling Discipline with a Unified Identity, New Brand, and Long-Term Vision, *Heliophysics 2050 Workshop*, p. 2087, on May 3–7, 2021, Virtual Meeting.
- [290] Wilson III, L. B. (2021), Accurate Measurements of Thermal Velocity Distribution Functions in the Solar Wind, *Heliophysics 2050 Workshop*, p. 2002, on May 3–7, 2021, Virtual Meeting.
- [291] Lario, D., I. G. Richardson, E. Palmerio, N. Lugaz, S. D. Bale, M. L. Stevens, C. M. S. Cohen, J. Giacalone, D. G. Mitchell, A. Szabo, T. Nieves-Chinchilla, L. B. Wilson III, E. R. Christian, M. E. Hill, D. J. McComas, R. L. McNutt Jr., N. A. Schwadron, and M. E. Wiedenbeck (2021), Comparative analysis of the 2020 November 29 solar energetic particle event observed by Parker Solar Probe, *Parker One Conference*, on Jun. 14–18, 2021, The Johns Hopkins University, Applied Physics Lab, Laurel, MD, USA.
- [292] Wilson III, L. B. (2021), Particle acceleration by nonlinear, magnetosonic-whistler precursors, *MMS Community Workshop*, Oct. 19–21, 2021, Waterville Valley, NH.
- [293] Howes, G. G., J. Juno, C. R. Brown, C. C. Haggerty, J. M. TenBarge, D. Caprioli, and A. Spitkovsky (2021), Fully Exploiting 3D-3V Phase Space to Understand Plasma Heating and Particle Acceleration in Collisionless Shocks, in *APS Meeting Abstracts*, p. CM10.00002, 63rd Annual Meeting of the APS Division of Plasma Physics, Nov. 8–12, 2021.

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- [294] Ofman, L., L. B. Wilson III, A. Szabo, and A. Koval (2021), Modeling the effects of α particles on collisionless oblique heliospheric shocks, in *APS Meeting Abstracts*, p. BM10.00006, 63rd Annual Meeting of the APS Division of Plasma Physics, Nov. 8–12, 2021.
- [295] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2021), Electron energization by electron-only reconnection in the Earth’s quasi-parallel bow shock, *AGU Fall Meeting Abstracts*, pp. SH34B–07, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [296] Collinson, G. A., R. Ramstad, A. Gloer, L. B. Wilson III, and A. L. Brosius (2021), Encounters with the ionosphere and tail ray of Venus by Parker Solar Probe, *AGU Fall Meeting Abstracts*, pp. SM52C–03, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [297] Farrugia, C. J., N. Lugaz, I. G. Richardson, N. A. Al-Haddad, R. M. Winslow, E. Davies, L. B. Wilson III, and R. B. Torbert (2021), How Magnetic Reconnection Inside Coronal Mass Ejections May Affect Their Coherence, *AGU Fall Meeting Abstracts*, pp. SH35B–2053, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [298] Fordin, S., M. A. Shay, L. B. Wilson III, and B. A. Maruca (2021), Identifying and Characterizing Waves in the Solar Wind Using Convolutional Neural Networks, *AGU Fall Meeting Abstracts*, pp. NG45B–0553, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [299] Gopalswamy, N., T. A. Kucera, J. E. Leak, R. J. MacDowall, L. B. Wilson III, S. G. Kanekal, A. Y. Shih, S. Christe, Q. Gong, N. M. Viall, S. S. K. Tadikonda, S. F. Fung, S. Yashiro, P. Makela, L. Golub, E. DeLuca, K. Reeves, D. B. Seaton, S. Savage, A. R. Winebarger, C. DeForest, M. I. Desai, T. Bastian, J. Lazio, E. A. Jensen, W. C. Manchester, B. E. Wood, J. E. Kooi, D. B. Wexler, S. D. Bale, S. Krucker, N. E. Hurlburt, M. L. DeRosa, A. A. Pevtsov, S. C. Tripathi, K. Jain, S. Gosain, G. J. D. Petrie, S. Kholikov, J. Zhao, P. H. Scherrer, T. N. Woods, P. Chamberlin, and M. Kenny (2021), The Multiview Observatory for Solar Terrestrial Science (MOST), *AGU Fall Meeting Abstracts*, pp. SH12A–07, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [300] Goodrich, K., S. J. Schwartz, L. B. Wilson III, R. E. Ergun, R. B. Torbert, J. L. Burch, Y. V. Khotyaintsev, P.-A. Lindqvist, F. D. Wilder, D. J. Gershman, R. J. Strangeway, and B. L. Giles (2021), Electrostatic Waves and Their Relation to Intermittent Shock Heating: An MMS Case Study, *AGU Fall Meeting Abstracts*, pp. SH25G–13, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [301] Howes, G. G., J. Juno, C. R. Brown, C. C. Haggerty, J. M. TenBarge, D. Caprioli, A. Spitkovsky, and L. B. Wilson III (2021), Fully Exploiting 3D-3V Phase Space to Understand Plasma Heating and Particle Acceleration in Collisionless Shocks, *AGU Fall Meeting Abstracts*, pp. SH25G–20, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [302] Jensen, E. A., W. Manchester, S. F. Fung, N. Gopalswamy, L. K. Jian, M. Kenny, J. E. Kooi, J. Lazio, L. Li, T. Nieves-Chinchilla, A. A. Pevtsov, D. B. Wexler, L. B. Wilson III, B. E. Wood, S. D. Bale, and T. Bastian (2021), Novel Magnetic Field and Electron Density Measurements of CMEs (within 1/2 AU) with the Proposed Multiview

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Observatory for Solar Terrestrial Science (MOST) Mission, *AGU Fall Meeting Abstracts*, pp. SH33A–08, Dec. 13–17, 2021, New Orleans, LA, Hybrid.

- [303] Kromyda, L., D. M. Malaspina, R. E. Ergun, J. L. Verniero, L. B. Wilson III, M. L. Stevens, J. S. Halekas, A. Chasapis, D. Vech, T. D. de Wit, S. D. Bale, J. W. Bonnell, K. Goetz, K. Goodrich, P. Harvey, R. J. MacDowall, M. P. Pulupa, D. E. Larson, R. Livi, P. L. Whittlesey, and J. C. Kasper (2021), Short Duration Electrostatic Waves with Frequency Shifts in the Solar Wind Sunward of 1/3 AU, *AGU Fall Meeting Abstracts*, pp. SH41A–08, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [304] Kuzichev, I., I. Vasko, J. Torsiello, L. B. Wilson III, and A. Artemyev (2021), Whistler Wave Generation Around Interplanetary Shocks, *AGU Fall Meeting Abstracts*, pp. SH25G–11, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [305] Liu, M., Z. Yang, Y. D. Liu, B. Lembege, K. Issautier, L. B. Wilson III, S. Zhao, K. Jagarlamudi, and X. Zhao (2021), Properties of A Supercritical Quasi-Perpendicular Interplanetary Shock Propagating in the Terrestrial Electron Foreshock Region, *AGU Fall Meeting Abstracts*, pp. SH25G–08, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [306] Wilson III, L. B., A. L. Brosius, D. J. Gershman, S. J. Schwartz, H. Madanian, I. J. Cohen, D. L. Turner, and K. Goodrich (2021), Particle acceleration by nonlinear, magnetosonic-whistler precursors, *AGU Fall Meeting Abstracts*, pp. SH25G–10, Dec. 13–17, 2021, New Orleans, LA, Hybrid.
- [307] Jensen, E., N. Gopalswamy, J. Lazio, J. Kooi, S. Fung, L. K. Jian, M. Kenny, L. Li, W. Manchester, T. Nieves-Chinchilla, A. Pevtsov, D. Wexler, L. B. Wilson III, B. Wood, S. D. Bale, and T. Bastian (2022), Investigating Quiescent and Transient Magnetic Structures in the Inner Heliosphere using Faraday Rotation, the FETCH instrument on the MOST *awesome* mission Concept, *Union Radio-Scientifique Internationale General Assembly*, p. 1185, 2022 USNC-URSI National Radio Science Meeting (NRSM), Jan. 4-8, 2022, Boulder, Colorado.
- [308] Wilson III, L. B., K. A. Goodrich, D. L. Turner, I. J. Cohen, P. Whittlesey, and S. J. Schwartz (2022), Accurate measurements of thermal velocity distribution functions in the solar wind, *Heliophysics 2050: Measurement Techniques and Technologies Workshop*, p. 4009, on Feb. 23–25, 2022, Virtual Meeting.
- [309] Kooi, J. E., E. A. Jensen, N. Gopalswamy, D. Wexler, W. Manchester, L. B. Wilson III, S. D. Bale, T. Bastian, L. K. Jian, J. Lazio, T. Nieves-Chinchilla, B. E. Wood, S. F. Fung, A. Pevtsov, M. N. Kenny, L. Li, L. Purves, G. Voellmer, and Q. Gong (2022), FETCH Instrument Concept: Spacecraft-to-spacecraft Faraday Rotation Observations to Enhance Future Space Weather Forecasting, *Space Weather Workshop*, Collaboration: Advancing the Space Weather Enterprise, Virtual Meeting on Apr. 26–28, 2022.
- [310] Bessho, N., L.-J. Chen, J. E. Stawarz, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2022), Strong reconnection electric fields in electron-only reconnection and regular reconnection in shock-driven turbulence, *MMS Community Workshop*, May 9–13, 2022, Daytona Beach, FL.

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- [311] Schwartz, S. J., K. A. Goodrich, L. B. Wilson III, D. L. Turner, K. Trattner, H. Kucharek, I. Gingell, S. Fuselier, I. J. Cohen, H. Madanian, R. E. Ergun, D. J. Gershman, and R. J. Strangeway (2022), “Shocks at Earth” Energy partition at collisionless supercritical quasiperpendicular shocks, *Magnetic Reconnection Workshop 2022*, May 16–20, 2022, Monterey, CA.
- [312] Bessho, N., L.-J. Chen, J. E. Stawarz, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2022), Strong reconnection electric fields, outflow speeds, and particle acceleration in shock-driven reconnection, *Magnetic Reconnection Workshop 2022*, May 16–20, 2022, Monterey, CA.
- [313] Eriksson, S., M. Swisdak, J. M. Weygand, A. Mallet, D. L. Newman, G. Lapenta, L. B. Wilson III, D. L. Turner, and B. Larsen (2022), Characteristics of Multi-Scale Current Sheets in the Solar Wind at 1 AU Associated with Magnetic Reconnection and the Case for a Heliospheric Current Sheet Avalanche, *Parker Two Conference*, on Jun. 21–24, 2022, The Johns Hopkins University, Applied Physics Lab, Laurel, MD, USA.
- [314] Wexler, D. B., E. A. Jensen, J. E. Kooi, W. Manchester, L. B. Wilson III, S. D. Bale, T. Bastian, L. K. Jian, J. Lazio, T. Nieves-Chinchilla, B. E. Wood, N. Gopalswamy, S. F. Fung, A. A. Pevtsov, M. Kenny, L. Li, L. R. Purves, G. Voellmer, and Q. Gong (2022), Investigating Solar Wind Stream Interaction Regions using Interplanetary Spacecraft Radio Signals: A Simulation Study of Faraday Rotation and Electron Column Density, *Triennial Earth-Sun Summit (TESS)*, p. 00, Aug. 8–12, 2022, Bellevue, WA.
- [315] Baalman, L., S. Hunziker, P. Strub, D. Malaspina, U. Schroffenegger, H. Krüger, M. E. Hervig, A. Jaynes, B. Kurth, L. B. Wilson III, and V. Sterken (2022), Investigating the outer regions of the heliosphere with measurements and simulations of interstellar dust, *Europlanet Science Congress*, **16**, held September 18–23, 2022, Grenada, Spain.
- [316] Hervig, M. E., D. Malaspina, L. B. Wilson III, V. Sterken, S. Hunziker, J. M. C. Plane, and D. E. Siskind (2022), Long-term observations of meteoric influx from SOFIE, Wind, and Ulysses, *20th International EISCAT Symposium*, held August 15–19, 2022, Stockholm University, Sweden.
- [317] Trotta, D., H. Hietala, T. Horbury, L. B. Wilson III, N. Dresing, and R. Vanio (2022), Multi-spacecraft observations of a strong interplanetary shock at Solar Orbiter and L1, *Solar Orbiter 8*, held September 12–15, 2022, Belfast, Ireland.
- [318] Bessho, N., L.-J. Chen, J. E. Stawarz, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2022), Electron acceleration and heating in magnetic reconnection in the shock turbulence in the Earth’s bow shock, in *APS Meeting Abstracts*, p. 0.00000, 64th Annual Meeting of the APS Division of Plasma Physics, Oct. 17–21, 2022, Spokane, WA.
- [319] Wilson III, L. B. (2022), Particle acceleration by nonlinear whistler precursors and possible reformation, in *APS Meeting Abstracts*, p. 0.00000, 64th Annual Meeting of the APS Division of Plasma Physics, Oct. 17–21, 2022, Spokane, WA.

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- [320] Allen, R. C., E. J. Smith, B. J. Anderson, J. Borovsky, G. C. Ho, L. K. Jian, S. Krucker, S. Lepri, G. Li, S. Livi, N. Lugaz, D. M. Malaspina, B. A. Maruca, P. Mostafavi, J. M. Raines, D. Verscharen, J. Vievering, S. K. Vines, P. Whittlesey, L. B. Wilson III, and R. F. Wimmer-Schweingruber (2022), Interplanetary Mesoscale Observatory (Inter-Meso): A mission to untangle dynamic mesoscale structures throughout the heliosphere, *AGU Fall Meeting Abstracts*, pp. SH26A–07, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [321] Baalmann, L., S. Hunziker, P. Strub, D. M. Malaspina, U. Schroffenegger, H. Krüger, M. E. Hervig, A. N. Jaynes, W. S. Kurth, L. B. Wilson III, and V. J. Sterken (2022), A multi-mission study of interstellar dust in the heliosphere: observations and simulations, *AGU Fall Meeting Abstracts*, pp. SH43B–08, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [322] Bessho, N., L.-J. Chen, J. E. Stawarz, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2022), Electron acceleration and heating in magnetic reconnection in the transition region of the Earth’s bow shock, *AGU Fall Meeting Abstracts*, pp. SH15B–06, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [323] Eriksson, S., M. Swisdak, J. M. Weygand, A. Mallet, D. L. Newman, G. Lapenta, L. B. Wilson III, D. L. Turner, and B. Larsen (2022), Characteristics of Multi-Scale Current Sheets in the Solar Wind at 1 AU Associated with Magnetic Reconnection and the Case for a Cascading Heliospheric Current Sheet, *AGU Fall Meeting Abstracts*, pp. SH15B–02, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [324] Fordin, S., M. A. Shay, L. B. Wilson III, and B. J. Thompson (2022), Identifying Waves in the Solar Wind Using Convolutional Neural Networks, *AGU Fall Meeting Abstracts*, pp. SH42D–2310, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [325] Goodrich, K., S. J. Schwartz, L. B. Wilson III, A. Caspi, J. S. Halekas, G. B. Hospodarsky, L.-J. Chen, K. Smith, R. Rose, I. J. Cohen, D. L. Turner, P. L. Whittlesey, F. Plaschke, J. L. Burch, A. Retino, Y.-V. Khotyaintsev, J. Bowman, and D. Conner (2022), MAKOS: Multi-point Assessment of the Kinematics of Shocks, *AGU Fall Meeting Abstracts*, pp. SH45D–2373, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [326] Hietala, H., A. Fedeli, D. Trotta, and L. B. Wilson III (2022), Candidates for Downstream Jets at Interplanetary Shocks, *AGU Fall Meeting Abstracts*, pp. SM22A–61, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [327] Howes, G. G., J. Juno, C. R. Brown, C. C. Haggerty, S. Constantinou, J. M. TenBarge, D. Caprioli, A. Spitkovsky, and L. B. Wilson III (2022), Understanding the Kinetic Physics of Particle Energization at Quasiperpendicular Collisionless Shocks Using the Field-Particle Correlation Technique, *AGU Fall Meeting Abstracts*, pp. SH53A–04, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [328] Jensen, E. A., N. Gopalswamy, S. Fung, L. Li, M. Deshpande, M. Shelton, J. E. Kooi, S. D. Bale, W. Manchester, A. A. Pevtsov, D. Wexler, L. B. Wilson III, L. K. Jian, J. Lazio, T. Nieves-Chinchilla, B. E. Wood, T. Bastian, Q. Gong, M. Kenny, L. Purves, and G. Voellmer (2022), Investigating Magnetic Structure in the Inner Heliosphere using

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Faraday Rotation, the FETCH instrument on the MOST mission, *AGU Fall Meeting Abstracts*, pp. SH34B–04, dec. 12–16, 2022, Chicago, IL, Hybrid.

- [329] Manchester, W., E. A. Jensen, D. Wexler, J. E. Kooi, T. Nieves-Chinchilla, B. E. Wood, L. K. Jian, N. Gopalswamy, S. Fung, and L. B. Wilson III (2022), Determination of CME Structures with Faraday Rotation of Spacecraft Radio Signals: the FETCH Instrument on the MOST Mission, *AGU Fall Meeting Abstracts*, pp. SH26A–08, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [330] Trotta, D., H. Hietala, T. S. Horbury, L. B. Wilson III, N. Dresing, R. O. Vanio, and K. E. J. Kilpua (2022), Multi-Spacecraft Observations of Shocklets at an Interplanetary Shock, *AGU Fall Meeting Abstracts*, pp. SH33A–02, dec. 12–16, 2022, Chicago, IL, Hybrid.
- [331] Wilson III, L. B., K. A. Goodrich, D. L. Turner, I. J. Cohen, P. L. Whittlesey, and S. J. Schwartz (2022), The need for accurate measurements of thermal velocity distribution functions in the solar wind, *AGU Fall Meeting Abstracts*, pp. SH32D–1796, dec. 12–16, 2022, Chicago, IL, Hybrid.

List of Invited Talks/Presentations

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- [332] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Goetz, K., Kersten, K., Kasper, J. C., Szabo, A. & Wilber, M. Atypical Waves and Particle Heating at an Interplanetary Shock (2010). Heliophysics Science Seminar, NASA Goddard Space Flight Center, Apr. 1st, 2010.
- [333] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Goetz, K., Kersten, K., Kasper, J. C., Szabo, A. & Wilber, M. Atypical Waves and Particle Heating at an Interplanetary Shock (2010). Space Physics Seminar, University of California at Berkeley, Oct. 5th, 2010.
- [334] Cattell, C. A., Breneman, A. W., Kersten, K., Kellogg, P. J., Goetz, K., Wygant, J. R., Wilson III, L. B., Looper, M., Blake, J. B. & Roth, I. Large Amplitude Whistler Waves and Electron Energization in Earth's Radiation Belts (2011). Chapman Conference: Dynamics of the Earth's Radiation Belts and Inner Magnetosphere, July 17-22, 2011.
- [335] Wilson III, L. B., Koval, A., Szabo, A., Cattell, C. A., Breneman, A., Goetz, K., Kellogg, P. J., Kersten, K., Kasper, J. C., Maruca, B. A. & Pulupa, M. Electromagnetic lower hybrid waves, whistler waves, and particle heating/acceleration at supercritical interplanetary shocks (2011). Space Physics Seminar, University of California at Berkeley, Jul. 18th, 2011.
- [336] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Wygant, J. R., Goetz, K., Breneman, A. & Kersten, K. The properties of large amplitude whistler mode waves in the magnetosphere: propagation and relationship with geomagnetic activity (2011). RBSP SGW, Applied Physics Laboratory, Oct. 21st, 2011.
- [337] Wilson III, L. B., Koval, A., Szabo, A., Breneman, A., Cattell, C. A., Goetz, K., Kellogg, P. J., Kersten, K., Kasper, J. C., Maruca, B. A. & Pulupa, M. Observations of Electromagnetic Whistler Precursors at Supercritical Interplanetary Shocks (2012). Space Physics Seminar, University of Minnesota, Mar. 7th, 2012.
- [338] Wilson III, L. B., Koval, A., Szabo, A., Breneman, A., Cattell, C. A., Goetz, K., Kellogg, P. J., Kersten, K., Kasper, J. C., Maruca, B. A. & Pulupa, M. Observations of Electromagnetic Whistler Precursors at Supercritical Interplanetary Shocks (2012). Space Physics Seminar, Dartmouth College, May 1st, 2012.
- [339] Russell, C. T., Jian, L. K., Wei, H., Wilson III, L. B., Omid, N., Szabo, A. & Luhmann, J. G. Long-Period Investigation of Ion Cyclotron Waves in the Solar Wind at 1 AU (Invited). *AOGS-AGU (WPGM) Joint Assembly* ST29-A015 (2012). URL <http://www.asiaoceania.org/society/index.asp>. August 13-17, 2012, Singapore.
- [340] Wilson III, L. B., Koval, A., Szabo, A., Breneman, A., Cattell, C. A., Goetz, K., Kellogg, P. J., Kersten, K., Kasper, J. C., Maruca, B. A. & Pulupa, M. Observations of Electromagnetic Whistler Precursors at Supercritical Interplanetary Shocks (2012). Space Physics Seminar, University of California at Los Angeles, Sept. 28th, 2012.
- [341] Wilson III, L. B., Sibeck, D. G., Breneman, A. W., Le Contel, O., Cully, C., Turner, D. L. & Angelopoulos, V. Quantified Energy Dissipation Rates in the Terrestrial Bow

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- Shock (invited) (2013). 8th European Workshop on Collisionless Shocks, Paris, France, June 5th, 2013.
- [342] Wilson III, L. B., Koval, A., Sibeck, D. G., Szabo, A., Cattell, C. A., Kasper, J. C., Maruca, B. A., Pulupa, M., Salem, C. S. & Wilber, M. Shocklets, SLAMS, and field-aligned ion beams in the terrestrial foreshock (invited) (2013). 8th European Workshop on Collisionless Shocks, Paris, France, June 5th, 2013.
- [343] Wilson III, L. B., Koval, A., Szabo, A., Breneman, A., Cattell, C. A., Goetz, K., Kellogg, P. J., Kersten, K., Kasper, J. C., Maruca, B. A. & Pulupa, M. Observations of Electromagnetic Whistler Precursors at Supercritical Interplanetary Shocks (invited) (2013). 8th European Workshop on Collisionless Shocks, Paris, France, June 7th, 2013.
- [344] Turner, D. L., Angelopoulos, V., Omid, N., Wilson III, L. B., Hietala, H., Kellerman, A. C. & Weygand, J. M. Foreshock bubbles and their global impacts on Earth's magnetosphere-ionosphere system (Invited). *AGU Fall Meeting Abstracts* SM13C-01 (2013). Dec. 9-13, 2013, San Francisco, CA.
- [345] Turner, D. L., Angelopoulos, V., Wilson III, L. B., Hietala, H., Omid, N. & Masters, A. Particle acceleration during interactions between transient ion foreshock phenomena and Earth's bow shock (solicited). In *EGU General Assembly Conference Abstracts*, vol. 16 of *EGU General Assembly Conference Abstracts*, 2276 (2014). URL <http://meetingorganizer.copernicus.org/EGU2014/EGU2014-2276.pdf>. April 27 – May 2, 2014, Vienna, Austria.
- [346] Wilson III, L. B., Breneman, A. W., Cattell, C. A., Goetz, K., Kellogg, P. J., Le Contel, O., Cully, C., Turner, D. L. & Malaspina, D. M. Wave activity within the ramp of collisionless shock waves: recent results (invited). *AOGS-AGU (WPGM) Joint Assembly* ST07-A001 (2014). URL <http://www.asiaoceania.org/aogs2014/>. July 28 - August 1, 2014, Sapporo, Japan.
- [347] Wilson III, L. B. Collisionless Shock Waves and Wave-Particle Interactions (plenary). *2014 LWS Science Meeting: Evolving Solar Activity and Its Influence on Space and Earth* (2014). URL <http://lws-sdo-workshops.org>. Nov. 2–6, 2014, Portland, Oregon.
- [348] Wilson III, L. B. Collisionless shocks in the interplanetary medium (lecture). *8th Korean Astrophysics Workshop on Astrophysics* (2014). URL <http://sirius.unist.ac.kr/kaw8/>. Nov. 10–13, 2014, Jeju Island, Korea.
- [349] Wilson III, L. B. Wave-particle interactions at collisionless shock waves (invited). *8th Korean Astrophysics Workshop on Astrophysics* (2014). URL <http://sirius.unist.ac.kr/kaw8/>. Nov. 10–13, 2014, Jeju Island, Korea.
- [350] Wilson III, L. B. Quantified Energy Dissipation Rates in the Terrestrial Bow Shock. *APL Space Physics Seminar* (2014). URL <http://www.jhuapl.edu>. Nov. 17, 2014, Applied Physics Laboratory.

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- [351] Turner, D. L., Liu, Z., Angelopoulos, V., Omid, N., Wilson III, L. B., Archer, M. O., Hietala, H. & Osmane, A. Pressure variations and particle acceleration associated with foreshock bubbles and hot flow anomalies (Invited). *AGU Fall Meeting Abstracts* SM52A-04 (2014). Dec. 15-19, 2014, San Francisco, CA.
- [352] Wilson III, L. B. Particle acceleration through wave-particle interactions (invited). *Accelerating Cosmic Ray Comprehension* (2015). URL <http://www.astro.princeton.edu/acrc15/>. Apr. 13-16, 2015, Princeton Center for Theoretical Physics, Princeton, NJ.
- [353] Turner, D. L., Archer, M. O., Hietala, H., Plaschke, F., Wilson III, L. B. & Omid, N. Do magnetospheric scientists take the magnetosheath for granted? (Invited). *Unsolved Problems of Magnetospheric Physics* (2015). URL <http://spacescience.org/upmpw/>. Sep. 6-12, 2015, Scarborough, UK.
- [354] Wilson III, L. B. Particle Acceleration through Wave-Particle Interactions (invited). *Unsolved Problems of Magnetospheric Physics* (2015). URL <http://spacescience.org/upmpw/>. Sep. 6-12, 2015, Scarborough, UK.
- [355] Wilson III, L. B. Energy dissipation at the terrestrial bow shock (invited). *Cluster 25th Workshop* (2015). URL http://caa.estec.esa.int/wksp/cluster_workshop25_main.xml. Oct. 12-15, 2015, Venice, Italy.
- [356] Wilson III, L. B. Energy dissipation at the terrestrial bow shock (invited) (2016). URL <http://lasp.colorado.edu/home/about/events/magnetosphere-seminars/>. Friends of the Magnetosphere (FOM) Seminar, Mar. 29, 2016, Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder.
- [357] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances (invited) (2016). URL <http://lasp.colorado.edu/home/about/events/science-seminars/>. LASP Science Seminar, Mar. 31, 2016, Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder.
- [358] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances (invited) (2016). URL <https://www.princeton.edu/astro/>. Astroplasmas Seminar, Apr. 15, 2016, Department of Astrophysical Sciences, Princeton University.
- [359] Turner, D. L., T. Z. Liu, L. B. Wilson III, H. Hietala, N. Omid, and V. Angelopoulos (2016), Transient ion foreshock phenomena on Earth's dayside (invited), *ISROSES-III Meeting*, Sep. 11-16, 2016, Golden Sands, Bulgaria.
- [360] Wilson III, L. B. Gradients as Antennas: A General Wave Source. *Van Allen Probes SWG Meeting* (2016). URL http://rbspgway.jhuapl.edu/general_meetings. Oct. 26-28, 2016, Applied Physics Laboratory, Johns Hopkins University, Laurel, MD.

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- [361] Wilson III, L. B. Unexpected Discovery in Shock Acceleration: Answers to a 60 Year Old Question. *“Science in 7” Presentations* (2016). Oct. 17, 2016, Goddard Space Flight Center, Invited Presentation for the Sciences and Exploration Directorate Executive Council.
- [362] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances (invited). *4th Cluster THEMIS Workshop* (2016). URL http://themis.igpp.ucla.edu/events_Cluster_THEMIS2016.shtml. Nov. 7-12, 2016, Palm Springs, CA.
- [363] Wilson III, L. B. Heliophysics Data Production and Use. *Heliophysics Director’s Seminar* (2016). Nov. 18, 2016, Goddard Space Flight Center, Presentation for the Sciences and Exploration Directorate Director.
- [364] Wilson III, L. B. Unexpected Discovery in Shock Acceleration: Answers to a 60 Year Old Question. *SMD Monthly Status Review* (2016). Dec. 8, 2016, NASA Headquarters, Invited Presentation for the Science Mission Directorate.
- [365] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances (invited). *10th International Nonlinear Wave and Chaos Workshop 10* (2017). URL <http://workshops.agu.org/nonlinear-waves-chaos/welcome/>. Mar. 20–24, 2017, San Diego, CA.
- [366] Wilson III, L. B., D. G. Sibeck, D. L. Turner, A. Osmane, D. Caprioli, and V. Angelopoulos (2017), Relativistic electrons produced by foreshock disturbances observed upstream of the Earth’s bow shock (invited and highlighted by EGU), in *EGU General Assembly Conference Abstracts, EGU General Assembly Conference Abstracts*, vol. 19, p. 143, Apr. 23–28, 2017, Vienna, Austria.
- [367] Wilson III, L. B. (2017), Shock Acceleration: An Unexpected Discovery Addresses a ~60 Year Old Question, *Heliophysics Director’s Seminar*, Apr. 21, 2017, Goddard Space Flight Center, Presentation for the Sciences and Exploration Directorate Director.
- [368] Turner, D. L., S. J. Schwartz, L. B. Wilson III, A. Osmane, J. F. Fennell, J. B. Blake, A. N. Jaynes, I. Cohen, B. Mauk, D. J. Gershman, L. A. Avanov, B. L. Giles, K. Goodrich, R. J. Strangeway, R. B. Torbert, and J. L. Burch (2017), Anatomy of Hot Flow Anomaly Shocks and Their Effectiveness for Energetic Particle Acceleration (invited), *Chapman Conference: Dayside Magnetosphere Interactions*, July 10-14, 2017, Chengdu, Sichuan Province, China.
- [369] Wilson III, L. B. (2017), Relativistic electrons generated locally within transient ion foreshock phenomena, *University of Maryland Plasma Physics Seminar*, Sep. 27, 2017, University of Maryland Plasma Physics Seminar.
- [370] Chen, L.-J., S. Wang, L. B. Wilson III, S. J. Schwartz, N. Bessho, A. Le, et al. (2017), Plasma heating across quasi-perpendicular shocks observed by the MMS mission, in *APS Meeting Abstracts*, p. UM9.00004, Oct. 23–27, 2017, Milwaukee, WI.

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- [371] Wilson III, L. B. (2017), Electron acceleration by whistler waves at collisionless shocks, *2017 JSI Workshop*, Nov. 6–9, 2017, Cosmic Accelerators: Understanding Nature’s High-energy Particles and Radiation.
- [372] Wilson III, L. B., D. G. Sibeck, D. L. Turner, A. Osmane, D. Caprioli, and V. Angelopoulos (2017), Relativistic electrons produced by foreshock disturbances observed upstream of the Earth’s bow shock (invited), *The Magnetosphere New Tools, New Thinking, New Results*, Nov. 12–17, 2017, Puerto Varas, Chile.
- [373] Liu, T. Z., V. Angelopoulos, H. Hietala, S. Lu, and L. B. Wilson III (2017), Understanding of Particle Acceleration by Foreshock Transients (invited), *AGU Fall Meeting Abstracts*, pp. U22B–06, Dec. 11–15, 2017, New Orleans, LA.
- [374] Wilson III, L. B., D. G. Sibeck, D. L. Turner, A. Osmane, D. Caprioli, V. Angelopoulos, and T. Z. Liu (2017), Relativistic electrons generated locally within transient ion foreshock phenomena (invited), *AGU Fall Meeting Abstracts*, pp. SM24A–01, Dec. 11–15, 2017, New Orleans, LA.
- [375] Liu, T. Z., S. Lu, V. Angelopoulos, H. Hietala, and L. B. Wilson III (2018), Fermi Acceleration of Electrons inside Foreshock Transient Cores (invited), *Fundamental Physical Processes in Solar-Terrestrial Research and Their Relevance to Planetary Physics*, Jan. 7–13, 2018, Kona, Hawaii.
- [376] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2018), The structure of low Mach number, low beta, quasi-perpendicular shocks (invited), *Fundamental Physical Processes in Solar-Terrestrial Research and Their Relevance to Planetary Physics*, Jan. 7–13, 2018, Kona, Hawaii.
- [377] Wilson III, L. B. (2018), The Structure of Low Mach Number, Low Beta, Quasi-perpendicular Collisionless Shocks (invited), *LANL Plasma Physics Seminar*, Seminar for the Center of Space and Earth Science in Los Alamos National Laboratory, Feb. 20, 2018.
- [378] Wilson III, L. B. (2018), The Physics of Collisionless Shock Waves (invited), *Swarthmore College Physics Colloquium*, Colloquium for the Department of Physics at Swarthmore College, Apr. 13, 2018.
- [379] Turner, D. L., L. B. Wilson III, S. J. Schwartz, T. Z. Liu, A. Osmane, J. F. Fennell, J. B. Blake, T. Leonard, A. N. Jaynes, I. J. Cohen, B. Mauk, R. J. Strangeway, J. Broll, S. A. Fuselier, and J. L. Burch (2018), Evidence of autogenous first-order Fermi acceleration of energetic ions upstream of Earth’s bow shock (solicited), in *EGU General Assembly Conference Abstracts*, *EGU General Assembly Conference Abstracts*, vol. 20, p. 2857, April 8–13, 2018, Vienna, Austria.
- [380] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2018), The Structure of Low Mach Number, Low Beta, Quasi-perpendicular Collisionless Shocks (invited), *AOGS-AGU (WPGM) Joint Assembly*, pp. ST06–A002, June 3–8, 2018, Honolulu, Hawaii.

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- [381] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2018), The Structure of Low Mach Number, Low Beta, Quasi-perpendicular Collisionless Shocks (invited), *COSPAR*, **42**, July 14–22, 2018, Pasadena, California.
- [382] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU (invited), Research Seminar, Apr. 15, 2019, Princeton Plasma Physics Laboratory, Princeton University.
- [383] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU (invited), *The Plasma Physics of the Magnetosphere*, on Jun. 2–7, 2019, Pollenzo, Italy.
- [384] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU (invited), *Ion Composition in the Sun-Earth System (ICSES): Measurements/Implications/Theory*, on Jul. 28 to Aug. 3, 2019, Durango, CO.
- [385] Wilson III, L. B. (2019), Nonthermal electron velocity distributions at interplanetary shocks near 1 AU (invited), *10th Korean Astrophysics Workshop (KAW10): Astrophysics of High-Beta Plasma in the ICM*, on Jul. 1–4, 2019, Busan, South Korea.
- [386] Bessho, N., L.-J. Chen, S. Wang, L. B. Wilson III, and M. Hesse (2019), Kinetic Physics of Magnetic Reconnection in Turbulence in the Earth’s Bow Shock (invited), *AOGS-AGU (WPGM) Joint Assembly*, pp. ST09–A007, July 28–Aug. 2, 2019, Singapore.
- [387] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, and L. B. Wilson III (2019), Two-dimensional particle-in-cell simulations of magnetic reconnection and kinetic physics in the Earth’s quasi-parallel bow shock (invited), *AGU Fall Meeting Abstracts*, pp. SH21A–03, Dec. 9–13, 2019, San Francisco, CA.
- [388] Turner, D. L., T. Z. Liu, and L. B. Wilson III (2019), Foreshock Transient Phenomena Observed by the Magnetospheric Multiscale (MMS) Mission (Invited), *AGU Fall Meeting Abstracts*, pp. SM53B–02, Dec. 9–13, 2019, San Francisco, CA.
- [389] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, et al. (2019), Magnetic reconnection observations in the bow shock transition region (invited), *AGU Fall Meeting Abstracts*, pp. SH21A–01, Dec. 9–13, 2019, San Francisco, CA.
- [390] Collinson, G., L. B. Wilson III, N. Omid, D. G. Sibeck, J. Espley, C. Fowler, D. Mitchell, J. Grebowsky, C. Mazelle, S. Ruhunusiri, J. Halekas, R. Frahm, T. Zhang, Y. Futaana, and B. Jakosky (2020), Solar Wind induced waves in the skies of Mars: Ionospheric compression, energization, and escape resulting from the impact of ultra-low frequency magnetosonic waves generated upstream of the Martian bow shock (invited), in *EGU General Assembly Conference Abstracts*, vol. 22, p. 1966, May 3–8, 2020, Vienna, Austria.
- [391] Wilson III, L. B. (2020), The Solar Wind, *Magnetosphere Online Seminar Series*, on May 4, 2020.

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- [392] Wilson III, L. B. (2020), Particle Energization at Collisionless Shock Waves (invited), *Astrophysical and Planetary Sciences Colloquium*, colloquium for the Department of Astrophysical and Planetary Sciences at University of Colorado Boulder, Oct. 5, 2020.
- [393] Wilson III, L. B. (2020), The discrepancy between simulation and observation of electric fields in collisionless shocks, *MMS FALL 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.
- [394] Wilson III, L. B. (2020), Energy partition at interplanetary shocks, *Solar Orbiter Working Group: Shocks and Particle Energisation*, on Oct. 26, 2020, Virtual Meeting.
- [395] Wilson III, L. B. (2020), The nonequilibrium solar wind electrons: Why care?, *Heliophysics Director's Seminar*, Nov. 20, 2020, Goddard Space Flight Center, Presentation for the Sciences and Exploration Directorate Director.
- [396] Madanian, H., M. I. Desai, J. L. Burch, S. A. Fuselier, L. B. Wilson III, O. Le Contel, S. J. Schwartz, D. L. Turner, N. Omid, K. Ogasawara, R. E. Ergun, N. Ahmadi, C. Russell, D. J. Gershman, and P.-A. Lindqvist (2020), The Dynamics of High Mach Number Quasi-Perpendicular Shocks, *AGU Fall Meeting Abstracts*, pp. SH047–02, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [397] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. E. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), Magnetic reconnection observed at Earth's bow shock (Invited), *AGU Fall Meeting Abstracts*, pp. SM038–01, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [398] Wilson III, L. B. (2021), Particle Energization at Collisionless Shock Waves (invited), *Space Plasma Physics Seminar*, Space Plasma Physics Seminar for the Department of Physics and Astronomy at Rice University, Feb. 16, 2021.
- [399] Chen, L.-J., N. Bessho, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2021), Magnetic reconnection and kinetic waves in the Earth's quasi-parallel bow shock, *Features in Plasma Physics Webinar*, on February 26, 2021.
- [400] Wilson III, L. B. (2021), Particle Energization at Collisionless Shock Waves (invited), *Monthly Meeting of the National Capital Astronomers*, Presentation for the Monthly Meeting of the National Capital Astronomers (virtual) on Oct. 9, 2021.
- [401] Wilson III, L. B., A. L. Brosius, D. J. Gershman, S. J. Schwartz, H. Madanian, I. J. Cohen, D. L. Turner, and K. Goodrich (2021), MMS Observations of nonlinear whistler precursor particle acceleration, in *APS Meeting Abstracts*, p. CM10.00001, 63rd Annual Meeting of the APS Division of Plasma Physics, Nov. 8–12, 2021.
- [402] Wilson III, L. B. (2022), The Sun Radio Interferometer Space Experiment (SunRISE) Mission, *Heliophysics Director's Seminar*, Mar. 16, 2022, Goddard Space Flight Center, Presentation for the Sciences and Exploration Directorate Director.
- [403] Wilson III, L. B. (2022), Comparative collisionless shocks beyond Earth, *MMS Community Workshop*, May 9–13, 2022, Daytona Beach, FL.

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List of Refereed Publications

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- [404] Wilson III, L. B. (2022), Suprathermal particles and collisionless shocks, *2022 SHINE Conference*, held June 27 to July 1, 2022, Honolulu, Hawaii.
- [405] Wilson III, L. B. (2022), Particle Energization at Collisionless Shock Waves and Particle Transport in the Interplanetary Medium, *6th ICM Theory and Computation Workshop*, held August 15–19, 2022, Copenhagen, Denmark.