

**List of Refereed Publications**  
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- [72] Liu, T. Z., V. Angelopoulos, H. Hietala, and L. B. Wilson III (2017), Statistical study of particle acceleration in the core of foreshock transients, *ArXiv e-prints*, [1706.04993](#).
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- [98] Collinson, G. A., Masters, A., Shane, N., Wilson III, L. B., Slavin, J. A., Zhang, T. L., Moore, T. E., Sarantos, M., Boardsen, S. A. & Barabash, S. New discoveries in the Venusian Foreshock. *AGU Fall Meeting Abstracts* A2231 (2012). Dec. 3-7, San Francisco, CA.

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- [100] Tang, X., Cattell, C. A., Dombek, J. P., Dai, L., Wilson III, L. B., Breneman, A. W. & Hupach, A. J. THEMIS Observations of Plasma Waves near the Diffusion Region of Dayside Magnetopause Reconnection. *AGU Fall Meeting Abstracts* A2240 (2012). Dec. 3-7, San Francisco, CA.
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- [104] Paradise, A., Breneman, A. W., Cattell, C. A., Wilson III, L. B., Kersten, K., Kellogg, P. J., Goetz, K. & Schreiner, S. STEREO and Wind Observations of Intense Cyclotron Harmonic Waves at the Earth's Bow Shock. *AGU Fall Meeting Abstracts* SM31A-2123 (2013). Dec. 9-13, 2013, San Francisco, CA.
- [105] Tang, X., Cattell, C. A. & Wilson III, L. B. THEMIS observations of the magnetopause electron diffusion region and magnetospheric separatrix: Large amplitude waves and heated particles. *AGU Fall Meeting Abstracts* SM11B-2078 (2013). Dec. 9-13, 2013, San Francisco, CA.
- [106] Wilson III, L. B., Sibeck, D. G., Breneman, A. W., Le Contel, O., Cully, C. M., Turner, D. L., Angelopoulos, V. & Malaspina, D. M. Quantified Energy Dissipation Rates in the Terrestrial Bow Shock. *AGU Fall Meeting Abstracts* SM31A-2107 (2013). Dec. 9-13, 2013, San Francisco, CA.
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- [116] Wilson III, L. B., Breneman, A. W., Malaspina, D. M., Le Contel, O. & Cully, C. M. Current-Driven Instabilities and Energy Dissipation Rates as a Predictive Tool for Solar

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- Probe Plus. *AGU Fall Meeting Abstracts* SM41A-4232 (2014). Dec. 15-19, 2014, San Francisco, CA.
- [117] Yu, W., Farrugia, C. J., Lugaz, N., Galvin, A. B., Leitner, M., Möstl, C., Nieves-Chinchilla, T., Luhmann, J. G. & Wilson III, L. B. On Modeling Flux Rope-type Small Interplanetary Transients by Non-Force Free Methods. *AGU Fall Meeting Abstracts* SH31A-4105 (2014). Dec. 15-19, 2014, San Francisco, CA.
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- [119] Markevitch, M., Wilson III, L. B., Jones, T. W., Ryu, D., Brunetti, G. & Oh, P. Microphysics of Intracuster Plasma with a High Angular Resolution Microcalorimetric Array. In *X-Ray Vision Workshop: Probing the Universe in Depth and Detail with the X-Ray Surveyor (X-Ray Vision Workshop)*, National Museum of the American Indian, Washington, DC, USA, 6-8 October 2015, article id.15, 15 (2015).
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- [124] Wilson III, L. B. & Turner, D. L. Electron Acceleration by Transient Ion Foreshock Phenomena. *AGU Fall Meeting Abstracts* SM13C-2509 (2015). Dec. 14-18, 2015, San Francisco, CA.
- [125] Goncharov, O., Němeček, Z., Šafránková, J., Přech, L., Koval, A., Wilson III, L. B. & Zastenker, G. N. Waves associated with interplanetary shocks: Types and properties. In *EGU General Assembly Conference Abstracts*, vol. 18 of *EGU General Assembly*



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- [129] Malaspina, D. M. & Wilson III, L. B. The Wind Dust Database: 22 Years Of Interplanetary And Interstellar Dust Observations at 1 AU. *Dusty Visions Workshop* (2016). URL <http://impact.colorado.edu/DustyVisions2016.html>. July 22–24, 2016, Boulder, CO.
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- [133] Alterman, B. L., Stevens, M., Kasper, J. C., Koval, A. & Wilson III, L. B. Alfvénicity of Ion Drifts at 1AU. *AGU Fall Meeting Abstracts* SH51D–2611 (2016). Dec. 12-16, 2016, San Francisco, CA.
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- [136] Randol, B. M., Christian, E. R. & Wilson III, L. B. Observations of thermal and suprathermal tail ions from WIND. *AGU Fall Meeting Abstracts* SH13D-06 (2016). Dec. 12-16, 2016, San Francisco, CA.
- [137] Wang, S., Chen, L.-J., Hesse, M., Wilson III, L. B., Bessho, N., Gershman, D. J., Dorelli, J., Giles, B. L., Torbert, R. B., Pollock, C. J., Strangeway, R., Ergun, R., Burch, J. L., Avanov, L. A., Lavraud, B., Moore, T. E. & Saito, Y. Effects of Lower-hybrid Waves on Electron And Ion Heating During Asymmetric Reconnection. *AGU Fall Meeting Abstracts* SM31C-04 (2016). Dec. 12-16, 2016, San Francisco, CA.
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- [139] Turner, D. L., L. B. Wilson III, et al. (2017), A case study of a hot flow anomaly observed by MMS, *2017 Geospace Environment Modeling Workshop*, Jun. 18-23, 2017, Portsmouth, VA.
- [140] Horaites, K., S. Boldyrev, L. B. Wilson III, A. F. Viñas, and J. Merka (2017), Kinetic Theory and Fast Wind Observations of the Electron Strahl, in *APS Meeting Abstracts*, p. NP11.00162, Oct. 23-27, 2017, Milwaukee, WI.
- [141] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2017), The structure of low Mach number, low beta, quasi-perpendicular collisionless shocks, in *APS Meeting Abstracts*, p. GO6.00006, Oct. 23-27, 2017, Milwaukee, WI.
- [142] 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.
- [143] Chen, L.-J., L. B. Wilson III, S. Wang, N. Bessho, A. F. Viñas, H. Lai, C. T. Russell, S. J. Schwartz, M. Hesse, T. E. Moore, J. L. Burch, D. J. Gershman, B. L. Giles, R. B. Torbert, R. E. Ergun, J. Dorelli, R. J. Strangeway, W. R. Paterson, B. Lavraud, Y. V. Khotyaintsev, et al. (2017), Ion Thermalization and Electron Heating across Quasi-Perpendicular Shocks Observed by the MMS Mission, *AGU Fall Meeting Abstracts*, pp. SH53B-05, Dec. 11-15, 2017, New Orleans, LA.
- [144] Cohen, Z., A. W. Breneman, C. A. Cattell, L. Davis, P. Grul, K. Kersten, and L. B. Wilson III (2017), STEREO Observations of Waves in the Ramp Regions of Interplanetary Shocks, *AGU Fall Meeting Abstracts*, pp. SH53B-02, Dec. 11-15, 2017, New Orleans, LA.

**List of Non-refereed Talks/Presentations**  
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- [145] Giagkiozis, S., L. B. Wilson III, et al. (2017), Statistical Study of the Properties of Magnetosheath Lion Roars using MMS observations, *AGU Fall Meeting Abstracts*, pp. SM11A–2281, Dec. 11–15, 2017, New Orleans, LA.
- [146] Horaites, K., S. Boldyrev, L. B. Wilson III, A. F. Viñas, and J. Merka (2017), Kinetic Theory and Fast Wind Observations of the Electron Strahl, *AGU Fall Meeting Abstracts*, pp. SH33A–2765, Dec. 11–15, 2017, New Orleans, LA.
- [147] Jones Greeley, A. D., S. G. Kanekal, D. N. Baker, B. Klecker, W. Li, L. B. Wilson III, and Q. Schiller (2017), Quantifying the contribution of microburst precipitation to global electron loss, *AGU Fall Meeting Abstracts*, pp. SM43A–2699, Dec. 11–15, 2017, New Orleans, LA.
- [148] 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.
- [149] Liu, T. Z., S. Lu, V. Angelopoulos, H. Hietala, and L. B. Wilson III (2017), Fermi Acceleration of Electrons inside Foreshock Transient Cores, *AGU Fall Meeting Abstracts*, pp. SM11A–2275, Dec. 11–15, 2017, New Orleans, LA.
- [150] Osmane, A., L. B. Wilson III, D. L. Turner, , A. P. Dimmock, and T. I. Pulkkinen (2017), Subcritical Growth of Electron Phase-space Holes in Planetary Radiation Belts, *AGU Fall Meeting Abstracts*, pp. SM43F–04, Dec. 11–15, 2017, New Orleans, LA.
- [151] St Cyr, O. C., L. B. Wilson III, K. Rockcliffe, A. Mills, T. Nieves-Chinchilla, M. L. Adrian, and D. M. Malaspina (2017), Investigations of Wind/WAVES Dust Impacts, *AGU Fall Meeting Abstracts*, pp. SH23D–2682, Dec. 11–15, 2017, New Orleans, LA.
- [152] Turner, D. L., L. B. Wilson III, S. J. Schwartz, T. Z. Liu, A. Osmane, J. F. Fennell, J. B. Blake, A. N. Jaynes, K. Goodrich, B. Mauk, D. J. Gershman, L. A. Avanov, R. J. Strangeway, R. B. Torbert, and J. L. Burch (2017), Characteristics of Energetic Particle Acceleration in Hot Flow Anomalies Observed by MMS, *AGU Fall Meeting Abstracts*, pp. SM11A–2276, Dec. 11–15, 2017, New Orleans, LA.
- [153] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2017), The structure of low Mach number, low beta, quasi-perpendicular shocks, *AGU Fall Meeting Abstracts*, pp. SH51A–2474, Dec. 11–15, 2017, New Orleans, LA.
- [154] Eriksson, S., G. Lapenta, P. A. Cassak, D. L. Newman, L. B. Wilson III, and D. J. Gershman (2018), On Magnetic Reconnection Exhausts in the Solar Wind and Associated Perturbations of the Out-of-Plane Magnetic Field, *The 17th Annual International Astrophysics Conference: Dissipative and Heating Processes in Collisionless Plasma: the Solar Corona, the Solar Wind, and the Interstellar Medium*, Santa Fe, New Mexico, Mar. 5–9, 2018.

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- [155] Lario, D., R. B. Decker, E. C. Roelof, L. Berger, R. Wimmer-Schweingruber, J. Giacalone, L. B. Wilson III, and Viñas, A. F. (2018), The Case of Flat Proton Spectra in Large Solar Energetic Particle Events, *The 17th Annual International Astrophysics Conference: Dissipative and Heating Processes in Collisionless Plasma: the Solar Corona, the Solar Wind, and the Interstellar Medium*, Santa Fe, New Mexico, Mar. 5–9, 2018.
- [156] Ofman, L., L. B. Koval, A. Wilson III, and A. Szabo (2018), Understanding the Role of Alpha Particles in Oblique Heliospheric Shock Oscillations, *Triennial Earth-Sun Summit*, May 20–24, 2018, Leesburg, Virginia.
- [157] 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.
- [158] Goodrich, K. A., R. E. Ergun, D. Newman, S. J. Schwartz, L. B. Wilson III, F. D. Wilder, J. L. Burch, R. B. Torbert, Y. Khotyaintsev, P.-A. Lindqvist, R. J. Strangeway, C. T. Russell, D. J. Gershman, and B. L. Giles (2018), Generation and Micro-scale Effects of Electrostatic Waves in an Oblique Shock Crossing, *AOGS-AGU (WPGM) Joint Assembly*, pp. ST03–A037, June 3–8, 2018, Honolulu, Hawaii.
- [159] Lario, D., L. Berger, L. B. Wilson III, R. B. Decker, R. F. Wimmer-Schweingruber, and J. Giacalone (2018), Evolution of the suprathermal proton population around interplanetary shocks, *The 15th International Solar Wind Conference*, Brussels, Belgium, Jun. 18–22, 2018.
- [160] Koval, A., L. B. Wilson III, A. Szabo, M. L. Stevens, J. C. Kasper, and D. A. Biesecker (2018), Multi-point observations of quasi-perpendicular interplanetary shock structures, *COSPAR*, **42**, July 14–22, 2018, Pasadena, California.
- [161] Wilson III, L. B., M. L. Stevens, J. C. Kasper, K. G. Klein, B. Maruca, S. D. Bale, T. A. Bowen, M. P. Pulupa, and C. S. Salem (2018), The statistical properties of solar wind temperature parameters near 1 AU, *2018 SHINE Conference*, July 30th – Aug. 3rd, 2018, Cocoa Beach, FL.
- [162] 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.
- [163] Lario, D., L. Berger, L. B. Wilson III, R. B. Decker, R. F. Wimmer-Schweingruber, and J. Giacalone (2018), Suprathermal Proton Populations around Transient Interplanetary Shocks, *2018 SHINE Conference*, July 30th – Aug. 3rd, 2018, Cocoa Beach, FL.
- [164] 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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- Earth's bow shock, *AGU Fall Meeting Abstracts*, pp. SH31A-09, Dec. 10-14, 2018, Washington, D.C.
- [165] Chen, L.-J., S. Wang, L. B. Wilson III, S. J. Schwartz, N. Bessho, C. T. Russell, T. E. Moore, et al. (2018), An emerging new picture on plasma heating at Earth's quasi-perpendicular shocks, *AGU Fall Meeting Abstracts*, pp. SH33A-06, Dec. 10-14, 2018, Washington, D.C.
- [166] Collinson, G., L. B. Wilson III, N. Omidi, D. G. Sibeck, J. R. Espley, C. M. Fowler, D. Mitchell, J. M. Grebowsky, C. X. Mazelle, S. Ruhunusiri, J. S. Halekas, R. A. Frahm, T. Zhang, Y. Futaana, and B. M. Jakosky (2018), 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, *AGU Fall Meeting Abstracts*, pp. SM23D-3209, Dec. 10-14, 2018, Washington, D.C.
- [167] Cooper, J. F., R. E. Coleman Jr., and L. B. Wilson III (2018), Investigation of Solar Electron Hysteresis Event in June 2011 as Observed by STEREO-B IMPACT, *AGU Fall Meeting Abstracts*, pp. SH31C-3650, Dec. 10-14, 2018, Washington, D.C.
- [168] Davis, L., C. A. Cattell, Z. Cohen, A. W. Breneman, and L. B. Wilson III (2018), ARTEMIS Observations of Waves in Laminar and Turbulent Interplanetary Shocks, *AGU Fall Meeting Abstracts*, pp. SH31C-3637, Dec. 10-14, 2018, Washington, D.C.
- [169] Goodrich, K. A., R. E. Ergun, S. J. Schwartz, L. B. Wilson III, D. Newman, F. D. Wilder, J. Holmes, A. Johlander, J. L. Burch, R. B. Torbert, Y. Khotyaintsev, P.-A. Lindqvist, R. J. Strangeway, C. T. Russell, D. J. Gershman, and B. L. Giles (2018), Impulsively Reflected Ions: A New Theory for Ion Acoustic Wave Growth in Collisionless Shocks, *AGU Fall Meeting Abstracts*, pp. SH33A-04, Dec. 10-14, 2018, Washington, D.C.
- [170] Koval, A., L. B. Wilson III, and A. Szabo (2018), Multi-point observations of quasi-perpendicular interplanetary shock structures, *AGU Fall Meeting Abstracts*, pp. SH31C-3635, Dec. 10-14, 2018, Washington, D.C.
- [171] Wilson III, L. B., M. L. Stevens, J. C. Kasper, K. Klein, B. Maruca, S. D. Bale, T. Bowen, M. P. Pulupa, and C. S. Salem (2018), The statistical properties of solar wind temperature parameters near 1 AU observed by *Wind*, in *APS Meeting Abstracts*, p. TP11.00156, Nov. 5-9, 2018, Portland, OR.
- [172] Wilson III, L. B., M. L. Stevens, J. C. Kasper, K. Klein, B. Maruca, S. D. Bale, T. Bowen, M. P. Pulupa, and C. S. Salem (2018), The statistical properties of solar wind temperature parameters near 1 AU observed by *Wind*, *AGU Fall Meeting Abstracts*, pp. SH51E-2904, Dec. 10-14, 2018, Washington, D.C.

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- [173] 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.
- [174] 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.
- [175] 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.
- [176] 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.
- [177] 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.
- [178] 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.
- [179] 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.
- [180] 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.
- [181] 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.
- [182] 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.
- [183] 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.
- [184] 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.
- [185] Turner, D. L., Angelopoulos, V., Omidi, 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.
- [186] Turner, D. L., Angelopoulos, V., Wilson III, L. B., Hietala, H., Omidi, 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.
- [187] 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.
- [188] 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.
- [189] 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.
- [190] 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.
- [191] 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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- [192] 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.
- [193] 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.
- [194] 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.
- [195] 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.
- [196] 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](http://caa.estec.esa.int/wksp/cluster_workshop25_main.xml). Oct. 12-15, 2015, Venice, Italy.
- [197] 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.
- [198] 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.
- [199] 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.
- [200] 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.
- [201] Wilson III, L. B. Gradients as Antennas: A General Wave Source. *Van Allen Probes SWG Meeting* (2016). URL [http://rbspgway.jhuapl.edu/general\\_meetings](http://rbspgway.jhuapl.edu/general_meetings). Oct. 26–28, 2016, Applied Physics Laboratory, Johns Hopkins University, Laurel, MD.

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- [202] 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.
- [203] 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](http://themis.igpp.ucla.edu/events_Cluster_THEMIS2016.shtml). Nov. 7-12, 2016, Palm Springs, CA.
- [204] 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.
- [205] 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.
- [206] 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.
- [207] 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.
- [208] 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.
- [209] 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.
- [210] 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.
- [211] 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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- [212] 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.
- [213] 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.
- [214] 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.
- [215] 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.
- [216] 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.
- [217] 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.
- [218] 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.
- [219] 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.
- [220] 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.
- [221] 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.

**List of Invited Talks/Presentations**  
**Lynn B. Wilson III**

- [222] 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.
- [223] 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.
- [224] 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.
- [225] 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.
- [226] 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.
- [227] 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.