

List of Refereed Publications
Lynn B. Wilson III

References

- [1] Wilson III, L. B., Cattell, C., Kellogg, P. J., Goetz, K., Kersten, K., Hanson, L., MacGregor, R. & Kasper, J. C. Waves in Interplanetary Shocks: A Wind/WAVES Study. *Phys. Rev. Lett.* **99**, 041101 (2007).
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- [6] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Goetz, K., Kersten, K., Kasper, J. C., Szabo, A. & Wilber, M. Large-amplitude electrostatic waves observed at a supercritical interplanetary shock. *J. Geophys. Res.* **115**, 12104 (2010).
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- [10] Kersten, K., Cattell, C. A., Breneman, A., Goetz, K., Kellogg, P. J., Wygant, J. R., Wilson III, L. B., Blake, J. B., Looper, M. D. & Roth, I. Observation of relativistic electron microbursts in conjunction with intense radiation belt whistler-mode waves. *Geophys. Res. Lett.* **38**, 8107 (2011).
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- [12] Breneman, A., Cattell, C., Wygant, J., Kersten, K., Wilson III, L. B., Dai, L., Colpitts, C., Kellogg, P. J., Goetz, K. & Paradise, A. Explaining polarization reversals in STEREO wave data. *J. Geophys. Res.* **117**, 4317 (2012).
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- III, L. B., Ogilvie, K. W. & Sauvaud, J.-A. A Statistical Analysis of Properties of Small Transients in the Solar Wind 2007-2009: STEREO and Wind Observations. *J. Geophys. Res.* **119**, 689–708 (2014).
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- [32] Kanekal, S. G., Baker, D. N., Fennell, J. F., Jones, A., Schiller, Q., Richardson, I. G., Li, X., Turner, D. L., Califf, S., Claudepierre, S. G., Wilson III, L. B., Jaynes, A.,

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- Blake, J. B., Reeves, G., Spence, H. E., Kletzing, C. A. & Wygant, J. R. Prompt Acceleration of Magnetospheric Electrons to Ultra-Relativistic Energies by the 17 March 2015 Interplanetary Shock. *J. Geophys. Res.* (2016). Accepted Jun. 28, 2016.
- [33] Collinson, G., Ma, Y., Wilson III, L. B., Grebowsky, J., Sibeck, D. G., Zesta, E., Zhang, T. & Futaana, Y. The Ionospheric Fossil Fields of Venus: Simultaneous multipoint observations by Venus Express and MESSENGER. *Geophys. Res. Lett.* (2016). Submitted Jan. 23, 2016.
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List of arXiv Submissions
Lynn B. Wilson III

- [38] Kersten, K., Cattell, C. A., Breneman, A., Goetz, K., Kellogg, P. J., Wilson III, L. B., Wygant, J. R., Blake, J. B., Looper, M. D. & Roth, I. Observation of relativistic electron microbursts in conjunction with intense radiation belt whistler-mode waves. *ArXiv e-prints* (2011). [1101.3345](#).
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- [43] Wilson III, L. B., Sibeck, D. G., Breneman, A. W., Le Contel, O., Cully, C., Turner, D. L. & Angelopoulos, V. Quantified Energy Dissipation Rates: Electromagnetic Wave Observations in the Terrestrial Bow Shock. *ArXiv e-prints* (2013). [1305.2333](#).
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Lynn B. Wilson III

- [46] Wilson III, L. B., Cattell, C., Kellogg, P., Goetz, K., Kersten, K., Hanson, L. & Kasper, J. A Wind/Waves Study of Waves in the Ramp Region of Interplanetary Shocks. *AGU Fall Meeting Abstracts* A390 (2006).
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- [56] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Goetz, K., Wygant, J., Breneman, A. W. & Kersten, K. Characteristics of electron distributions observed during large amplitude whistler wave events in the magnetosphere. *AGU Fall Meeting Abstracts* B1703 (2010).
- [57] Breneman, A., Cattell, C., Wygant, J., Kersten, K., Wilson III, L. B., Kellogg, P. J., Goetz, K. & Schreiner, S. Large Amplitude Transmitter- and Lightning-Associated

List of Non-refereed Talks/Presentations
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- Whistler Waves in Earth's Inner Plasmasphere at $L < 2$ (2011). Chapman Conference: Dynamics of the Earth's Radiation Belts and Inner Magnetosphere, July 17-22, 2011.
- [58] Breneman, A. W., Cattell, C. A., Wilson III, L. B., Kersten, K. & Goetz, K. STEREO observations of large amplitude electrostatic waves at the Earth's bowshock. *AGU Fall Meeting Abstracts* B2061 (2011).
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- [65] Breneman, A. W., Cattell, C. A., Wilson III, L. B., Kersten, K., Goetz, K. & Paradise, A. STEREO observations of waves near the ramp region of interplanetary shocks. *AGU Fall Meeting Abstracts* B2208 (2012). Dec. 3-7, San Francisco, CA.
- [66] 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.

List of Non-refereed Talks/Presentations
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- [67] Malaspina, D. M., Newman, D. L., Wilson III, L. B., Goetz, K., Kellogg, P. J. & Kersten, K. Observations of Electrostatic Solitary Waves as Evidence of Kinetic Instabilities and Magnetic Reconnection at Solar Wind Current Sheets. *AGU Fall Meeting Abstracts* B2271 (2012). Dec. 3-7, San Francisco, CA.
- [68] 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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- [71] Pulupa, M. P., Bale, S. D., Opitz, A., Fedorov, A., Sauvaud, J.-A. & Wilson III, L. B. Electron observations and wave activity at shocks in the solar wind. *AGU Meeting of the Americas* SH32A-02 (2013). URL <http://moa.agu.org/2013/scientific-program/>. May 14-17, Cancun, Mexico.
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- [74] 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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List of Non-refereed Talks/Presentations
Lynn B. Wilson III

- [76] Wilson III, L. B., Sibeck, D. G., Breneman, A. W., Le Contel, O., Cully, C., Turner, D. L., Angelopoulos, V. & Malaspina, D. M. Quantified Energy Dissipation Rates in the Terrestrial Bow Shock. *2014 SHINE Conference* (2014). URL <http://shinecon.org/shine2014/abstractlisting.php>. June 23rd- 27th, 2014, Telluride, CO.
- [77] Yu, W., Farrugia, C. J., Lugaz, N., Galvin, A. B., Leitner, M., Sonnerup, B. U. Ö., Möstl, C., Luhmann, J. G. & Wilson III, L. B. On modeling flux ropetype small interplanetary transients by nonforcefree methods. *2014 SHINE Conference* (2014). URL <http://shinecon.org/shine2014/abstractlisting.php>. June 23rd- 27th, 2014, Telluride, CO.
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- [81] Hoilijoki, S., Walsh, B., Kempf, Y., von Alfthan, S., Gutynska, O., Wilson III, L. B., Hannuksela, O., Ganse, U., Sibeck, D. & Palmroth, M. Formation and Evolution of Mirror Mode Type Fluctuations in the Earth's Magnetosheath in Global Hybrid-Vlasov Simulations. *AGU Fall Meeting Abstracts SM41A-4231* (2014). Dec. 15-19, 2014, San Francisco, CA.
- [82] Muzamil, F. M., Farrugia, C. J., Torbert, R. B., Pritchett, P. R., Mozer, F. S., Scudder, J. D., Russell, C. T., Sandholt, P. E., Denig, W. F. & Wilson III, L. B. A Statistical View of the Effect of Density Asymmetry and Guide Field on the Structure of the Reconnection Layer Poleward of the Cusp. *AGU Fall Meeting Abstracts SM12B-08* (2014). Dec. 15-19, 2014, San Francisco, CA.
- [83] Tang, X., Cattell, C. A., Wilson III, L. B. & Alexander, R. J. First simultaneous observations of lower hybrid, whistler mode, electrostatic solitary and electron cyclotron waves near the Earth's magnetopause. *AGU Fall Meeting Abstracts SM41A-4224* (2014). Dec. 15-19, 2014, San Francisco, CA.
- [84] 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.
- [85] 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.
- [86] Kanekal, S., Baker, D., Blake, B., Califf, S., Claudepierre, S., Elkington, S., Fennell, J. F., Jaynes, A., Jones, A., Kletzing, C., Li, X., Reeves, G., Spence, H. & Wilson III, L. B. Observation of Prompt Energization to ultra relativistic energies by the March 2015 interplanetary shock. *RBSP Science Working Group Meeting* (2015). URL http://rbspgway.jhuapl.edu/rbsp_SWG_Jul_2015. July 29–31, 2015, Applied Physics Laboratory, Laurel, MD.
- [87] Markevitch, M., Wilson III, L. B., Jones, T. W., Ryu, D., Brunetti, G. & Oh, P. Microphysics of Intracluster 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).
- [88] Djordjevic, B., Maruca, B. A., Bale, S. D., Wilson III, L. B. & Larson, D. Non-linear analysis of PESA-Low electrostatic analyzer data and solar wind temperature anisotropies. *AGU Fall Meeting Abstracts* SH53B-2510 (2015). Dec. 14-18, 2015, San Francisco, CA.
- [89] Kanekal, S., Baker, D., Blake, B., Califf, S., Claudepierre, S., Elkington, S., Fennell, J. F., Jaynes, A., Jones, A., Kletzing, C., Li, X., Reeves, G., Spence, H. & Wilson III, L. B. Near Instantaneous Energization of Electrons to Ultra-relativistic Energies in the Earth's Radiation Belts during the Strong Shock event of 17 March 2015. *AGU Fall Meeting Abstracts* SM44B-09 (2015). Dec. 14-18, 2015, San Francisco, CA.
- [90] Koval, A., Wilson III, L. B., Szabo, A., Kasper, J. C., Stevens, M., Case, A. & Biesecker, D. Interplanetary Shocks Observed by the DSCOVR Spacecraft. *AGU Fall Meeting Abstracts* SH22B-05 (2015). Dec. 14-18, 2015, San Francisco, CA.
- [91] Osmane, A., Wilson III, L. B., Blum, L. & Pulkkinen, T. I. On the connection between large-amplitude whistlers, microbursts and nonlinear kinetic structures in the Earth's Radiation Belt. *AGU Fall Meeting Abstracts* SM21B-2527 (2015). Dec. 14-18, 2015, San Francisco, CA.
- [92] 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.
- [93] 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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- [94] Koval, A., Wilson III, L. B., Szabo, A., Kasper, J. C., Stevens, M., Case, A. & Biesecker, D. DSCOVR Observations of Waves at Interplanetary Shocks. In *EGU General Assembly Conference Abstracts*, vol. 18 of *EGU General Assembly Conference Abstracts*, 11410 (2016). URL <http://meetingorganizer.copernicus.org/EGU2016/EGU2016-11410.pdf>. April 17–22, 2016, Vienna, Austria.
- [95] Markevitch, M. L., Wilson III, L., Jones, T. W., Ryu, D., Brunetti, G. & Oh, S. P. Microphysics of intracluster plasma with an X-ray microcalorimeter. In *AAS/High Energy Astrophysics Division*, vol. 15 of *AAS/High Energy Astrophysics Division*, 101.04 (2016).
- [96] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances. *2016 SHINE Conference* (2016). URL <http://shinecon.org/shine2016/abstractlisting.php>. July 11th - 15th, 2016, Santa Fe, NM.
- [97] Markevitch, M., Wilson III, L. B. *et al.* Microphysics of intracluster plasma with high-resolution X-ray spectroscopy. In *41st COSPAR Scientific Assembly*, vol. 41 of *COSPAR* (2016). URL <https://www.cospar-assembly.org>. July 30 – August 7, 2016, Istanbul, Turkey.
- [98] Malaspina, D. M., Wilson III, L. B. *et al.* The Wind Dust Database: 22 Years Of Interplanetary And Interstellar Dust Observations. *AOGS-AGU (WPGM) Joint Assembly* PS18–A002 (2016). URL <http://www.asiaoceania.org/aogs2016/>. July 31 - August 5, 2016, Beijing, China.

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- [99] 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.
- [100] 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.
- [101] 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.
- [102] 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.
- [103] 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.
- [104] 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.
- [105] 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.
- [106] 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.
- [107] 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.
- [108] 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.
- [109] 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.
- [110] 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.
- [111] 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.
- [112] 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.
- [113] 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.
- [114] 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.
- [115] 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.
- [116] 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.
- [117] 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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- [118] 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.
- [119] 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.
- [120] 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.
- [121] 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.
- [122] 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.
- [123] 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.
- [124] 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.
- [125] 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.