

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).
- [2] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Goetz, K., Kersten, K., Kasper, J. C., Szabo, A. & Meziane, K. Low-frequency whistler waves and shocklets observed at quasi-perpendicular interplanetary shocks. *J. Geophys. Res.* **114**, 10106 (2009).
- [3] Breneman, A., Cattell, C., Schreiner, S., Kersten, K., Wilson III, L. B., Kellogg, P., Goetz, K. & Jian, L. K. Observations of large-amplitude, narrowband whistlers at stream interaction regions. *J. Geophys. Res.* **115**, 8104 (2010).
- [4] Kellogg, P. J., Cattell, C. A., Goetz, K., Monson, S. J. & Wilson III, L. B. Electron trapping and charge transport by large amplitude whistlers. *Geophys. Res. Lett.* **37**, 20106 (2010).
- [5] Wilson III, L. B. *The microphysics of collisionless shocks*. Ph.D. thesis, University of Minnesota lynn.b.wilsoniii@gmail.com (2010). URL <http://search.proquest.com/technologycollection/docview/762748509>. Publication Number: AAT 3426498; ISBN: 9781124274577; Advisor: Cynthia Cattell.
- [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).
- [7] Breneman, A., Cattell, C., Wygant, J., Kersten, K., Wilson III, L. B., Schreiner, S., Kellogg, P. J. & Goetz, K. Large-amplitude transmitter-associated and lightning-associated whistler waves in the Earth's inner plasmasphere at $L < 2$. *J. Geophys. Res.* **116**, 6310 (2011).
- [8] Cattell, C., Dombeck, J., Preiwisch, A., Thaller, S., Vo, P., Wilson III, L. B., Wygant, J., Mende, S. B., Frey, H. U., Ilie, R. & Lu, G. Observations of a high-latitude stable electron auroral emission at ~ 16 MLT during a large substorm. *J. Geophys. Res.* **116**, 7215 (2011).
- [9] Kellogg, P. J., Cattell, C. A., Goetz, K., Monson, S. J. & Wilson III, L. B. Large amplitude whistlers in the magnetosphere observed with Wind-Waves. *J. Geophys. Res.* **116**, 9224 (2011).
- [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).
- [11] 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. *Geophys. Res. Lett.* **38**, 17107 (2011).

List of Refereed Publications
Lynn B. Wilson III

- [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).
- [13] 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. *Geophys. Res. Lett.* **39**, 8109 (2012).
- [14] Collinson, G. A., Wilson III, L. B., Sibeck, D. G., Shane, N., Zhang, T. L., Moore, T. E., Coates, A. J. & Barabash, S. Short large-amplitude magnetic structures (SLAMS) at Venus. *J. Geophys. Res.* **117**, 10221 (2012).
- [15] Cattell, C. A., Breneman, A., Goetz, K., Kellogg, P. J., Kersten, K., Wygant, J. R., Wilson III, L. B., Looper, M. D., Blake, J. B. & Roth, I. Large-Amplitude Whistler Waves and Electron Acceleration in the Earth's Radiation Belts: A Review of STEREO and Wind Observations. In *Dynamics of the Earth's Radiation Belts and Inner Magnetosphere*, Summers, D., Mann, I. R., Baker, D. N. & Schulz, M. (eds.), Vol. 199 of *Geophys. Monogr. Ser.*, 41–51 (American Geophysical Union, Washington, D.C., 2012).
- [16] 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. Electromagnetic waves and electron anisotropies downstream of supercritical interplanetary shocks. *J. Geophys. Res.* **118**, 5–16 (2013).
- [17] Malaspina, D. M., Newman, D. L., Wilson III, L. B., Goetz, K., Kellogg, P. J. & Kersten, K. Electrostatic Solitary Waves in the Solar Wind: Evidence for Instability at Solar Wind Current Sheets. *J. Geophys. Res.* **118**, 591–599 (2013).
- [18] 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. *J. Geophys. Res.* **118**, 957–966 (2013).
- [19] Tang, X., Cattell, C. A., Dombeck, J. P., Dai, L., Wilson III, L. B., Breneman, A. W. & Hupach, A. J. THEMIS observations of the magnetopause electron diffusion region: Large amplitude waves and heated electrons. *Geophys. Res. Lett.* **40**, 2884–2890 (2013).
- [20] Breneman, A., Cattell, C., Kersten, K., Paradise, A., Schreiner, S., Kellogg, P. J., Goetz, K. & Wilson III, L. B. STEREO and Wind observations of intense cyclotron harmonic waves at the Earth's bow shock and inside the magnetosheath. *J. Geophys. Res.* **118**, 7654–7664 (2013).
- [21] Malaspina, D. M., Horanyi, M., Zaslavsky, A., Goetz, K., Wilson III, L. B. & Kersten, K. Interplanetary and interstellar dust observed by the Wind/WAVES electric field instrument. *Geophys. Res. Lett.* **41**, 266–272 (2014).
- [22] Yu, W., Farrugia, C. J., Lugaz, N., Galvin, A. B., Kilpua, E. K. J., Kucharek, H., Möstl, C., Leitner, M., Torbert, R. B., Simunac, K. D. C., Luhmann, J. G., Szabo, A., Wilson

List of Refereed Publications
Lynn B. Wilson III

- 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).
- [23] Farrugia, C. J., Gratton, F. T., Gnani, G., Torbert, R. B. & Wilson III, L. B. A Vortical Boundary Layer for Near-Radial IMF: Wind Observations on October 24, 2001. *J. Geophys. Res.* **119**, 4572–4590 (2014).
- [24] 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: 1. Analysis Techniques and Methodology. *J. Geophys. Res.* **119**, 6455–6474 (2014).
- [25] 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: 2. Waves and Dissipation. *J. Geophys. Res.* **119**, 6475–6495 (2014).
- [26] 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. Structure of a reconnection layer poleward of the cusp: Extreme density asymmetry and a guide field. *J. Geophys. Res.* **119**, 7343–7362 (2014).
- [27] Tang, X., Cattell, C. A., Lysak, R., Wilson III, L. B., Dai, L. & Thaller, S. THEMIS observations of electrostatic ion cyclotron waves and associated ion heating near the Earth’s dayside magnetopause. *J. Geophys. Res.* **120**, 3380–3392 (2015).
- [28] Kempf, Y., Pokhotelov, D., Gutynska, O., Wilson III, L. B., Walsh, B. M., von Alfthan, S., Hannuksela, O., Sibeck, D. G. & Palmroth, M. Ion distributions in the Earth’s foreshock: hybrid-Vlasov simulation and THEMIS observations. *J. Geophys. Res.* **120**, 3684–3701 (2015).
- [29] Osmane, A., Wilson III, L. B., Blum, L. & Pulkkinen, T. I. On the Connection between Microbursts and Nonlinear Electronic Structures in Planetary Radiation Belts. *Astrophys. J.* **816**, 51–60 (2016).
- [30] Wilson III, L. B. Low frequency waves at and upstream of collisionless shocks. In Keiling, A., Lee, D.-H. & Nakariakov, V. (eds.) *Low-frequency Waves in Space Plasmas*, vol. 216 of *Geophys. Monogr. Ser.*, 269–291 (American Geophysical Union, Washington, D.C., 2016).
- [31] Wicks, R. T., Alexander, R. L., Stevens, M. L., Wilson III, L. B., Moya, P. S., Viñas, A. F., Jian, L. K., Roberts, D. A., O’Modhrain, S., Gilbert, J. A. & Zurbuchen, T. H. A Proton-cyclotron Wave Storm Generated by Unstable Proton Distribution Functions in the Solar Wind. *Astrophys. J.* **819**, 6 (2016).
- [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.,

List of Refereed Publications
Lynn B. Wilson III

- Blake, J. B., Reeves, G., Spence, H. E., Kletzing, C. A. & Wygant, J. R. Prompt acceleration of magnetospheric electrons to ultrarelativistic energies by the 17 March 2015 interplanetary shock. *J. Geophys. Res.* **121**, 7622–7635 (2016).
- [33] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances observed upstream of the Earth’s bow shock. *Phys. Rev. Lett.* **117** (2016). Accepted Sep. 23, 2016.
- [34] 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.
- [35] Malaspina, D. M. & Wilson III, L. B. A Database of Interplanetary and Interstellar Dust Detected by the Wind Spacecraft. *J. Geophys. Res.* (2016). Submitted July 19, 2016.
- [36] Jones, T. W., Brunetti, G., Caprioli, D., Markevitch, M., Oh, S. P., Oka, M., Ryu, D., Wilson III, L. B. & Yoon, P. Comparing the Physics of Interplanetary and Intra-Galaxy-Cluster Media. *Space Sci. Rev.* (2016). In preparation.
- [37] Collinson, G., Dorelli, J., Gloer, A., Wilson III, L. B., Paterson, W., Sarantos, M., Toth, G. & Wilson, R. Hall Magnetic Reconnection at Ganymede: Accelerating particles into the atmosphere and surface. *Science* (2016). In preparation.

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](#).
- [39] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Wygant, J. R., Goetz, K., Breneman, A. & Kersten, K. A statistical study of the properties of large amplitude whistler waves and their association with few eV to 30 keV electron distributions observed in the magnetosphere by Wind. *ArXiv e-prints* (2011). [1101.3303](#).
- [40] 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. *ArXiv e-prints* (2012). [1207.5561](#).
- [41] 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. Electromagnetic waves and electron anisotropies downstream of supercritical interplanetary shocks. *ArXiv e-prints* (2012). [1207.6429](#).
- [42] Tang, X., Cattell, C., Dombeck, J., Dai, L., Wilson III, L. B., Breneman, A. & Hupach, A. THEMIS Observations of the Magnetopause Electron Diffusion Region: Large Amplitude Waves and Heated Electrons. *ArXiv e-prints* (2013). [1301.3814](#).
- [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](#).
- [44] Wilson III, L. B., Breneman, A. W., Osmane, A. & Malaspina, D. M. On the role of wave-particle interactions in the macroscopic dynamics of collisionless plasmas. *ArXiv e-prints* (2015). Submitted Oct. 23, 2015, [1510.06904](#).
- [45] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by foreshock disturbances. *ArXiv e-prints* (2016). [1607.02183](#).

List of Non-refereed Talks/Presentations
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).
- [47] Wilson III, L. B., Cattell, C. C., Kellogg, P. J., Goetz, K., Kersten, K., Szabo, A. & Kasper, J. C. Simultaneous Wave and Particle Data at Interplanetary Shocks Observed by Wind. *AGU Spring Meeting Abstracts* A19 (2008).
- [48] Cattell, C., Breneman, A., Goetz, K., Kellogg, P., Kersten, K., Wilson III, L., Wygant, J., Bale, S., Roth, I. & Maksimovic, M. Observations of intense whistler-mode waves and simulations of associated acceleration of electrons. In *APS Meeting Abstracts*, 6001 (2009).
- [49] Breneman, A. W., Cattell, C. A., Kersten, K., Wilson III, L. B., Kellogg, P. J., Schreiner, S. & Goetz, K. Observations of Large Amplitude, Monochromatic Whistlers at Stream Interaction Regions. *AGU Fall Meeting Abstracts* B1524 (2009).
- [50] Kellogg, P. J., Cattell, C. A. & Wilson III, L. B. Whistlers and Electron Trapping in the Earth's Magnetosphere. In Arabelos, D. N. & Tscherning, C. C. (eds.) *EGU General Assembly Conference Abstracts*, vol. 11 of *EGU General Assembly Conference Abstracts*, 13452 (2009).
- [51] Kellogg, P. J., Cattell, C. A. & Wilson III, L. B. Electron trapping in large amplitude whistlers. *AGU Fall Meeting Abstracts* C1 (2009).
- [52] Wilson III, L. B., Cattell, C. A., Kellogg, P. J., Goetz, K., Kersten, K., Kasper, J. C. & Szabo, A. Observational Evidence of Modified Two Stream Instability Driven Waves at an Interplanetary Shock. *AGU Fall Meeting Abstracts* A1291 (2009).
- [53] Breneman, A., Cattell, C., Kersten, K., Wilson III, L., Schreiner, S., Jian, L., Kellogg, P. & Goetz, K. Observations of Large Amplitude, Narrowband Whistlers at Stream Interaction Regions. In *APS Meeting Abstracts*, 9 (2010).
- [54] Breneman, A. W., Cattell, C. A., Wygant, J. R., Kersten, K., Wilson III, L. B., Kellogg, P. J. & Goetz, K. Extremely Large Amplitude Whistler Waves in the Earth's Inner Radiation Belt. *AGU Fall Meeting Abstracts* C5 (2010).
- [55] Kersten, K., Cattell, C. A., Breneman, A. W., Goetz, K., Kellogg, P. J., Wilson III, L. B., Wygant, J. R., Blake, J., Looper, M. D. & Roth, I. Observation of relativistic electron microbursts in conjunction with intense radiation belt whistlers. *AGU Fall Meeting Abstracts* C1910 (2010).
- [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
Lynn B. Wilson III

- 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).
- [59] Wilson III, L. B., Szabo, A., Koval, A., Cattell, C. A., Kellogg, P. J., Goetz, K., Breneman, A., Kersten, K., Kasper, J. C. & Pulupa, M. Wind Observations of Wave Heating and/or Particle Energization at Supercritical Interplanetary Shocks. In *EGU General Assembly Conference Abstracts*, vol. 13 of *EGU General Assembly Conference Abstracts*, 3893 (2011).
- [60] Wilson III, L. B., Szabo, A., Koval, A., Cattell, C. A., Kellogg, P. J., Goetz, K., Breneman, A. W., Kersten, K., Kasper, J. C., Maruca, B. A. & Pulupa, M. Electromagnetic lower hybrid waves, whistler waves, and particle heating/acceleration at supercritical interplanetary shocks. *AGU Fall Meeting Abstracts* B2048 (2011).
- [61] Jian, L. K., Russell, C. T., Figueroa-Vinas, A., Wilson III, L. B., Szabo, A., Stevens, M. L. & Kasper, J. C. Observations of Ion Cyclotron Waves Using Wind: How Are They Related to Solar Wind Parameters? *Thirteenth International Solar Wind Conference* (2012). URL <http://www.sw13.org/index.html>. June 18-22, 2012, Hawaii.
- [62] 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. *SHINE* (2012). URL <http://shinecon.org/shine2012/abstractlisting.php>. June 25-29, 2012, Hawaii.
- [63] 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. Search Coil vs. Fluxgate Magnetometer Measurements at Interplanetary Shocks. *SHINE* (2012). URL <http://shinecon.org/shine2012/abstractlisting.php>. June 25-29, 2012, Hawaii.
- [64] Wilson III, L. B., Sibeck, D. G., Breneman, A., Le Contel, O., Cully, C. & Angelopoulos, V. THEMIS observations of gyrating ions and electromagnetic waves at the bow shock. *3rd Cluster THEMIS Workshop* (2012). URL http://caa.estec.esa.int/wksp/cluster_workshop22_posters.xml. Oct. 1-5, 2012, Boulder, CO.
- [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
Lynn B. Wilson III

- [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.
- [69] 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. *AGU Fall Meeting Abstracts* B2206 (2012).
- [70] Yu, W., Farrugia, C. J., Galvin, A. B., Lugaz, N., Möstl, C., Kilpua, E. K. J., Simunac, K. D. C., Luhmann, J. G., Torbert, R. B., Szabo, A., Wilson III, L. B., Ogilvie, K. W., Lepping, R. P. & Sauvaud, J.-A. Analysis of Properties of Small Transients in the Solar Wind in 2007-2009: Wind Observations. *EGU General Assembly 2013* **15**, 6967 (2013). URL <http://meetingorganizer.copernicus.org/EGU2013/EGU2013-6967.pdf>. Held 07-12 April, 2013 in Vienna, Austria.
- [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.
- [72] 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.
- [73] 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.
- [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.
- [75] 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. *THEMIS/ARTEMIS/Van Allen Probes SWG Meeting Spring 2014* (2014). URL http://themis.igpp.ucla.edu/events_spring2014swg.shtml. Mar. 10-14, 2014, Applied Physics Laboratory, Johns Hopkins University, Laurel, MD.

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.
- [78] 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. *AOGS-AGU (WPGM) Joint Assembly ST07-A002* (2014). URL <http://www.asiaoceania.org/aogs2014/>. July 28 - August 1, 2014, Sapporo, Japan.
- [79] Breneman, A. W., Cattell, C. A., Kersten, K., Paradise, A., Schreiner, S., Kellogg, P. J., Goetz, K. & Wilson III, L. B. STEREO and wind observations of intense electron cyclotron harmonic waves at the Earth's bow shock and inside the magnetosheath. *Union Radio-Scientifique Internationale General Assembly 1* (2014). 2014 XXXIth URSI, Aug. 16-23, 2014, Beijing, China.
- [80] Kempf, Y., Gutynska, O., Pokhotelov, D., Wilson III, L. B., Walsh, B. M., von Alfthan, S., Sibeck, D. G. & Palmroth, M. Ion distributions in the Earth's foreshock region: hybrid-Vlasov simulations and spacecraft observations. *Union Radio-Scientifique Internationale General Assembly 1* (2014). 2014 XXXIth URSI, Aug. 16-23, 2014, Beijing, China.
- [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

List of Non-refereed Talks/Presentations
Lynn B. Wilson III

- 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*

List of Non-refereed Talks/Presentations
Lynn B. Wilson III

- Conference Abstracts*, 3009 (2016). URL <http://meetingorganizer.copernicus.org/EGU2016/EGU2016-3009-1.pdf>. April 17–22, 2016, Vienna, Austria.
- [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.
- [99] Alterman, B. L., Stevens, M., Kasper, J. C., Koval, A. & Wilson III, L. B. Alfvénicity of Ion Drifts at 1AU. *AGU Fall Meeting Abstracts ??–??* (2016). Dec. 12-16, 2016, San Francisco, CA.
- [100] Chen, L.-J., Hesse, M., Wang, S., Ergun, R. E., Bessho, N., Burch, J. L., Gershman, D. J., Torbert, R. B., Wilson III, L. B., Dorelli, J., Giles, B. L., Pollock, C. J. & Moore, T. Structure of the diffusion region and effects of coupling between ion, electron and wave scales during magnetopause reconnection. *AGU Fall Meeting Abstracts ??–??* (2016). Dec. 12-16, 2016, San Francisco, CA.
- [101] Jones, A. D., Kanekal, S. G., Baker, D. N., Schiller, Q., Li, W. & Wilson III, L. B. Quantifying the contribution of microbursts to global electron loss. *AGU Fall Meeting Abstracts ??–??* (2016). Dec. 12-16, 2016, San Francisco, CA.
- [102] Randol, B. M., Christian, E. R. & Wilson III, L. B. Observations of thermal and suprathermal tail ions from WIND. *AGU Fall Meeting Abstracts ??–??* (2016). Dec. 12-16, 2016, San Francisco, CA.

List of Non-refereed Talks/Presentations
Lynn B. Wilson III

- [103] 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* ??-?? (2016). Dec. 12-16, 2016, San Francisco, CA.
- [104] Wilson III, L. B., Sibeck, D. G., Turner, D. L., Osmane, A., Caprioli, D. & Angelopoulos, V. Relativistic electrons produced by transient ion foreshock phenomena. *AGU Fall Meeting Abstracts* ??-?? (2016). Dec. 12-16, 2016, San Francisco, CA.

List of Invited Talks/Presentations
Lynn B. Wilson III

- [105] 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.
- [106] 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.
- [107] 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.
- [108] 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.
- [109] 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.
- [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 (2012). Space Physics Seminar, University of Minnesota, Mar. 7th, 2012.
- [111] 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.
- [112] 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.
- [113] 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.
- [114] 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

List of Invited Talks/Presentations
Lynn B. Wilson III

- Shock (invited) (2013). 8th European Workshop on Collisionless Shocks, Paris, France, June 5th, 2013.
- [115] 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.
- [116] 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.
- [117] 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.
- [118] 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.
- [119] 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.
- [120] 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.
- [121] 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.
- [122] 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.
- [123] 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.

List of Invited Talks/Presentations
Lynn B. Wilson III

- [124] 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.
- [125] 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.
- [126] 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.
- [127] 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.
- [128] 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.
- [129] 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.
- [130] 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.
- [131] 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.
- [132] 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.