

List of Refereed Publications
Lynn B. Wilson III

References

- [1] Wilson III, L. B., C. Cattell, P. J. Kellogg, K. Goetz, K. Kersten, L. Hanson, R. MacGregor, and J. C. Kasper (2007), Waves in Interplanetary Shocks: A Wind/WAVES Study, *Phys. Rev. Lett.*, **99**(4), 041101, [10.1103/PhysRevLett.99.041101](https://doi.org/10.1103/PhysRevLett.99.041101).
- [2] Wilson III, L. B., C. A. Cattell, P. J. Kellogg, K. Goetz, K. Kersten, J. C. Kasper, A. Szabo, and K. Meziane (2009), Low-frequency whistler waves and shocklets observed at quasi-perpendicular interplanetary shocks, *J. Geophys. Res.*, **114**, A10106, [10.1029/2009JA014376](https://doi.org/10.1029/2009JA014376).
- [3] Breneman, A., C. Cattell, S. Schreiner, K. Kersten, L. B. Wilson III, P. Kellogg, K. Goetz, and L. K. Jian (2010), Observations of large-amplitude, narrowband whistlers at stream interaction regions, *J. Geophys. Res.*, **115**, A08104, [10.1029/2009JA014920](https://doi.org/10.1029/2009JA014920).
- [4] Kellogg, P. J., C. A. Cattell, K. Goetz, S. J. Monson, and L. B. Wilson III (2010), Electron trapping and charge transport by large amplitude whistlers, *Geophys. Res. Lett.*, **37**, L20106, [10.1029/2010GL044845](https://doi.org/10.1029/2010GL044845).
- [5] Wilson III, L. B., C. A. Cattell, P. J. Kellogg, K. Goetz, K. Kersten, J. C. Kasper, A. Szabo, and M. Wilber (2010), Large-amplitude electrostatic waves observed at a supercritical interplanetary shock, *J. Geophys. Res.*, **115**, A12104, [10.1029/2010JA015332](https://doi.org/10.1029/2010JA015332).
- [6] Wilson III, L. B. (2010), The microphysics of collisionless shocks, Ph.D. thesis, University of Minnesota lynn.b.wilsoniii@gmail.com, publication Number: AAT 3426498; ISBN: 9781124274577; Advisor: Cynthia Cattell.
- [7] Breneman, A., C. Cattell, J. Wygant, K. Kersten, L. B. Wilson III, S. Schreiner, P. J. Kellogg, and K. Goetz (2011), Large-amplitude transmitter-associated and lightning-associated whistler waves in the Earth's inner plasmasphere at $L < 2$, *J. Geophys. Res.*, **116**, A06310, [10.1029/2010JA016288](https://doi.org/10.1029/2010JA016288).
- [8] Cattell, C., J. Dombeck, A. Preiwisch, S. Thaller, P. Vo, L. B. Wilson III, J. Wygant, S. B. Mende, H. U. Frey, R. Ilie, and G. Lu (2011), Observations of a high-latitude stable electron auroral emission at ~ 16 MLT during a large substorm, *J. Geophys. Res.*, **116**, A07215, [10.1029/2010JA016132](https://doi.org/10.1029/2010JA016132).
- [9] Kellogg, P. J., C. A. Cattell, K. Goetz, S. J. Monson, and L. B. Wilson III (2011), Large amplitude whistlers in the magnetosphere observed with Wind-Waves, *J. Geophys. Res.*, **116**, A09224, [10.1029/2010JA015919](https://doi.org/10.1029/2010JA015919).
- [10] Kersten, K., C. A. Cattell, A. Breneman, K. Goetz, P. J. Kellogg, J. R. Wygant, L. B. Wilson III, J. B. Blake, M. D. Looper, and I. Roth (2011), Observation of relativistic electron microbursts in conjunction with intense radiation belt whistler-mode waves, *Geophys. Res. Lett.*, **38**, 8107, [10.1029/2011GL046810](https://doi.org/10.1029/2011GL046810).
- [11] Wilson III, L. B., C. A. Cattell, P. J. Kellogg, J. R. Wygant, K. Goetz, A. Breneman, and K. Kersten (2011), The properties of large amplitude whistler mode waves in the

List of Refereed Publications
Lynn B. Wilson III

- magnetosphere: Propagation and relationship with geomagnetic activity, *Geophys. Res. Lett.*, **38**, L17107, [10.1029/2011GL048671](https://doi.org/10.1029/2011GL048671).
- [12] Breneman, A., C. Cattell, J. Wygant, K. Kersten, L. B. Wilson III, L. Dai, C. Colpitts, P. J. Kellogg, K. Goetz, and A. Paradise (2012), Explaining polarization reversals in STEREO wave data, *J. Geophys. Res.*, **117**, A04317, [10.1029/2011JA017425](https://doi.org/10.1029/2011JA017425).
- [13] Cattell, C. A., A. Breneman, K. Goetz, P. J. Kellogg, K. Kersten, J. R. Wygant, L. B. Wilson III, M. D. Looper, J. B. Blake, and I. Roth (2012), 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*, *Geophys. Monogr. Ser.*, vol. 199, edited by D. Summers, I. R. Mann, D. N. Baker, and M. Schulz, pp. 41–51, American Geophysical Union, Washington, D.C., [10.1029/2012GM001322](https://doi.org/10.1029/2012GM001322).
- [14] Collinson, G. A., L. B. Wilson III, D. G. Sibeck, N. Shane, T. L. Zhang, T. E. Moore, A. J. Coates, and S. Barabash (2012), Short large-amplitude magnetic structures (SLAMS) at Venus, *J. Geophys. Res.*, **117**, A10221, [10.1029/2012JA017838](https://doi.org/10.1029/2012JA017838).
- [15] Wilson III, L. B., A. Koval, A. Szabo, A. Breneman, C. A. Cattell, K. Goetz, P. J. Kellogg, K. Kersten, J. C. Kasper, B. A. Maruca, and M. Pulupa (2012), Observations of electromagnetic whistler precursors at supercritical interplanetary shocks, *Geophys. Res. Lett.*, **39**, L08109, [10.1029/2012GL051581](https://doi.org/10.1029/2012GL051581).
- [16] Breneman, A., C. Cattell, K. Kersten, A. Paradise, S. Schreiner, P. J. Kellogg, K. Goetz, and L. B. Wilson III (2013), STEREO and Wind observations of intense cyclotron harmonic waves at the Earth's bow shock and inside the magnetosheath, *J. Geophys. Res.*, **118**(12), 7654–7664, [10.1002/2013JA019372](https://doi.org/10.1002/2013JA019372).
- [17] Malaspina, D. M., D. L. Newman, L. B. Wilson III, K. Goetz, P. J. Kellogg, and K. Kersten (2013), Electrostatic Solitary Waves in the Solar Wind: Evidence for Instability at Solar Wind Current Sheets, *J. Geophys. Res.*, **118**, 591–599, [10.1002/jgra.50102](https://doi.org/10.1002/jgra.50102).
- [18] Tang, X., C. A. Cattell, J. P. Dombeck, L. Dai, L. B. Wilson III, A. W. Breneman, and A. J. Hupach (2013), THEMIS observations of the magnetopause electron diffusion region: Large amplitude waves and heated electrons, *Geophys. Res. Lett.*, **40**(12), 2884–2890, [10.1002/grl.50565](https://doi.org/10.1002/grl.50565).
- [19] Wilson III, L. B., A. Koval, A. Szabo, A. Breneman, C. A. Cattell, K. Goetz, P. J. Kellogg, K. Kersten, J. C. Kasper, B. A. Maruca, and M. Pulupa (2013), Electromagnetic waves and electron anisotropies downstream of supercritical interplanetary shocks, *J. Geophys. Res.*, **118**(1), 5–16, [10.1029/2012JA018167](https://doi.org/10.1029/2012JA018167).
- [20] Wilson III, L. B., A. Koval, D. G. Sibeck, A. Szabo, C. A. Cattell, J. C. Kasper, B. A. Maruca, M. Pulupa, C. S. Salem, and M. Wilber (2013), Shocklets, SLAMS, and field-aligned ion beams in the terrestrial foreshock, *J. Geophys. Res.*, **118**(3), 957–966, [10.1029/2012JA018186](https://doi.org/10.1029/2012JA018186).

List of Refereed Publications
Lynn B. Wilson III

- [21] Farrugia, C. J., F. T. Gratton, G. Gnani, R. B. Torbert, and L. B. Wilson III (2014), A Vortical Boundary Layer for Near-Radial IMF: Wind Observations on October 24, 2001, *J. Geophys. Res.*, **119**, 4572–4590, [10.1002/2013JA019578](https://doi.org/10.1002/2013JA019578).
- [22] Malaspina, D. M., M. Horanyi, A. Zaslavsky, K. Goetz, L. B. Wilson III, and K. Kersten (2014), Interplanetary and interstellar dust observed by the Wind/WAVES electric field instrument, *Geophys. Res. Lett.*, **41**, 266–272, [10.1002/2013GL058786](https://doi.org/10.1002/2013GL058786).
- [23] Muzamil, F. M., C. J. Farrugia, R. B. Torbert, P. R. Pritchett, F. S. Mozer, J. D. Scudder, C. T. Russell, P. E. Sandholt, W. F. Denig, and L. B. Wilson III (2014), Structure of a reconnection layer poleward of the cusp: Extreme density asymmetry and a guide field, *J. Geophys. Res.*, **119**(9), 7343–7362, [10.1002/2014JA019879](https://doi.org/10.1002/2014JA019879).
- [24] Yu, W., C. J. Farrugia, N. Lugaz, A. B. Galvin, E. K. J. Kilpua, H. Kucharek, C. Möstl, M. Leitner, R. B. Torbert, K. D. C. Simunac, J. G. Luhmann, A. Szabo, L. B. Wilson III, K. W. Ogilvie, and J.-A. Sauvaud (2014), A Statistical Analysis of Properties of Small Transients in the Solar Wind 2007-2009: STEREO and Wind Observations, *J. Geophys. Res.*, **119**(2), 689–708, [10.1002/2013JA019115](https://doi.org/10.1002/2013JA019115).
- [25] Wilson III, L. B., D. G. Sibeck, A. W. Breneman, O. Le Contel, C. Cully, D. L. Turner, V. Angelopoulos, and D. M. Malaspina (2014), Quantified Energy Dissipation Rates in the Terrestrial Bow Shock: 1. Analysis Techniques and Methodology, *J. Geophys. Res.*, **119**(8), 6455–6474, [10.1002/2014JA019929](https://doi.org/10.1002/2014JA019929).
- [26] Wilson III, L. B., D. G. Sibeck, A. W. Breneman, O. Le Contel, C. Cully, D. L. Turner, V. Angelopoulos, and D. M. Malaspina (2014), Quantified Energy Dissipation Rates in the Terrestrial Bow Shock: 2. Waves and Dissipation, *J. Geophys. Res.*, **119**(8), 6475–6495, [10.1002/2014JA019930](https://doi.org/10.1002/2014JA019930).
- [27] Kempf, Y., D. Pokhotelov, O. Gutynska, L. B. Wilson III, B. M. Walsh, S. von Alfthan, O. Hannuksela, D. G. Sibeck, and M. Palmroth (2015), Ion distributions in the Earth’s foreshock: hybrid-Vlasov simulation and THEMIS observations, *J. Geophys. Res.*, **120**, 3684–3701, [10.1002/2014JA020519](https://doi.org/10.1002/2014JA020519).
- [28] Tang, X., C. A. Cattell, R. Lysak, L. B. Wilson III, L. Dai, and S. Thaller (2015), THEMIS observations of electrostatic ion cyclotron waves and associated ion heating near the Earth’s dayside magnetopause, *J. Geophys. Res.*, **120**, 3380–3392, [10.1002/2015JA020984](https://doi.org/10.1002/2015JA020984).
- [29] Kanekal, S. G., D. N. Baker, J. F. Fennell, A. Jones, Q. Schiller, I. G. Richardson, X. Li, D. L. Turner, S. Califf, S. G. Claudepierre, L. B. Wilson III, A. Jaynes, J. B. Blake, G. Reeves, H. E. Spence, C. A. Kletzing, and J. R. Wygant (2016), Prompt acceleration of magnetospheric electrons to ultrarelativistic energies by the 17 March 2015 interplanetary shock, *J. Geophys. Res.*, **121**, 7622–7635, [10.1002/2016JA022596](https://doi.org/10.1002/2016JA022596).
- [30] Malaspina, D. M., and L. B. Wilson III (2016), A database of interplanetary and interstellar dust detected by the Wind spacecraft, *J. Geophys. Res.*, **121**, 9369–9377, [10.1002/2016JA023209](https://doi.org/10.1002/2016JA023209).

List of Refereed Publications
Lynn B. Wilson III

- [31] Osmane, A., L. B. Wilson III, L. Blum, and T. I. Pulkkinen (2016), On the Connection between Microbursts and Nonlinear Electronic Structures in Planetary Radiation Belts, *Astrophys. J.*, **816**(2), 51–60, [10.3847/0004-637X/816/2/51](https://doi.org/10.3847/0004-637X/816/2/51).
- [32] Wicks, R. T., R. L. Alexander, M. L. Stevens, L. B. Wilson III, P. S. Moya, A. F. Viñas, L. K. Jian, D. A. Roberts, S. O’Modhrain, J. A. Gilbert, and T. H. Zurbuchen (2016), A Proton-cyclotron Wave Storm Generated by Unstable Proton Distribution Functions in the Solar Wind, *Astrophys. J.*, **819**(1), 6, [10.3847/0004-637X/819/1/6](https://doi.org/10.3847/0004-637X/819/1/6).
- [33] Wilson III, L. B. (2016), Low frequency waves at and upstream of collisionless shocks, in *Low-frequency Waves in Space Plasmas*, *Geophys. Monogr. Ser.*, vol. 216, edited by A. Keiling, D.-H. Lee, and V. Nakariakov, pp. 269–291, American Geophysical Union, Washington, D.C., [10.1002/9781119055006.ch16](https://doi.org/10.1002/9781119055006.ch16).
- [34] Wilson III, L. B., D. G. Sibeck, D. L. Turner, A. Osmane, D. Caprioli, and V. Angelopoulos (2016), Relativistic electrons produced by foreshock disturbances observed upstream of the Earth’s bow shock, *Phys. Rev. Lett.*, **117**(21), 215101, [10.1103/PhysRevLett.117.215101](https://doi.org/10.1103/PhysRevLett.117.215101), Editors’ Suggestion.
- [35] Oka, M., L. B. Wilson III, T. D. Phan, A. J. Hull, T. Amano, M. Hoshino, M. R. Argall, O. Le Contel, O. Agapitov, D. J. Gershman, Y. V. Khotyaintsev, J. L. Burch, R. B. Torbert, C. Pollock, J. C. Dorelli, B. L. Giles, T. E. Moore, Y. Saito, L. A. Avanov, W. Paterson, R. E. Ergun, R. J. Strangeway, C. T. Russell, and P. A. Lindqvist (2017), Electron scattering by high-frequency whistler waves at Earth’s bow shock, *Astrophys. J. Lett.*, **842**(2), L11, [10.3847/2041-8213/aa7759](https://doi.org/10.3847/2041-8213/aa7759).
- [36] Wang, S., L.-J. Chen, M. Hesse, L. B. Wilson III, N. Bessho, D. J. Gershman, R. Ergun, T. Phan, J. L. Burch, J. Dorelli, B. L. Giles, R. B. Torbert, C. J. Pollock, C. T. Russell, R. J. Strangeway, O. Le Contel, L. A. Avanov, B. Lavraud, and T. E. Moore (2017), Parallel electron heating in the magnetospheric inflow region, *Geophys. Res. Lett.*, **44**(10), 4384–4392, [10.1002/2017GL073404](https://doi.org/10.1002/2017GL073404).
- [37] Liu, T. Z., V. Angelopoulos, H. Hietala, and L. B. Wilson III (2017), Statistical study of particle acceleration in the core of foreshock transients, *J. Geophys. Res.*, **122**(7), 7197–7208, [10.1002/2017JA024043](https://doi.org/10.1002/2017JA024043), Editors’ Highlight.
- [38] Osmane, A., D. L. Turner, L. B. Wilson III, , A. P. Dimmock, and T. I. Pulkkinen (2017), Subcritical Growth of Electron Phase-space Holes in Planetary Radiation Belts, *Astrophys. J.*, **846**(83), 8, [10.3847/1538-4357/aa8367](https://doi.org/10.3847/1538-4357/aa8367).
- [39] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2017), Revisiting the structure of low Mach number, low beta, quasi-perpendicular shocks, *J. Geophys. Res.*, **122**(9), 9115–9133, [10.1002/2017JA024352](https://doi.org/10.1002/2017JA024352).
- [40] Liu, T. Z., S. Lu, V. Angelopoulos, H. Hietala, and L. B. Wilson III (2017), Fermi acceleration of electrons inside foreshock transient cores, *J. Geophys. Res.*, **122**(9), 9248–9263, [10.1002/2017JA024480](https://doi.org/10.1002/2017JA024480).

List of Refereed Publications
Lynn B. Wilson III

- [41] Horaites, K., S. Boldyrev, L. B. Wilson III, A. F. Viñas, and J. Merka (2018), Kinetic Theory and Fast Wind Observations of the Electron Strahl, *Mon. Not. Roy. Astron. Soc.*, **474**(1), 115–127, [10.1093/mnras/stx2555](https://doi.org/10.1093/mnras/stx2555).
- [42] Livadiotis, G., M. I. Desai, and L. B. Wilson III (2018), Generation of Kappa Distributions in Solar Wind at 1 au, *Astrophys. J.*, **853**(142), 15, [10.3847/1538-4357/aaa713](https://doi.org/10.3847/1538-4357/aaa713).
- [43] Liu, M., Y. D. Liu, Z. Yang, L. B. Wilson III, and H. Hu (2018), Kinetic Properties of an Interplanetary Shock Propagating inside a Coronal Mass Ejection, *Astrophys. J. Lett.*, **859**, L4, [10.3847/2041-8213/aac269](https://doi.org/10.3847/2041-8213/aac269).
- [44] Chen, L.-J., S. Wang, L. B. Wilson III, S. J. Schwartz, D. J. Gershman, N. Bessho, D. M. Malaspina, F. Wilder, T. E. Moore, B. L. Giles, R. E. Ergun, M. Hesse, H. Lai, C. T. Russell, R. J. Strangeway, R. B. Torbert, A. F. Viñas, J. L. Burch, S. Lee, C. Pollock, J. Dorelli, W. R. Paterson, K. A. Goodrich, B. Lavraud, Y. V. Khotyaintsev, P.-A. Lindqvist, A. Le, and L. A. Avanov (2018), Electron bulk acceleration and thermalization at Earth’s quasi-perpendicular bow shock, *Phys. Rev. Lett.*, **120**(22), 225101, [10.1103/PhysRevLett.120.225101](https://doi.org/10.1103/PhysRevLett.120.225101).
- [45] 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, *Astrophys. J. Suppl.*, **236**(2), 41, [10.3847/1538-4365/aab71c](https://doi.org/10.3847/1538-4365/aab71c).
- [46] Giagkiozis, S., L. B. Wilson III, J. L. Burch, O. Le Contel, R. E. Ergun, D. J. Gershman, P.-A. Lindqvist, L. Mirioni, T. E. Moore, and R. J. Strangeway (2018), Statistical study of the properties of magnetosheath lion roars, *J. Geophys. Res.*, **123**(7), 5435–5451, [10.1029/2018JA025343](https://doi.org/10.1029/2018JA025343).
- [47] Turner, D. L., L. B. Wilson III, T. Z. Liu, I. J. Cohen, S. J. Schwartz, A. Osmane, J. F. Fennell, J. H. Clemmons, J. B. Blake, J. Westlake, B. H. Mauk, A. N. Jaynes, T. Leonard, D. N. Baker, R. J. Strangeway, C. T. Russell, D. J. Gershman, L. A. Avanov, B. L. Giles, R. B. Torbert, J. Broll, R. G. Gomez, S. A. Fuselier, and J. L. Burch (2018), Autogenous and efficient acceleration of energetic ions upstream of Earth’s bow shock, *Nature*, **561**(7722), 206–210, [10.1038/s41586-018-0472-9](https://doi.org/10.1038/s41586-018-0472-9).
- [48] Collinson, G., L. B. Wilson III, N. Omidi, D. G. Sibeck, J. Espley, C. Fowler, D. Mitchell, J. Grebowsky, C. Mazelle, S. Ruhunusiri, J. Halekas, R. Frahm, T. Zhang, Y. Futaana, and B. Jakosky (2018), Solar Wind Induced Waves in the Skies of Mars: Ionospheric Compression, Energization, and Escape Resulting From the Impact of Ultralow Frequency Magnetosonic Waves Generated Upstream of the Martian Bow Shock, *J. Geophys. Res.*, **123**(9), 7241–7256, [10.1029/2018JA025414](https://doi.org/10.1029/2018JA025414).
- [49] Lario, D., L. Berger, L. B. Wilson III, R. B. Decker, D. K. Haggerty, E. C. Roelof, R. F. Wimmer-Schweingruber, and J. Giacalone (2018), Flat Proton Spectra in Large Solar Energetic Particle Events, in *The 17th Annual International Astrophysics Conference: Dissipative and Heating Processes in Collisionless Plasma*, *J. Phys. Conf. Ser.*, vol. 1100, p. 012014, [10.1088/1742-6596/1100/1/012014](https://doi.org/10.1088/1742-6596/1100/1/012014).

List of Refereed Publications
Lynn B. Wilson III

- [50] 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, C. T. Russell, D. J. Gershman, B. L. Giles, and L. Andersson (2018), MMS Observations of Electrostatic Waves in an Oblique Shock Crossing, *J. Geophys. Res.*, **123**(11), 9430–9442, [10.1029/2018JA025830](https://doi.org/10.1029/2018JA025830).
- [51] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, B. L. Giles, T. E. Moore, C. T. Russell, R. B. Torbert, and J. L. Burch (2019), Observational evidence of magnetic reconnection in the terrestrial bow shock transition region, *Geophys. Res. Lett.*, **46**(2), 562–570, [10.1029/2018GL080944](https://doi.org/10.1029/2018GL080944).
- [52] Goodrich, K. A., R. E. Ergun, S. J. Schwartz, L. B. Wilson III, A. Johlander, D. Newman, F. D. Wilder, J. Holmes, J. L. Burch, R. B. Torbert, Y. Khotyaintsev, P.-A. Lindqvist, R. J. Strangeway, C. T. Russell, D. J. Gershman, and B. L. Giles (2019), Impulsively Reflected Ions: A Plausible Mechanism for Ion Acoustic Wave Growth in Collisionless Shocks, *J. Geophys. Res.*, **124**(3), 1855–1865, [10.1029/2018JA026436](https://doi.org/10.1029/2018JA026436).
- [53] Ofman, L., A. Koval, L. B. Wilson III, and A. Szabo (2019), Understanding the Role of α Particles in Oblique Heliospheric Shock Oscillations, *J. Geophys. Res.*, **124**(4), 2393–2405, [10.1029/2018JA026301](https://doi.org/10.1029/2018JA026301).
- [54] Lario, D., L. Berger, R. B. Decker, R. F. Wimmer-Schweingruber, L. B. Wilson III, J. Giacalone, and E. C. Roelof (2019), Evolution of the Suprathermal Proton Population at Interplanetary Shocks, *Astron. J.*, **158**(1), 12, [10.3847/1538-3881/ab1e49](https://doi.org/10.3847/1538-3881/ab1e49).
- [55] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2019), Electron energy partition across interplanetary shocks: I. Methodology and Data Product, *Astrophys. J. Suppl.*, **243**(8), [10.3847/1538-4365/ab22bd](https://doi.org/10.3847/1538-4365/ab22bd).
- [56] Bessho, N., L.-J. Chen, S. Wang, L. B. Wilson III, and M. Hesse (2019), Magnetic reconnection in a quasi-parallel shock: two-dimensional local particle-in-cell simulation, *Geophys. Res. Lett.*, **46**(16), 9352–9361, [10.1029/2019GL083397](https://doi.org/10.1029/2019GL083397).
- [57] Oka, M., F. Otsuka, S. Matsukiyo, L. B. Wilson III, M. R. Argall, T. Amano, T. D. Phan, M. Hoshino, O. Le Contel, D. J. Gershman, J. L. Burch, R. B. Torbert, J. C. Dorelli, B. L. Giles, R. E. Ergun, C. T. Russell, and P.-A. Lindqvist (2019), Electron Scattering by Low-Frequency Whistler Waves at Earth’s Bow Shock, *Astrophys. J.*, **886**(53), 11, [10.3847/1538-4357/ab4a81](https://doi.org/10.3847/1538-4357/ab4a81).
- [58] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2019), Electron energy partition across interplanetary shocks: II. Statistics, *Astrophys. J. Suppl.*, **245**(24), [10.3847/1538-4365/ab5445](https://doi.org/10.3847/1538-4365/ab5445).
- [59] Heuer, P. V., M. S. Weidl, R. S. Dorst, D. B. Schaeffer, S. K. P. Tripathi, S. Vincena, C. G. Constantin, C. Niemann, L. B. Wilson III, and D. Winske (2020), Laboratory Observations of Ultra-Low Frequency Analogue Waves Driven by the Right-Hand Resonant Ion Beam Instability, *Astrophys. J. Lett.*, **891**, 6, [10.3847/2041-8213/ab75f4](https://doi.org/10.3847/2041-8213/ab75f4).

List of Refereed Publications
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- [60] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2020), Electron energy partition across interplanetary shocks: III. Analysis, *Astrophys. J.*, **893**(22), [10.3847/1538-4357/ab7d39](https://doi.org/10.3847/1538-4357/ab7d39).
- [61] Madanian, H., S. J. Schwartz, J. S. Halekas, and L. B. Wilson III (2020), Nonstationary Quasi-perpendicular Shock and Ion Reflection at Mars, *Geophys. Res. Lett.*, **47**(11), e2020GL088309, [10.1029/2020GL088309](https://doi.org/10.1029/2020GL088309).
- [62] Farrugia, C. J., N. Lugaz, B. J. Vasquez, L. B. Wilson III, W. Yu, K. Paulson, R. B. Torbert, and F. T. Gratton (2020), A Study of a Magnetic Cloud Propagating through Large-Amplitude Alfvén Waves, *J. Geophys. Res.*, **125**(6), e2019JA027638, [10.1029/2019JA027638](https://doi.org/10.1029/2019JA027638).
- [63] Turner, D. L., T. Z. Liu, L. B. Wilson III, I. J. Cohen, D. J. Gershman, J. F. Fennell, J. B. Blake, B. H. Mauk, N. Omid, and J. L. Burch (2020), Microscopic, multipoint characterization of foreshock bubbles with Magnetospheric Multiscale (MMS), *J. Geophys. Res.*, **125**(7), e2019JA027707, [10.1029/2019JA027707](https://doi.org/10.1029/2019JA027707).
- [64] Chen, L.-J., S. Wang, O. Le Contel, A. Rager, J. Ng, M. Hesse, J. Drake, J. Dorelli, N. Bessho, D. Graham, L. B. Wilson III, T. E. Moore, B. L. Giles, W. R. Paterson, B. Lavraud, K. Genestreti, R. Nakamura, Y. V. Khotyaintsev, R. E. Ergun, R. B. Torbert, J. L. Burch, C. Pollock, C. Russell, P.-A. Lindqvist, and L. A. Avanov (2020), Lower-hybrid drift waves driving electron nongyrotropic heating and vortical flows in a magnetic reconnection layer, *Phys. Rev. Lett.*, **125**(2), 025103, [10.1103/PhysRevLett.125.025103](https://doi.org/10.1103/PhysRevLett.125.025103).
- [65] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), Ion-scale current structures in Short Large-amplitude Magnetic Structures, *Astrophys. J.*, **898**(121), 13, [10.3847/1538-4357/ab9b8b](https://doi.org/10.3847/1538-4357/ab9b8b).
- [66] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2020), Magnetic reconnection and kinetic waves generated in the Earth's quasi-parallel bow shock, *Phys. Plasmas*, **27**(9), 092901, [10.1063/5.0012443](https://doi.org/10.1063/5.0012443).
- [67] Cohen, Z. A., C. A. Cattell, A. W. Breneman, L. Davis, P. Grul, K. Kersten, L. B. Wilson III, and J. R. Wygant (2020), The rapid variability of electric field waves within and near interplanetary shock ramps: STEREO observations, *Astrophys. J.*, accepted on Oct. 5, 2020.
- [68] Davis, L., C. A. Cattell, L. B. Wilson III, Z. A. Cohen, A. W. Breneman, and E. L. M. Hanson (2020), ARTEMIS Observations of Plasma Waves in Laminar and Perturbed Interplanetary Shocks, *J. Geophys. Res.*, submitted Oct. 11, 2019.
- [69] Madanian, H., M. I. Desai, S. J. Schwartz, L. B. Wilson III, S. A. Fuselier, J. L. Burch, O. Le Contel, D. L. Turner, K. Ogasawara, A. L. Brosius, C. T. Russell, R. E. Ergun, N. Ahmadi, D. J. Gershman, and P.-A. Lindqvist (2020), The Dynamics of a High Mach

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- Number Quasi-Perpendicular Shock: MMS Observations, *Astrophys. J.*, submitted July 13, 2020.
- [70] Wilson III, L. B., L.-J. Chen, and V. Roytershteyn (2020), The discrepancy between simulation and observation of electric fields in collisionless shocks, *Front. Astron. Space Sci.*, submitted on Aug. 7, 2020.
- [71] Ofman, L., A. Koval, L. B. Wilson III, and A. Szabo (2020), Oblique High Mach Number Heliospheric Shocks: the Role of α Particles, *J. Geophys. Res.*, submitted on Aug. 13, 2020.
- [72] Wilson III, L. B., A. L. Brosius, N. Gopalswamy, T. Nieves-Chinchilla, A. Szabo, K. Hurley, T. Phan, J. Kasper, N. Lugaz, I. G. Richardson, C. H. K. Chen, D. Verscharen, R. T. Wicks, and J. M. TenBarge (2020), A Quarter Century of *Wind* Spacecraft Discoveries, *Rev. Geophys.*, submitted on Sep. 14, 2020.
- [73] Howes, G. G., J. Juno, J. M. TenBarge, L. B. Wilson III, D. Caprioli, and A. Spitkovsky (2020), A Field-Particle Correlation Analysis of a Perpendicular Magnetized Collisionless Shock: I. Theory, *J. Plasma Phys.*, in preparation.
- [74] Lario, D., L. Berger, L. B. Wilson III, R. B. Decker, and E. C. Roelof (2020), A long-lasting field-aligned suprathermal proton beam upstream of a transient interplanetary shock, in *The 19th Annual International Astrophysics Conference: From the Sun's atmosphere to the edge of the galaxy: A story of connections*, J. Phys. Conf. Ser., in preparation.
- [75] Howes, G. G., J. L. Verniero, D. E. Larson, S. D. Bale, J. Kasper, K. Goetz, K. G. Klein, P. L. Whittlesey, R. Livi, C. H. K. Chen, L. B. Wilson III, and B. L. Alterman (2020), Revolutionizing our Understanding of Particle Energization in Space Plasmas Using On-Board Wave-Particle Correlator Instrumentation, *Front. Astron. Space Sci.*, in preparation.
- [76] Liu, T. Z., Y. Hao, L. B. Wilson III, H. Zhang, and D. L. Turner (2020), MMS observations of Earth's oblique bow shock reformation by foreshock ULF waves, *Geophys. Res. Lett.*, in preparation.

List of Datasets/Repositories
Lynn B. Wilson III

- [77] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2019), Supplement to: Electron energy partition across interplanetary shocks, [10.5281/zenodo.2875806](https://zenodo.org/record/2875806).
- [78] Davis, L., C. A. Cattell, L. B. Wilson III, Z. A. Cohen, A. W. Breneman, and E. L. M. Hanson (2019), Artemis observations of plasma waves in laminar and perturbed interplanetary shocks: Shock parameters, [10.5281/zenodo.3475589](https://zenodo.org/record/3475589).
- [79] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2020), Supplement to: Electron energy partition across interplanetary shocks: III. analysis, [10.5281/zenodo.3627284](https://zenodo.org/record/3627284).
- [80] Wilson III, L. B. (2020), *Wind* WAVES TDSF dataset, [10.5281/zenodo.3911205](https://zenodo.org/record/3911205).

List of arXiv Submissions
Lynn B. Wilson III

- [81] 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](#).
- [82] 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](#).
- [83] 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](#).
- [84] 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](#).
- [85] 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](#).
- [86] 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](#).
- [87] 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](#).
- [88] 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](#).
- [89] Osmane, A., D. L. Turner, L. B. Wilson III, , A. P. Dimmock, and T. I. Pulkkinen (2017), Subcritical growth of electron phase-space holes in planetary radiation belts, *ArXiv e-prints*, [1705.07467](#).
- [90] 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](#).
- [91] Liu, T. Z., S. Lu, V. Angelopoulos, H. Hietala, and L. B. Wilson III (2017), Fermi acceleration of electrons inside foreshock transient cores, *ArXiv e-prints*, [1706.05047](#).
- [92] 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, *ArXiv e-prints*, [1706.03464](#).

List of arXiv Submissions
Lynn B. Wilson III

- [93] 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, *ArXiv e-prints*, [1802.08585](#).
- [94] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson, III, B. Giles, T. E. Moore, C. T. Russell, R. B. Torbert, and J. L. Burch (2018), Observational evidence of magnetic reconnection in the terrestrial bow shock transition region, *arXiv e-prints*, [1812.09337](#).
- [95] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2019), Electron energy partition across interplanetary shocks: I. Methodology and Data Product, *arXiv e-prints*, [1902.01476](#).
- [96] Cohen, Z. A., C. A. Cattell, A. W. Breneman, L. Davis, P. Grul, K. Kersten, L. B. Wilson III, and J. R. Wygant (2019), The rapid variability of electric field waves within and near interplanetary shock ramps: STEREO observations, *arXiv e-prints* [1909.08176](#).
- [97] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2019), Electron energy partition across interplanetary shocks: II. Statistics, *arXiv e-prints* [1909.09050](#).
- [98] Wilson III, L. B., L.-J. Chen, S. Wang, S. J. Schwartz, D. L. Turner, M. L. Stevens, J. C. Kasper, A. Osmane, D. Caprioli, S. D. Bale, M. P. Pulupa, C. S. Salem, and K. A. Goodrich (2020), Electron energy partition across interplanetary shocks: III. Analysis, *arXiv e-prints* [2001.09231](#).
- [99] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), Ion-scale current structures in Short Large-Amplitude Magnetic Structures, *arXiv e-prints*, [2004.10714](#).
- [100] Wilson III, L. B., A. L. Brosius, N. Gopalswamy, T. Nieves-Chinchilla, A. Szabo, K. Hurlley, T. Phan, J. Kasper, N. Lugaz, I. G. Richardson, C. H. K. Chen, D. Verscharen, R. T. Wicks, and J. M. TenBarge (2020), A Quarter Century of *Wind* Spacecraft Discoveries, *ESSOAr Preprint*, [10.1002/essoar.10504309.1](#), preprint on <https://essoar.org> (2020).

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

- [101] 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).
- [102] 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).
- [103] 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).
- [104] 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).
- [105] 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).
- [106] Kellogg, P. J., Cattell, C. A. & Wilson III, L. B. Electron trapping in large amplitude whistlers. *AGU Fall Meeting Abstracts* C1 (2009).
- [107] 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).
- [108] 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).
- [109] 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).
- [110] 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).
- [111] 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).
- [112] 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.
- [113] 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).
- [114] 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).
- [115] 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).
- [116] 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.
- [117] 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.
- [118] 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.
- [119] 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.
- [120] 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.
- [121] 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

- [122] 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.
- [123] 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.
- [124] 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).
- [125] 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.
- [126] 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.
- [127] 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.
- [128] 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.
- [129] 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.
- [130] 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
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- [131] 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.
- [132] 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 rope-type small interplanetary transients by non-force-free methods. *2014 SHINE Conference* (2014). URL <http://shinecon.org/shine2014/abstractlisting.php>. June 23rd- 27th, 2014, Telluride, CO.
- [133] 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.
- [134] 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.
- [135] 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.
- [136] 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.
- [137] 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.
- [138] 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.
- [139] 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.
- [140] 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.
- [141] 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.
- [142] 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).
- [143] 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.
- [144] 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.
- [145] 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.
- [146] 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.
- [147] 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.
- [148] 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.
- [149] 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.
- [150] 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).
- [151] 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.
- [152] 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.
- [153] 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.
- [154] Malaspina, D. M. & Wilson III, L. B. The Wind Dust Database: 22 Years Of Interplanetary And Interstellar Dust Observations at 1 AU. *AOGS-AGU (WPGM) Joint Assembly* PS18–A002 (2016). URL <http://www.asiaoceania.org/aogs2016/>. July 31 - August 5, 2016, Beijing, China.
- [155] Wilson III, L. B. Relativistic electrons produced by foreshock disturbances observed upstream of the Earth’s bow shock. *RBSP Seminar* (2016). Nov. 16, 2016, Goddard Space Flight Center, Informal RBSP Group Presentation.
- [156] 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.
- [157] 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. Physics of the diffusion region in the Magnetospheric Multiscale era. *AGU Fall Meeting Abstracts* SM13D–03 (2016). Dec. 12-16, 2016, San Francisco, CA.

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

- [158] 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* SM31B-2493 (2016). Dec. 12-16, 2016, San Francisco, CA.
- [159] 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.
- [160] 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.
- [161] 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* SH21A-2504 (2016). Dec. 12-16, 2016, San Francisco, CA.
- [162] 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.
- [163] 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.
- [164] 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.
- [165] 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.
- [166] 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.
- [167] 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
Lynn B. Wilson III

- [168] 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.
- [169] 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.
- [170] 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.
- [171] 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.
- [172] 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.
- [173] 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.
- [174] 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.
- [175] 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.
- [176] 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.
- [177] 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.

List of Non-refereed Talks/Presentations
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- [178] 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.
- [179] 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.
- [180] 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.
- [181] 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.
- [182] 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.
- [183] 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.
- [184] 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.
- [185] 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.
- [186] 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.
- [187] 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.
- [188] 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.
- [189] 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.
- [190] 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.
- [191] 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.
- [192] 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.
- [193] 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.
- [194] 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.
- [195] 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.
- [196] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, *2019 GEM Conference*, June 22nd – 28th, 2019, Santa Fe, NM.
- [197] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, *2019 SHINE Conference*, Aug. 5th – 9th, 2019, Boulder, CO.

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- [198] Farrugia, C. J., N. Lugaz, B. J. Vasquez, W. Yu, K. Paulson, R. B. Torbert, L. B. Wilson III, and F. T. Gratton (2019), A Study of a Magnetic Cloud Propagating through Large-Amplitude Alfvén Waves, *2019 SHINE Conference*, Aug. 5th – 9th, 2019, Boulder, CO.
- [199] Chen, L.-J., S. Wang, J. Ng, A. Rager, L. B. Wilson III, and B. L. Giles (2019), Electron dynamics driven by nonlinear lower hybrid waves in a magnetic reconnection layer, in *APS Meeting Abstracts*, p. GO4.00002, 61st Annual Meeting of the APS Division of Plasma Physics, Oct. 21–25, 2019, Fort Lauderdale, FL.
- [200] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, B. L. Giles, T. Moore, C. T. Russell, R. B. Torbert, and J. L. Burch (2019), Magnetic reconnection observation in the Earth’s bow shock transition region, in *APS Meeting Abstracts*, p. PP10.00014, 61st Annual Meeting of the APS Division of Plasma Physics, Oct. 21–25, 2019, Fort Lauderdale, FL.
- [201] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, in *APS Meeting Abstracts*, p. GO4.00011, 61st Annual Meeting of the APS Division of Plasma Physics, Oct. 21–25, 2019, Fort Lauderdale, FL.
- [202] Adrian, M. L., O. C. St Cyr, M. L. Kaiser, M. R. Collier, L. B. Wilson III, C. Schiff, L. W. Sacks, D. J. Chai, S. Z. Queen, and J. E. Sedlak (2019), The Distribution of Interplanetary Dust Near 1-AU: Perspectives from STEREO and MMS, *AGU Fall Meeting Abstracts*, pp. P23C–3514, Dec. 9–13, 2019, San Francisco, CA.
- [203] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, and L. B. Wilson III (2019), Evolution of the foreshock and shock dynamics caused by the turning of the interplanetary magnetic field associated with extreme geomagnetic storms, *AGU Fall Meeting Abstracts*, pp. SM13E–3348, Dec. 9–13, 2019, San Francisco, CA.
- [204] Brosius, A. L., L. B. Wilson III, G. Collinson, and C. M. Anderson (2019), VEX observations of solar wind-ionosphere coupling via ULF waves, *AGU Fall Meeting Abstracts*, pp. SH23B–3385, Dec. 9–13, 2019, San Francisco, CA.
- [205] Eriksson, S., D. N. Baker, D. L. Newman, G. Lapenta, and L. B. Wilson III (2019), Magnetic Reconnection Exhausts and Magnetic Flux Rope Structures in the Solar Wind: Spatial Scales at 1 AU and Heliosheath at 100 AU, *AGU Fall Meeting Abstracts*, pp. SH51E–3322, Dec. 9–13, 2019, San Francisco, CA.
- [206] McGuire, R. E., L. B. Wilson III, and A. Szabo (2019), The Wind Spacecraft: Highlights from 25 Years of Service, *AGU Fall Meeting Abstracts*, pp. SH43C–3375, Dec. 9–13, 2019, San Francisco, CA.
- [207] Koval, A., L. B. Wilson III, and A. Szabo (2019), Multi-point observations of quasi-perpendicular interplanetary shock structures by the Wind and DSCOVR spacecraft during 2015-2019, *AGU Fall Meeting Abstracts*, pp. SH23B–3379, Dec. 9–13, 2019, San Francisco, CA.

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Lynn B. Wilson III

- [208] Ofman, L., L. B. Wilson III, A. Koval, and A. Szabo (2019), The effects of Alpha Particles on Oblique High Mach Number Heliospheric Shocks, *AGU Fall Meeting Abstracts*, pp. SH23B-3401, Dec. 9–13, 2019, San Francisco, CA.
- [209] Oka, M., F. Otsuka, S. Matsukiyo, L. B. Wilson III, T. D. Phan, T. Amano, M. Hoshino, M. R. Argall, O. Le Contel, D. J. Gershman, J. L. Burch, R. B. Torbert, J. C. Dorelli, B. L. Giles, R. E. Ergun, C. T. Russell, and P.-A. Lindqvist (2019), Electron Scattering by Low-Frequency Whistler Waves at Earth’s Bow Shock, *AGU Fall Meeting Abstracts*, pp. SH21A-06, Dec. 9–13, 2019, San Francisco, CA.
- [210] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, *AGU Fall Meeting Abstracts*, pp. SH23B-3394, Dec. 9–13, 2019, San Francisco, CA.
- [211] Lario, D., L. Berger, L. B. Wilson III, R. B. Decker, and E. C. Roelof (2020), A long-lasting field-aligned suprathermal proton beam upstream of a transient interplanetary shock, *The 19th Annual International Astrophysics Conference: From the Sun’s atmosphere to the edge of the galaxy: A story of connections*, Santa Fe, New Mexico, Mar. 8–13, 2020.
- [212] Wilson III, L. B. (2020), Electron velocity distribution functions near interplanetary shocks, *Royal Astronomical Society Specialist Discussion Meeting: The near-Sun solar wind at solar minimum*, on Mar. 13, 2020, Burlington House, Piccadilly, London, UK **Cancelled: COVID-19**.
- [213] Wilson III, L. B. (2020), Electron velocity distribution functions near interplanetary shocks, *Parker One*, on Mar. 23–27, 2020, The Johns Hopkins University, Applied Physics Lab, Laurel, MD, USA **Postponed: COVID-19**.
- [214] Ofman, L., L. B. Wilson III, A. Koval, and A. Szabo (2020), Exploring the effects of α particles on heliospheric oblique shocks, *Isradynamics 2020: Dynamical Processes in Space Plasmas*, held Apr. 19–26, 2020, Eilat, Israel.
- [215] Bessho, N., L.-J. Chen, J. Ng, S. Wang, M. Hesse, and L. B. Wilson III (2020), Re-connecting and non-reconnecting current sheets in the Earth’s quasi-parallel bow shock, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15-16, 2020, Virtual Meeting.
- [216] Chen, L.-J., S. Wang, O. Le Contel, A. Rager, J. Ng, M. Hesse, J. Drake, J. Dorelli, N. Bessho, D. Graham, L. B. Wilson III, T. E. Moore, B. L. Giles, W. R. Paterson, B. Lavraud, K. Genestreti, R. Nakamura, Y. V. Khotyaintsev, R. E. Ergun, R. B. Torbert, J. L. Burch, C. Pollock, C. Russell, P.-A. Lindqvist, and L. A. Avanov (2020), Lower hybrid drift (LHD) waves in a magnetotail EDR, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15-16, 2020, Virtual Meeting.
- [217] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), d_i -scale current structures in SLAMS as energy conversion sites, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15-16, 2020, Virtual Meeting.

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- [218] Wilson III, L. B. (2020), Electron velocity distribution functions near 1 AU, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15-16, 2020, Virtual Meeting.
- [219] Wilson III, L. B. (2020), Electron energy partition across interplanetary shocks near 1 AU, *Parker Solar Probe Theory Group Telecon*, on Apr. 23, 2020.
- [220] Wilson III, L. B. (2020), Energy partition across interplanetary shocks, *MMS FPI Team Telecon*, on Jul. 9, 2020.
- [221] Wilson III, L. B. (2020), Electron energy partition at interplanetary shocks, *2020 Virtual GEM Conference*, online Jul. 21–23, 2020.
- [222] Bessho, N., L.-J. Chen, S. Wang, J. Ng, M. Hesse, and L. B. Wilson III (2020), Kinetic instabilities and magnetic reconnection in the Earth’s quasi-parallel bow shock, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [223] Brosius, A. L., G. Collinson, and L. B. Wilson III (2020), Effect of MVA criteria on upstream wave properties for >100,000 Venus Express intervals, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [224] Madanian, H., D. L. Turner, D. J. Gershman, B. L. Giles, L. B. Wilson III, et al. (2020), Modulation of the quasi-perpendicular shock structure by reflected ions at high Mach numbers, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [225] Roytershteyn, V., L.-J. Chen, and L. B. Wilson III (2020), Waves and Instabilities in High-resolution PIC Simulations of Oblique Shocks, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [226] Turner, D. L., D. J. Gershman, L. B. Wilson III, et al. (2020), Direct multipoint observations capturing the formation of a collisionless, supercritical, fast magnetosonic shock, *2020 Virtual GEM Conference*, on Jul. 20-23, 2020, Virtual Meeting.
- [227] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2020), Magnetic reconnection in the Earth’s bow shock due to kinetic instabilities, in *APS Meeting Abstracts*, p. 000.000, 62nd Annual Meeting of the APS Division of Plasma Physics, Nov. 9–13, 2020, Virtual.
- [228] Wilson III, L. B. (2020), Energy partition across interplanetary shocks, in *APS Meeting Abstracts*, p. 000.000, 62nd Annual Meeting of the APS Division of Plasma Physics, Nov. 9–13, 2020, Virtual.
- [229] Bessho, N., L.-J. Chen, S. Wang, J. Ng, L. B. Wilson III, and M. Hesse (2020), Kinetic instabilities in the shock transition region and magnetic reconnection in the Earth’s quasi-parallel bow shock, *AGU Fall Meeting Abstracts*, pp. SM036–03, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [230] Brosius, A. L., L. B. Wilson III, A. Szabo, and A. Koval (2020), Minimum Variance Analysis of Planetary and Interplanetary Plasmas, *AGU Fall Meeting Abstracts*, pp. SH042–0017, Dec. 7–11, 2020, San Francisco, CA, Virtual.

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- [231] Farrugia, C. J., N. Lugaz, L. B. Wilson III, D. G. Sibeck, N. Erkaev, B. J. Vasquez, and R. B. Torbert (2020), Wind Observations of an Unexpected Precursor to Flapping of the Distant Tail, *AGU Fall Meeting Abstracts*, pp. SH042–0015, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [232] Fordin, S., M. Shay, L. B. Wilson III, and B. A. Maruca (2020), Identifying and Characterizing Whistler Waves in the Solar Wind Using Machine Learning, *AGU Fall Meeting Abstracts*, pp. NG004–0023, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [233] Koval, A., L. Ofman, L. B. Wilson III, and A. Szabo (2020), Oblique High Mach Number Heliospheric Shocks: the Role of Alpha Particles, *AGU Fall Meeting Abstracts*, pp. SH042–0012, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [234] Roytershteyn, V., L. B. Wilson III, and L.-J. Chen (2020), Waves and Instabilities in High-Resolution PIC simulations of Oblique Shocks, *AGU Fall Meeting Abstracts*, pp. SH047–05, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [235] Wilson III, L. B. (2020), Energy partition across interplanetary shocks, *AGU Fall Meeting Abstracts*, pp. SH042–0003, Dec. 7–11, 2020, San Francisco, CA, Virtual.

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- [236] 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.
- [237] 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.
- [238] 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.
- [239] 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.
- [240] 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.
- [241] 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.
- [242] 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.
- [243] 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.
- [244] 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.
- [245] 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.
- [246] 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.
- [247] 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.
- [248] 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.
- [249] 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.
- [250] 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.
- [251] 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.
- [252] 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.
- [253] 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.
- [254] 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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- [255] 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.
- [256] 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.
- [257] 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.
- [258] 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.
- [259] 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.
- [260] 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.
- [261] 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.
- [262] 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.
- [263] 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.
- [264] Wilson III, L. B. Gradients as Antennas: A General Wave Source. *Van Allen Probes SWG Meeting* (2016). URL http://rbspgway.jhuapl.edu/general_meetings. Oct. 26–28, 2016, Applied Physics Laboratory, Johns Hopkins University, Laurel, MD.

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- [265] 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.
- [266] 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.
- [267] 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.
- [268] 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.
- [269] 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.
- [270] 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.
- [271] 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.
- [272] 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.
- [273] 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.
- [274] 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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- [275] 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.
- [276] 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.
- [277] 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.
- [278] 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.
- [279] 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.
- [280] 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.
- [281] 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.
- [282] 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.
- [283] 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.
- [284] Wilson III, L. B., A. Koval, A. Szabo, M. L. Stevens, J. C. Kasper, C. A. Cattell, and V. V. Krasnoselskikh (2018), The Structure of Low Mach Number, Low Beta, Quasi-perpendicular Collisionless Shocks (invited), *AOGS-AGU (WPGM) Joint Assembly*, pp. ST06–A002, June 3–8, 2018, Honolulu, Hawaii.

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- [285] 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.
- [286] 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.
- [287] 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.
- [288] 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.
- [289] 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.
- [290] 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.
- [291] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, and L. B. Wilson III (2019), Two-dimensional particle-in-cell simulations of magnetic reconnection and kinetic physics in the Earth’s quasi-parallel bow shock (invited), *AGU Fall Meeting Abstracts*, pp. SH21A–03, Dec. 9–13, 2019, San Francisco, CA.
- [292] Turner, D. L., T. Z. Liu, and L. B. Wilson III (2019), Foreshock Transient Phenomena Observed by the Magnetospheric Multiscale (MMS) Mission (Invited), *AGU Fall Meeting Abstracts*, pp. SM53B–02, Dec. 9–13, 2019, San Francisco, CA.
- [293] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, et al. (2019), Magnetic reconnection observations in the bow shock transition region (invited), *AGU Fall Meeting Abstracts*, pp. SH21A–01, Dec. 9–13, 2019, San Francisco, CA.
- [294] Collinson, G., L. B. Wilson III, N. Omid, D. G. Sibeck, J. Espley, C. Fowler, D. Mitchell, J. Grebowsky, C. Mazelle, S. Ruhunusiri, J. Halekas, R. Frahm, T. Zhang, Y. Futaana, and B. Jakosky (2020), Solar Wind induced waves in the skies of Mars: Ionospheric compression, energization, and escape resulting from the impact of ultra-low frequency magnetosonic waves generated upstream of the Martian bow shock (invited), in *EGU General Assembly Conference Abstracts*, vol. 22, p. 1966, May 3–8, 2020, Vienna, Austria.
- [295] Wilson III, L. B. (2020), The Solar Wind, *Magnetosphere Online Seminar Series*, on May 4, 2020.

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- [296] Wilson III, L. B. (2020), Particle Energization at Collisionless Shock Waves (invited), *Astrophysical and Planetary Sciences Colloquium*, colloquium for the Department of Astrophysical and Planetary Sciences at University of Colorado Boulder, Oct. 5, 2020.
- [297] Wilson III, L. B. (2020), The discrepancy between simulation and observation of electric fields in collisionless shocks, *MMS FALL 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.
- [298] Madanian, H., M. I. Desai, J. L. Burch, S. A. Fuselier, L. B. Wilson III, O. Le Contel, S. J. Schwartz, D. L. Turner, N. Omid, K. Ogasawara, R. E. Ergun, N. Ahmadi, C. Russell, D. J. Gershman, and P.-A. Lindqvist (2020), The Dynamics of High Mach Number Quasi-Perpendicular Shocks, *AGU Fall Meeting Abstracts*, pp. SH047–02, Dec. 7–11, 2020, San Francisco, CA, Virtual.
- [299] Wang, S., L.-J. Chen, N. Bessho, L. B. Hesse, M. Wilson III, R. E. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), Magnetic reconnection observed at Earth’s bow shock (Invited), *AGU Fall Meeting Abstracts*, pp. SM038–01, Dec. 7–11, 2020, San Francisco, CA, Virtual.