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[161] 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.

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[166] 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.

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[169] 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.

[170] 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.

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[171] 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.

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[173] 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.

[174] 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.

[175] 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.

[176] 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.

[177] 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.

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[180] Eriksson, S., G. Lapenta, P. A. Cassak, D. L. Newman, L. B. Wilson III, and D. J. Gershman (2018), On Magnetic Reconnection Exhausts in the Solar Wind and Associated Perturbations of the Out-of-Plane Magnetic Field, *The 17th Annual International Astrophysics Conference: Dissipative and Heating Processes in Collisionless Plasma: the Solar Corona, the Solar Wind, and the Interstellar Medium*, Santa Fe, New Mexico, Mar. 5–9, 2018.

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[181] 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.

[182] 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.

[183] 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, 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.

[184] 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.

[185] 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.

[186] 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.

[187] 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.

[188] 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.

[189] 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.

[190] 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

Earth's bow shock, *AGU Fall Meeting Abstracts*, pp. SH31A–09, Dec. 10–14, 2018, Washington, D.C.

[191] 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.

[192] 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.

[193] Cooper, J. F., R. E. Coleman Jr., and L. B. Wilson III (2018), Investigation of Solar Electron Hysterisis Event in June 2011 as Observed by STEREO-B IMPACT, *AGU Fall Meeting Abstracts*, pp. SH31C–3650, Dec. 10–14, 2018, Washington, D.C.

[194] 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.

[195] 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.

[196] 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.

[197] 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.

[198] 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.

[199] Wilson III, L. B. (2019), Electron energy partition across interplanetary shocks near 1 AU, *2019 GEM Conference*, June 22nd – 28th, 2019, Santa Fe, NM.

[200] 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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[201] 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 Alfven Waves, *2019 SHINE Conference*, Aug. 5th – 9th, 2019, Boulder, CO.

[202] 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.

[203] 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.

[204] 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.

[205] 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.

[206] 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.

[207] 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.

[208] 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.

[209] 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.

[210] 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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[211] 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.

[212] 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.

[213] 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.

[214] 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.

[215] 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**.

[216] 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**.

[217] 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.

[218] Bessho, N., L.-J. Chen, J. Ng, S. Wang, M. Hesse, and L. B. Wilson III (2020), Reconnecting and non-reconnecting current sheets in the Earth's quasi-parallel bow shock, *MMS Spring 2020 Science Working Team Meeting*, on Apr. 15-16, 2020, Virtual Meeting.

[219] 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.

[220] 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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[221] 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.

[222] Wilson III, L. B. (2020), Electron energy partition across interplanetary shocks near 1 AU, *Parker Solar Probe Theory Group Telecon*, on Apr. 23, 2020.

[223] Wilson III, L. B. (2020), Energy partition across interplanetary shocks, *MMS FPI Team Telecon*, on Jul. 9, 2020.

[224] Wilson III, L. B. (2020), Electron energy partition at interplanetary shocks, *2020 Virtual GEM Conference*, online Jul. 21–23, 2020.

[225] 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.

[226] 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.

[227] 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.

[228] 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.

[229] 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.

[230] Bessho, N., L.-J. Chen, S. Wang, M. Hesse, L. B. Wilson III, and J. Ng (2020), The structure of reconnection layers in Earth's quasi-parallel bow shock, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.

[231] Bessho, N., L.-J. Chen, S. Wang, J. Ng, M. Hesse, and L. B. Wilson III (2020), Kinetic waves and reconnecting current sheets in a quasi-parallel shock, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.

[232] Bessho, N., L.-J. Chen, S. Wang, J. Ng, M. Hesse, and L. B. Wilson III (2020), Kinetic instabilities and magnetic reconnection in the Earth's quasi-parallel bow shock, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.

[233] Madanian, H., M. I. Desai, S. J. Schwartz, L. B. Wilson III, S. A. Fuselier, J. L. Burch, O. Le Contel, D. L. Turner, K. Ogasawara, A. L. Brosius, C. T. Russell, R. E. Ergun, N. Ahmadi, D. J. Gershman, and P.-A. Lindqvist (2020), What makes a shock layer?, *MMS Fall 2020 Science Working Team Meeting*, on Oct. 6–8, 2020, Virtual Meeting.

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

[234] 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. GM14.00005, 62nd Annual Meeting of the APS Division of Plasma Physics, Nov. 9–13, 2020, Virtual.

[235] Wang, S., L.-J. Chen, N. Bessho, M. Hesse, L. B. Wilson III, R. E. Denton, J. Ng, B. L. Giles, R. B. Torbert, and J. L. Burch (2020), Reconnection observed at Earth's bow shock, in *APS Meeting Abstracts*, p. GM14.00003, 62nd Annual Meeting of the APS Division of Plasma Physics, Nov. 9–13, 2020, Virtual.

[236] 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.

[237] 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.

[238] 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.

[239] 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.

[240] 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.

[241] 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.

[242] Brosius, A. L., and L. B. Wilson III (2021), Minimum variance analysis of diverse heliospheric environments: from universal to endemic wave geometries and their relationships to astrophysical phenomena, *USNC-URSI National Radio Science Meeting*, p. 1081UR, held on Jan. 4–9, 2021, Virtual Meeting.

[243] Malaspina, D. M., R. E. Ergun, L. B. Wilson III, S. D. Bale, J. Bonnell, T. D. de Wit, K. Goetz, P. Harvey, R. MacDowall, and M. P. Pulupa (2021), Wave Mode Identification and Implications of Plasma Waves Near the Electron Cyclotron Frequency in the Near Sun Solar Wind, *USNC-URSI National Radio Science Meeting*, p. 1029, held on Jan. 4–9, 2021, Virtual Meeting.

[244] 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.

[245] 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.

[246] 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.

[247] 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.

[248] 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.

[249] 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.

[250] 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.

[251] Russell, C. T., Jian, L. K., Wei, H., Wilson III, L. B., Omidi, 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.

[252] 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.

[253] 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

Shock (invited) (2013). 8th European Workshop on Collisionless Shocks, Paris, France, June 5th, 2013.

[254] 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.

[255] 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.

[256] 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.

[257] 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.

[258] 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.

[259] 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.

[260] 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.

[261] 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.

[262] 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
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[263] Turner, D. L., Liu, Z., Angelopoulos, V., Omidi, 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.

[264] 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.

[265] Turner, D. L., Archer, M. O., Hietala, H., Plaschke, F., Wilson III, L. B. & Omidi, 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.

[266] 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.

[267] 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.

[268] 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.

[269] 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.

[270] 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.

[271] Turner, D. L., T. Z. Liu, L. B. Wilson III, H. Hietala, N. Omidi, and V. Angelopoulos (2016), Transient ion foreshock phenomena on Earth's dayside (invited), *ISROSES-III Meeting*, Sep. 11–16, 2016, Golden Sands, Bulgaria.

[272] 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.

List of Invited Talks/Presentations
Lynn B. Wilson III

[273] 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.

[274] 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.

[275] 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.

[276] 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.

[277] 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.

[278] 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.

[279] 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.

[280] 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.

[281] 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.

[282] 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.

List of Invited Talks/Presentations
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[283] 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.

[284] 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.

[285] 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.

[286] 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.

[287] 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.

[288] 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.

[289] 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.

[290] 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.

[291] 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.

[292] 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.

[293] 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.

[294] 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.

[295] 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.

[296] 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.

[297] 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.

[298] 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.

[299] 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.

[300] 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.

[301] 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.

[302] 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 (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.

[303] Wilson III, L. B. (2020), The Solar Wind, *Magnetosphere Online Seminar Series*, on May 4, 2020.

List of Invited Talks/Presentations
Lynn B. Wilson III

[304] 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.

[305] 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.

[306] Wilson III, L. B. (2020), Energy partition at interplanetary shocks, Solar Orbiter *Working Group: Shocks and Particle Energisation*, on Oct. 26, 2020, Virtual Meeting.

[307] Wilson III, L. B. (2020), The nonequilibrium solar wind electrons: Why care?, *Heliophysics Director's Seminar*, Nov. 20, 2020, Goddard Space Flight Center, Presentation for the Sciences and Exploration Directorate Director.

[308] 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. Omidi, 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.

[309] 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.