

Figure B.7: Full length movie corresponding to Figure 3.5. See text for details.

Figure B.8: Full length movie corresponding to Figure 3.6. See text for details.

Figure B.9: Full length movie corresponding to Figure 4.16. See text for details.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Altschuler, M. D., and G. Newkirk (1969), Magnetic Fields and the Structure of the Solar Corona. I: Methods of Calculating Coronal Fields, *Sol. Phys.*, *9*, 131–149, doi:10.1007/BF00145734.
- Antiochos, S. K. (2013), Helicity Condensation as the Origin of Coronal and Solar Wind Structure, *ApJ*, *772*, 72, doi:10.1088/0004-637X/772/1/72.
- Antiochos, S. K., C. R. DeVore, J. T. Karpen, and Z. Mikić (2007), Structure and Dynamics of the Sun’s Open Magnetic Field, *ApJ*, *671*, 936–946, doi:10.1086/522489.
- Antiochos, S. K., Z. Mikić, V. S. Titov, R. Lionello, and J. A. Linker (2011), A Model for the Sources of the Slow Solar Wind, *ApJ*, *731*, 112, doi:10.1088/0004-637X/731/2/112.
- Attie, R., D. E. Innes, and H. E. Potts (2009), Evidence of photospheric vortex flows at supergranular junctions observed by FG/SOT (Hinode), *A&A*, *493*, L13–L16, doi:10.1051/0004-6361:200811258.
- Brandt, P. N., G. B. Scharmer, S. Ferguson, R. A. Shine, and T. D. Tarbell (1988), Vortex flow in the solar photosphere, *Nature*, *335*, 238–240, doi:10.1038/335238a0.
- Bray, R. J., and R. E. Loughhead (1967), *The solar granulation*.
- Burlaga, L. F., N. F. Ness, Y.-M. Wang, and N. R. Sheeley (2002), Heliospheric magnetic field strength and polarity from 1 to 81 AU during the ascending phase of solar cycle 23, *Journal of Geophysical Research (Space Physics)*, *107*, 1410, doi:10.1029/2001JA009217.
- Chollet, E. E., and J. Giacalone (2011), Evidence of Confinement of Solar-energetic Particles to Interplanetary Magnetic Field Lines, *ApJ*, *728*, 64, doi:10.1088/0004-637X/728/1/64.
- Cliver, E. W., S. W. Kahler, and D. V. Reames (2004), Coronal Shocks and Solar Energetic Proton Events, *ApJ*, *605*, 902–910, doi:10.1086/382651.
- Cohen, C. M. S. (2016), Current understanding of sep acceleration and transport, *AIP Conference Proceedings*, *1720*(1), 060001, doi:http://dx.doi.org/10.1063/1.4943836.
- Cranmer, S. R., A. A. van Ballegooijen, and R. J. Edgar (2007), Self-consistent Coronal Heating and Solar Wind Acceleration from Anisotropic Magnetohydrodynamic Turbulence, *ApJS*, *171*, 520–551, doi:10.1086/518001.

- Crooker, N. U., J. T. Gosling, and S. W. Kahler (2002), Reducing heliospheric magnetic flux from coronal mass ejections without disconnection, *Journal of Geophysical Research (Space Physics)*, *107*, 1028, doi:10.1029/2001JA000236.
- Crooker, N. U., S. K. Antiochos, X. Zhao, and M. Neugebauer (2012), Global network of slow solar wind, *Journal of Geophysical Research (Space Physics)*, *117*, A04104, doi:10.1029/2011JA017236.
- Del Zanna, G., and B. J. I. Bromage (1999), The Elephant's Trunk: Spectroscopic diagnostics applied to SOHO/CDS observations of the August 1996 equatorial coronal hole, *J. Geophys. Res.*, *104*, 9753–9766, doi:10.1029/1998JA900067.
- DeVore, C. (1991), Flux-corrected transport techniques for multidimensional compressible magnetohydrodynamics, *Journal of Computational Physics*, *92*(1), 142 – 160, doi: [http://dx.doi.org/10.1016/0021-9991\(91\)90295-V](http://dx.doi.org/10.1016/0021-9991(91)90295-V).
- Doschek, G. A., and U. Feldman (1977), The coronal temperature and nonthermal motions in a coronal hole compared with other solar regions, *ApJ*, *212*, L143–L146, doi:10.1086/182394.
- Doschek, G. A., H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, and T. G. Moran (1997), Electron Densities in the Solar Polar Coronal Holes from Density-Sensitive Line Ratios of Si VIII and S X, *ApJ*, *482*, L109–L112, doi:10.1086/310668.
- Dröge, W., Y. Y. Kartavykh, N. Dresing, B. Heber, and A. Klassen (2014), Wide longitudinal distribution of interplanetary electrons following the 7 February 2010 solar event: Observations and transport modeling, *Journal of Geophysical Research (Space Physics)*, *119*, 6074–6094, doi:10.1002/2014JA019933.
- Druckmüller, M. (2009), Phase Correlation Method for the Alignment of Total Solar Eclipse Images, *ApJ*, *706*, 1605–1608, doi:10.1088/0004-637X/706/2/1605.
- Duvall, T. L., Jr., and L. Gizon (2000), Time-Distance Helioseismology with f Modes as a Method for Measurement of Near-Surface Flows, *Sol. Phys.*, *192*, 177–191, doi:10.1023/A:1005239503637.
- Edmondson, J. K., S. K. Antiochos, C. R. DeVore, B. J. Lynch, and T. H. Zurbuchen (2010a), Interchange Reconnection and Coronal Hole Dynamics, *ApJ*, *714*, 517–531, doi:10.1088/0004-637X/714/1/517.
- Edmondson, J. K., S. K. Antiochos, C. R. DeVore, and T. H. Zurbuchen (2010b), Formation and Reconnection of Three-dimensional Current Sheets in the Solar Corona, *ApJ*, *718*, 72–85, doi:10.1088/0004-637X/718/1/72.
- Endeve, E., T. E. Holzer, and E. Leer (2004), Helmet Streamers Gone Unstable: Two-Fluid Magnetohydrodynamic Models of the Solar Corona, *ApJ*, *603*, 307–321, doi:10.1086/381239.

- Feldman, U., and J. M. Laming (2000), Element Abundances in the Upper Atmospheres of the Sun and Stars: Update of Observational Results, *Phys. Scr*, *61*, 222, doi:10.1238/Physica.Regular.061a00222.
- Feldman, U., and K. G. Widing (2002), A review of the first ionization potential effect on elemental abundances in the solar corona and in flares, *Physics of Plasmas*, *9*, 629–635, doi:10.1063/1.1435000.
- Feldman, U., and K. G. Widing (2003), Elemental Abundances in the Solar Upper Atmosphere Derived by Spectroscopic Means, *Space Sci. Rev.*, *107*, 665–720, doi:10.1023/A:1026103726147.
- Feldman, U., G. A. Doschek, J. T. Mariska, A. K. Bhatia, and H. E. Mason (1978), Electron densities in the solar corona from density-sensitive line ratios in the N I isoelectronic sequence, *ApJ*, *226*, 674–678, doi:10.1086/156649.
- Fisk, L. A. (2003), Acceleration of the solar wind as a result of the reconnection of open magnetic flux with coronal loops, *Journal of Geophysical Research (Space Physics)*, *108*, 1157, doi:10.1029/2002JA009284.
- Fisk, L. A., and L. Zhao (2009), The heliospheric magnetic field and the solar wind during the solar cycle, in *Universal Heliophysical Processes, IAU Symposium*, vol. 257, edited by N. Gopalswamy and D. F. Webb, pp. 109–120, doi:10.1017/S1743921309029160.
- Fisk, L. A., N. A. Schwadron, and T. H. Zurbuchen (1998), On the Slow Solar Wind, *Space Sci. Rev.*, *86*, 51–60, doi:10.1023/A:1005015527146.
- Fisk, L. A., T. H. Zurbuchen, and N. A. Schwadron (1999), On the Coronal Magnetic Field: Consequences of Large-Scale Motions, *ApJ*, *521*, 868–877, doi:10.1086/307556.
- Geiss, J., et al. (1995), The Southern High-Speed Stream: Results from the SWICS Instrument on Ulysses, *Science*, *268*, 1033–1036, doi:10.1126/science.7754380.
- Giacalone, J., and J. R. Jokipii (2012), The Longitudinal Transport of Energetic Ions from Impulsive Solar Flares in Interplanetary Space, *ApJ*, *751*, L33, doi:10.1088/2041-8205/751/2/L33.
- Giacalone, J., J. R. Jokipii, and J. E. Mazur (2000), Small-scale Gradients and Large-scale Diffusion of Charged Particles in the Heliospheric Magnetic Field, *ApJ*, *532*, L75–L78, doi:10.1086/312564.
- Gizon, L., and T. L. Duvall, Jr. (2003), Supergranulation supports waves, in *GONG+ 2002. Local and Global Helioseismology: the Present and Future, ESA Special Publication*, vol. 517, edited by H. Sawaya-Lacoste, pp. 43–52.
- Gosling, J. T. (1990), Coronal mass ejections and magnetic flux ropes in interplanetary space, *Washington DC American Geophysical Union Geophysical Monograph Series*, *58*, 343–364.

- Gosling, J. T. (1997), Physical nature of the low-speed solar wind, in *Robotic Exploration Close to the Sun: Scientific Basis, American Institute of Physics Conference Series*, vol. 385, edited by S. R. Habbal, pp. 17–24, doi:10.1063/1.51743.
- Gosling, J. T., and T. D. Phan (2013), Magnetic Reconnection in the Solar Wind at Current Sheets Associated with Extremely Small Field Shear Angles, *ApJ*, 763, L39, doi:10.1088/2041-8205/763/2/L39.
- Hundhausen, A. J. (1972), *Coronal Expansion and Solar Wind*, 101 pp.
- Hundhausen, A. J., H. E. Gilbert, and S. J. Bame (1968), The State of Ionization of Oxygen in the Solar Wind, *ApJ*, 152, L3, doi:10.1086/180165.
- Kahler, S. W., E. Hildner, and M. A. I. Van Hollebeke (1978), Prompt solar proton events and coronal mass ejections, *Sol. Phys.*, 57, 429–443, doi:10.1007/BF00160116.
- Kepko, L., N. M. Viall, S. K. Antiochos, S. T. Lepri, J. C. Kasper, and M. Weberg (2016), Implications of L1 observations for slow solar wind formation by solar reconnection, *Geophys. Res. Lett.*, 43, 4089–4097, doi:10.1002/2016GL068607.
- Kivelson, M. G., and C. T. Russell (1995), *Introduction to Space Physics*, 586 pp.
- Komm, R., R. Howe, F. Hill, M. Miesch, D. Haber, and B. Hindman (2007), Divergence and Vorticity of Solar Subsurface Flows Derived from Ring-Diagram Analysis of MDI and GONG Data, *ApJ*, 667, 571–584, doi:10.1086/520765.
- Laming, J. M. (2004), A Unified Picture of the First Ionization Potential and Inverse First Ionization Potential Effects, *ApJ*, 614, 1063–1072, doi:10.1086/423780.
- Laming, J. M. (2015), The FIP and Inverse FIP Effects in Solar and Stellar Coronae, *Living Reviews in Solar Physics*, 12, doi:10.1007/lrsp-2015-2.
- Laming, J. M., U. Feldman, U. Schühle, P. Lemaire, W. Curdt, and K. Wilhelm (1997), Electron Density Diagnostics for the Solar Upper Atmosphere from Spectra Obtained by SUMER/SOHO, *ApJ*, 485, 911–919.
- Landi, E. (2008), The Off-Disk Thermal Structure of a Polar Coronal Hole, *ApJ*, 685, 1270–1276, doi:10.1086/591225.
- Lau, Y.-T., and J. M. Finn (1990), Three-dimensional kinematic reconnection in the presence of field nulls and closed field lines, *ApJ*, 350, 672–691, doi:10.1086/168419.
- Lin, R. P. (1970a), The Emission and Propagation of 40 keV Solar Flare Electrons. I: The Relationship of 40 keV Electron to Energetic Proton and Relativistic Electron Emission by the Sun, *Sol. Phys.*, 12, 266–303, doi:10.1007/BF00227122.
- Lin, R. P. (1970b), The Emission and Propagation of \sim 40 keV Solar Flare Electrons. II: The Electron Emission Structure of Large Active Regions, *Sol. Phys.*, 15, 453–478, doi:10.1007/BF00151852.

- Lin, R. P., and S. W. Kahler (1992), Interplanetary magnetic field connection to the sun during electron heat flux dropouts in the solar wind, *J. Geophys. Res.*, *97*, 8203–8209, doi:10.1029/92JA00230.
- Linker, J. A., R. Lionello, Z. Mikić, V. S. Titov, and S. K. Antiochos (2011), The Evolution of Open Magnetic Flux Driven by Photospheric Dynamics, *ApJ*, *731*, 110, doi:10.1088/0004-637X/731/2/110.
- Long, D. M., D. R. Williams, S. Régnier, and L. K. Harra (2013), Measuring the Magnetic-Field Strength of the Quiet Solar Corona Using "EIT Waves", *Sol. Phys.*, *288*, 567–583, doi:10.1007/s11207-013-0331-7.
- Longcope, D. W. (2001), Separator current sheets: Generic features in minimum-energy magnetic fields subject to flux constraints, *Physics of Plasmas*, *8*, 5277–5290, doi:10.1063/1.1418431.
- Lynch, B. J., J. K. Edmondson, M. D. Kazachenko, and S. E. Guidoni (2016), Reconnection Properties of Large-scale Current Sheets During Coronal Mass Ejection Eruptions, *ApJ*, *826*, 43, doi:10.3847/0004-637X/826/1/43.
- Manoharan, P. K. (2012), Three-dimensional Evolution of Solar Wind during Solar Cycles 22-24, *ApJ*, *751*, 128, doi:10.1088/0004-637X/751/2/128.
- Mazur, J. E., G. M. Mason, J. R. Dwyer, J. Giacalone, J. R. Jokipii, and E. C. Stone (2000), Interplanetary Magnetic Field Line Mixing Deduced from Impulsive Solar Flare Particles, *ApJ*, *532*, L79–L82, doi:10.1086/312561.
- McComas, D. J., R. W. Ebert, H. A. Elliott, B. E. Goldstein, J. T. Gosling, N. A. Schwadron, and R. M. Skoug (2008), Weaker solar wind from the polar coronal holes and the whole Sun, *Geophys. Res. Lett.*, *35*, L18103, doi:10.1029/2008GL034896.
- Meyer, J.-P. (1985), The baseline composition of solar energetic particles, *ApJS*, *57*, 151–171, doi:10.1086/191000.
- Neugebauer, M., and C. W. Snyder (1962), Solar Plasma Experiment, *Science*, *138*, 1095–1097, doi:10.1126/science.138.3545.1095-a.
- Oran, R., et al. (2015), A Steady-state Picture of Solar Wind Acceleration and Charge State Composition Derived from a Global Wave-driven MHD Model, *ApJ*, *806*, 55, doi:10.1088/0004-637X/806/1/55.
- Orrall, F. (1981), *Solar active regions: a monograph from Skylab Solar Workshop III*, Colorado Associated University Press, Boulder, CO.
- Pallavicini, R., S. Serio, and G. S. Vaiana (1977), A survey of soft X-ray limb flare images - The relation between their structure in the corona and other physical parameters, *ApJ*, *216*, 108–122, doi:10.1086/155452.

- Pariat, E., K. Dalmasse, C. R. DeVore, S. K. Antiochos, and J. T. Karpen (2015), Model for straight and helical solar jets. I. Parametric studies of the magnetic field geometry, *A&A*, 573, A130, doi:10.1051/0004-6361/201424209.
- Parker, E. N. (1958), Dynamics of the Interplanetary Gas and Magnetic Fields., *ApJ*, 128, 664, doi:10.1086/146579.
- Parker, E. N. (1979), *Cosmical magnetic fields: Their origin and their activity*.
- Parnell, C. E., A. L. Haynes, and K. Galsgaard (2010), Structure of magnetic separators and separator reconnection, *Journal of Geophysical Research (Space Physics)*, 115, A02102, doi:10.1029/2009JA014557.
- Pottasch, S. R. (1963), The Lower Solar Corona: Interpretation of the Ultraviolet Spectrum., *ApJ*, 137, 945, doi:10.1086/147569.
- Priest, E., and T. Forbes (2000), *Magnetic Reconnection*, 612 pp.
- Priest, E. R., and V. S. Titov (1996), Magnetic Reconnection at Three-Dimensional Null Points, *Philosophical Transactions of the Royal Society of London Series A*, 354, 2951–2992, doi:10.1098/rsta.1996.0136.
- Rappazzo, A. F., M. Velli, G. Einaudi, and R. B. Dahlburg (2005), Diamagnetic and Expansion Effects on the Observable Properties of the Slow Solar Wind in a Coronal Streamer, *ApJ*, 633, 474–488, doi:10.1086/431916.
- Raymond, J. C., et al. (1997), Composition of Coronal Streamers from the SOHO Ultraviolet Coronagraph Spectrometer, *Sol. Phys.*, 175, 645–665, doi:10.1023/A:1004948423169.
- Reames, D. V. (1999), Particle acceleration at the Sun and in the heliosphere, *Space Sci. Rev.*, 90, 413–491, doi:10.1023/A:1005105831781.
- Reames, D. V. (2013), The Two Sources of Solar Energetic Particles, *Space Sci. Rev.*, 175, 53–92, doi:10.1007/s11214-013-9958-9.
- Reames, D. V., T. T. von Rosenvinge, and R. P. Lin (1985), Solar He-3-rich events and nonrelativistic electron events - A new association, *ApJ*, 292, 716–724, doi:10.1086/163203.
- Reames, D. V., B. R. Dennis, R. G. Stone, and R. P. Lin (1988), X-ray and radio properties of solar (He-3) rich events, *ApJ*, 327, 998–1008, doi:10.1086/166257.
- Rušin, V., et al. (2010), Comparing eclipse observations of the 2008 August 1 solar corona with an MHD model prediction, *A&A*, 513, A45, doi:10.1051/0004-6361/200912778.
- Schatten, K. H., J. M. Wilcox, and N. F. Ness (1969), A model of interplanetary and coronal magnetic fields, *Sol. Phys.*, 6, 442–455, doi:10.1007/BF00146478.
- Schrijver, C. J., A. M. Title, A. A. van Ballegoijen, H. J. Hagenaar, and R. A. Shine (1997), Sustaining the Quiet Photospheric Network: The Balance of Flux Emergence, Fragmentation, Merging, and Cancellation, *ApJ*, 487, 424–436.

- Schrijver, C. J., A. M. Title, A. R. Yeates, and M. L. DeRosa (2013), Pathways of Large-scale Magnetic Couplings between Solar Coronal Events, *ApJ*, *773*, 93, doi:10.1088/0004-637X/773/2/93.
- Schwenn, R. (1990), *Large-Scale Structure of the Interplanetary Medium*, p. 99.
- Seligman, D., G. J. D. Petrie, and R. Komm (2014), A Combined Study of Photospheric Magnetic and Current Helicities and Subsurface Kinetic Helicities of Solar Active Regions during 2006-2013, *ApJ*, *795*, 113, doi:10.1088/0004-637X/795/2/113.
- Sheeley, N. R., et al. (1997), Measurements of Flow Speeds in the Corona Between 2 and 30 R, *ApJ*, *484*, 472–478.
- Sheeley, N. R., Jr. (1995), A Volcanic Origin for High FIP Material in the Solar Atmosphere, *ApJ*, *440*, 884, doi:10.1086/175326.
- Sheeley, N. R., Jr., D. D.-H. Lee, K. P. Casto, Y.-M. Wang, and N. B. Rich (2009), The Structure of Streamer Blobs, *ApJ*, *694*, 1471-1480, doi:10.1088/0004-637X/694/2/1471.
- Simon, G. W., and R. B. Leighton (1964), Velocity Fields in the Solar Atmosphere. III. Large-Scale Motions, the Chromospheric Network, and Magnetic Fields., *ApJ*, *140*, 1120, doi:10.1086/148010.
- Smith, E. J. (2001), The heliospheric current sheet, *J. Geophys. Res.*, *106*, 15,819–15,832, doi:10.1029/2000JA000120.
- Suess, S. T., A.-H. Wang, and S. T. Wu (1996), Volumetric heating in coronal streamers, *J. Geophys. Res.*, *101*, 19,957–19,966, doi:10.1029/96JA01458.
- Taylor, J. B. (1974), Relaxation of Toroidal Plasma and Generation of Reverse Magnetic Fields, *Physical Review Letters*, *33*, 1139–1141, doi:10.1103/PhysRevLett.33.1139.
- Taylor, J. B. (1986), Relaxation and magnetic reconnection in plasmas, *Reviews of Modern Physics*, *58*, 741–763, doi:10.1103/RevModPhys.58.741.
- Timothy, A. F., A. S. Krieger, and G. S. Vaiana (1975), The structure and evolution of coronal holes, *Sol. Phys.*, *42*, 135–156, doi:10.1007/BF00153291.
- Titov, V. S., G. Hornig, and P. Démoulin (2002), Theory of magnetic connectivity in the solar corona, *Journal of Geophysical Research (Space Physics)*, *107*, 1164, doi:10.1029/2001JA000278.
- Titov, V. S., Z. Mikić, J. A. Linker, R. Lionello, and S. K. Antiochos (2011), Magnetic Topology of Coronal Hole Linkages, *ApJ*, *731*, 111, doi:10.1088/0004-637X/731/2/111.
- Tokumaru, M., M. Kojima, and K. Fujiki (2010), Solar cycle evolution of the solar wind speed distribution from 1985 to 2008, *Journal of Geophysical Research (Space Physics)*, *115*, A04102, doi:10.1029/2009JA014628.

- van Allen, J. A., and S. M. Krimigis (1965), Impulsive Emission of 40-keV Electrons from the Sun, *J. Geophys. Res.*, *70*, 5737–5751, doi:10.1029/JZ070i023p05737.
- Viall, N. M., and A. Vourlidas (2015), Periodic Density Structures and the Origin of the Slow Solar Wind, *ApJ*, *807*, 176, doi:10.1088/0004-637X/807/2/176.
- von Steiger, R., and T. H. Zurbuchen (2011), Polar coronal holes during the past solar cycle: Ulysses observations, *Journal of Geophysical Research: Space Physics*, *116*(A1), n/a–n/a, doi:10.1029/2010JA015835, a01105.
- von Steiger, R., and T. H. Zurbuchen (2016), Solar Metallicity Derived from in situ Solar Wind Composition, *ApJ*, *816*, 13, doi:10.3847/0004-637X/816/1/13.
- von Steiger, R., J. Geiss, and G. Gloeckler (1997), Composition of the Solar Wind, in *Cosmic Winds and the Heliosphere*, edited by J. R. Jokipii, C. P. Sonett, and M. S. Giampapa, p. 581.
- von Steiger, R., N. A. Schwadron, L. A. Fisk, J. Geiss, G. Gloeckler, S. Hefti, B. Wilken, R. F. Wimmer-Schweingruber, and T. H. Zurbuchen (2000), Composition of quasi-stationary solar wind flows from Ulysses/Solar Wind Ion Composition Spectrometer, *J. Geophys. Res.*, *105*, 27,217–27,238, doi:10.1029/1999JA000358.
- von Steiger, R., T. H. Zurbuchen, J. Geiss, G. Gloeckler, L. A. Fisk, and N. A. Schwadron (2001), The 3-D Heliosphere from the Ulysses and ACE Solar Wind Ion Composition Experiments, *Space Sci. Rev.*, *97*, 123–127, doi:10.1023/A:1011886414964.
- Wang, Y.-M., and N. R. Sheeley, Jr. (1990), Solar wind speed and coronal flux-tube expansion, *ApJ*, *355*, 726–732, doi:10.1086/168805.
- Wang, Y.-M., S. H. Hawley, and N. R. Sheeley, Jr. (1996), The Magnetic Nature of Coronal Holes, *Science*, *271*, 464–469, doi:10.1126/science.271.5248.464.
- Wang, Y.-M., N. R. Sheeley, D. G. Socker, R. A. Howard, and N. B. Rich (2000), The dynamical nature of coronal streamers, *J. Geophys. Res.*, *105*, 25,133–25,142, doi:10.1029/2000JA000149.
- Wang, Y.-M., N. R. Sheeley, Jr., and N. B. Rich (2007), Coronal Pseudostreamers, *ApJ*, *658*, 1340–1348, doi:10.1086/511416.
- Warren, H. P., and D. H. Brooks (2009), The Temperature and Density Structure of the Solar Corona. I. Observations of the Quiet Sun with the EUV Imaging Spectrometer on Hinode, *ApJ*, *700*, 762–773, doi:10.1088/0004-637X/700/1/762.
- Widing, K. G. (1997), Emerging Active Regions on the Sun and the Photospheric Abundance of Neon, *ApJ*, *480*, 400–405.
- Wiedenbeck, M. (2011), Observations of Broad Longitudinal Extents of 3He-rich SEP Events, *International Cosmic Ray Conference*, *10*, 208, doi:10.7529/ICRC2011/V10/1162.

- Wiedenbeck, M. E., G. M. Mason, C. M. S. Cohen, N. V. Nitta, R. Gómez-Herrero, and D. K. Haggerty (2013), Observations of Solar Energetic Particles from ^3He -rich Events over a Wide Range of Heliographic Longitude, *ApJ*, *762*, 54, doi:10.1088/0004-637X/762/1/54.
- Wild, J. P., S. F. Smerd, and A. A. Weiss (1963), Solar Bursts, *ARA&A*, *1*, 291, doi:10.1146/annurev.aa.01.090163.001451.
- Zhao, L., T. H. Zurbuchen, and L. A. Fisk (2009), Global distribution of the solar wind during solar cycle 23: ACE observations, *Geophys. Res. Lett.*, *36*, L14104, doi:10.1029/2009GL039181.
- Zirker, J. B. (1977), Coronal holes and high-speed wind streams, *Reviews of Geophysics and Space Physics*, *15*, 257–269, doi:10.1029/RG015i003p00257.
- Zurbuchen, T. H. (2007), A New View of the Coupling of the Sun and the Heliosphere, *ARA&A*, *45*, 297–338, doi:10.1146/annurev.astro.45.010807.154030.
- Zurbuchen, T. H., S. Hefti, L. A. Fisk, G. Gloeckler, and R. von Steiger (1999), The Transition Between Fast and Slow Solar Wind from Composition Data, *Space Sci. Rev.*, *87*, 353–356, doi:10.1023/A:1005126718714.
- Zurbuchen, T. H., L. A. Fisk, G. Gloeckler, and R. von Steiger (2002), The solar wind composition throughout the solar cycle: A continuum of dynamic states, *Geophys. Res. Lett.*, *29*, 1352, doi:10.1029/2001GL013946.