

Publications

16 January 2024

Emilia Katja Johanna Kilpua (née: Huttunen)

Born November 18, 1977, Oulu, Finland

A Peer-reviewed scientific articles

A1 Original scientific article

1. **Huttunen**, K.E.J., H.E.J. Koskinen, and R. Schwenn, Variability of magnetospheric storms driven by different solar wind perturbations, *Journal of Geophysical Research*, 107, SPM 20-1, 2002.
2. **Huttunen**, K.E.J., H.E.J. Koskinen, T.I. Pulkkinen, A. Pulkkinen, and M. Palmroth, April 2000 magnetic storm: Solar wind driver and magnetospheric response, *Journal of Geophysical Research*, 107, 1440, 2002.
3. **Huttunen**, K.E.J., and H.E.J. Koskinen, Importance of post-shock streams and sheath regions as driver of intense magnetospheric storms and high latitude activity, *Annales Geophysicae*, 22, 1729, 2004.
4. **Huttunen**, K.E.J., R. Schwenn, V. Bothmer, and H.E.J., Koskinen, Properties and geoeffectiveness of magnetic clouds in the rising, maximum and early declining phases of solar cycle 23, *Annales Geophysicae*, 23, 624, 2005.
5. **Huttunen**, K.E.J., J. Slavin, M. Collier, H.E.J., Koskinen, A. Szabo, E. Tanskanen, A. Balogh, E. Lucek, and H. Rème, Cluster observations of sudden impulses in the magnetotail caused by interplanetary shocks and pressure increases, *Annales Geophysicae*, 23, 609, 2005.
6. Schwenn, R., A. Dal Lago, E.K.J. **Huttunen**, and W.D. Gonzalez, The association of coronal mass ejections with the effects of their counterparts near the Earth, *Annales Geophysicae*, 23, 1033, 2005.
7. **Huttunen**, K.E.J., H.E.J., Koskinen, A. Karinen, and K. Mursula, Asymmetric development of magnetospheric storms during magnetic clouds and sheath regions, *Geophysical Research Letter*, 33, L06107, doi:10.1029/2005GL024894, 2006.
8. H.E.J. Koskinen, and K.E.J., Huttunen, Space weather: From solar eruptions to magnetospheric storms, in *Solar Eruptions and Energetic Particles*, Geophysical Monograph Series 165, 375-385, American Geophysical Union, 2006.
9. Koskinen, H.E.J., and K.E.J. **Huttunen**, Geoeffectivity of coronal mass ejections, *Space Science Reviews*, 124, 169, 2006.
10. Pulkkinen, T.I., N. Partamies, K.E.J. **Huttunen**, G.D. Reeves, and H.E.J. Koskinen, Differences in storms driven by magnetic clouds and ICME sheath regions, *Geophysical Research Letter*, 34, L02105, doi:10.1029/2006GL027775, 2007.
11. **Huttunen**, K.E.J., S.D. Bale, T.D. Phan, M. Davis, and J.T. Gosling, Wind/WAVES observations of the plasma wave activity in solar wind reconnection exhausts, *Journal of Geophysical Research*, 2006, 112, A01102, doi:10.1029/2006JA011836, 2007.
12. Zhang J., I.G. Richardson, D.F. Webb, N. Gopalswamy, K.E.J. **Huttunen**, J. Kasper, N.V. Nitta, W. Poomvises, B.J. Thompson, C.-C. Wu, S. Yashiro, and A.N. Zhukov, Solar and interplanetary sources of major geomagnetic storms (Dst < -100 nT) during 1996-2005, *Journal of Geophysical Research*, 112, A10102, doi:10.1029/2007JA012321, 2007.
13. Bougeret, J.L., et al. (with 42 co-authors including K.E.J. **Huttunen**, SWAVES: Radio and plasma wave investigation on the STEREO mission, *Space Sciences Reviews*, 487, 2008.

14. **Huttunen**, K.E.J., S.D. Bale, and C. Salem, Wind observations of low energy particles in solar wind reconnection exhaust, *Annales Geophysicae*, 26, 2701, 2008.
15. **Huttunen**, K.E.J., S.P. Kilpua, A. Pulkkinen, A. Viljanen, and E. Tanskanen, Solar wind drivers of large geomagnetically induced currents during the solar cycle 23, *Space Weather*, 6, S10002, doi:10.1029/2007SW000374, 2008.
16. Li Y., B.J. Lynch, G. Stenborg, J.G. Luhmann, K.E.J. **Huttunen**, B.T. Welsch, P.C Liewer, and A. Vourlidas, The solar magnetic field and coronal dynamics of the eruption on 2007 May 19, *The Astrophysical Journal*, 681, L37, 2008.
17. Liu, Y., J.G. Luhmann, K.E.J. **Huttunen**, R.P. Lin, S.D. Bale, C.T. Russell, and A.B. Galvin, Reconstruction of the 2007 May 22 magnetic cloud: How much can we trust the flux-rope geometry of CMEs?, *The Astrophysical Journal*, 677, L133, 2008.
18. **Kilpua**, E.K.J., P.C. Liewer, C. Farrugia, J.G. Luhmann, C. Möstl, Y. Li, Y. Liu, B. Lynch, C.T. Russell, A. Vourlidas, M.H. Acuna, A.B. Galvin, D. Larson, and J.A. Sauvaud, Multispacecraft observations of magnetic clouds and their solar origins May 19-23, 2007, *Solar Physics*, 254, 325-344, 2009.
19. Möstl, C., C.J. Farrugia, C. Miklenic, M. Temmer, A.B. Galvin, J.G. Luhmann, E.K.J. **Kilpua**, M. Leitner, T. Nieves-Chinchilla, A. Veronig, K.W. Ogilvie, and H.K. Biernat, Multi-spacecraft recovery of a magnetic cloud and its origin from magnetic reconnection on the Sun, *Journal of Geophysical Research*, 114, A04102, 2009.
20. Möstl, C., C.J. Farrugia, H.K. Biernat, M. Leitner, E.K.J. **Kilpua**, A.B. Galvin, A. B., and J.G. Luhmann, Optimized Grad – Shafranov reconstruction of a magnetic cloud using STEREO-wind observations, *Solar Physics*, 256, 427-441, 2009.
21. **Kilpua**, E.K.J., J.G. Luhmann, J. Gosling, Y. Li, H. Elliott, C.T. Russell, L. Jian, A.B. Galvin, D. Larson, P. Schroeder, K. Simunac, and G. Petrie, Small solar wind transients and their connection to the large-scale coronal structure, *Solar Physics*, 256, 327-344, 2009.
22. Galvin, A.B., M.A. Popecki, K.D.C. Simunac, L.M. Kistler, L. Ellis, J. Barry, L. Berger, L.M. Blush, P. Bochsler, C.J. Farrugia, L.K. Jian, and E.K.J. **Kilpua**, B. Klecker, M. Lee, Y. Liu, J.L. Luhmann, E. Moebius, A. Opitz, C.T. Russell, B. Thompson, R.F. Wimmer Schweingruber, and P. Wurz, "Solar wind ion trends and signatures: STEREO PLASTIC observations approaching solar minimum," *Annales Geophysicae*, 27, 3909, 2009.
23. Agueda, N., D. Lario, R. Vainio, B. Sanahuja, E.K.J. **Kilpua**, and S. Pohjolainen, Modelling solar near-relativistic electron events: Insights into solar injection and interplanetary transport conditions, *Astronomy and Astrophysics*, doi:10.1051/0004-6361/200912224 2009.
24. **Kilpua**, E.K.J., J. Pomoell, A. Vourlidas, R. Vainio, J. Luhmann, Y. Li, P. Schroeder, A.B. Galvin, and K. Simunac, STEREO observations of interplanetary coronal mass ejections and prominence deflection during solar minimum period, *Annales Geophysicae*, 27, 4491, 2009.
25. Gómez-Herrero, R., O. Malandraki, N. Dresing, E.K.J. **Kilpua**, B. Heber, A. Klassen, R. Müller-Mellin, and R.F. Wimmer-Schweingruber, Multi-point observations of CIR-associated energetic particles during the 2008 solar minimum, Twelfth International Solar Wind ConferenceS, AIP Conference Proceedings, Vol 1216, 608-612 (pre-refereed), 2010.
26. Pomoell, J., R. Vainio, and E.K.J. **Kilpua**, Observation-based Analysis of the Deflection of a Polar Crown Filament Eruption, Twelfth International Solar Wind ConferenceS, AIP Conference Proceedings, Vol 1216, 335-338, (pre-refereed) 2010.
27. Gómez-Herrero, R., O. Malandraki, N. Dresing, E.K.J. **Kilpua**, B. Heber, A. Klassen, R. Müller-Mellin, and R.F. Wimmer-Schweingruber, Spatial and temporal variations of CIRs: multi-point observations by STEREO, *Journal of Atmospheric and Solar-Terrestrial Physics*, 73, 551, 2011.
28. **Kilpua**, E.K.J., J.K. Lian, Y. Li, J.G. Luhmann, and C.T. Russell, Multipoint ICME Encounters: Pre-STEREO and STEREO Observations, *Journal of Atmospheric and Terrerstial Research*, 73, 1228, 2011.

29. Li, Y., J.G. Luhmann, B.J. Lynch, and E.K.J. **Kilpua**, Cyclic reversal of magnetic cloud poloidal field, *Solar Physics*, 270, 331, 2011.
30. Rouillard, A.P., N.R. Sheeley, T. Cooper, J.A. Davies, B. Lavraud, E.K.J. **Kilpua**, R.M. Skoug, and J.T. Steinberg, The solar origin of small interplanetary transients, *Astrophysical Journal*, 734, doi:10.1088/0004-637X/734/1/7, 2011.
31. **Kilpua**, E.K.J., O.C. Lee, J.G. Luhmann, Y. Li, Interplanetary coronal mass ejections in the near-Earth solar wind during the minimum periods following solar cycles 22 and 23, *Annales Geophysicae*, 29, 1455-1467, 2011
32. Rodriguez, L., M. Mierla, A.N. Zhukov, M. West, and K.E.J. **Kilpua**, Linking remote-sensing and in situ observations of coronal mass ejections using STEREO, *Solar Physics*, 70, 561, 2011.
33. Hietala, H., N. Agueda, K. Andreeva, R. Vainio, S. Nylund, E.K.J. **Kilpua**, and H. Koskinen, In situ observations of particle acceleration in shock-shock interaction, *Journal of Geophysical Research*, 116, A10105, 12 PP., 2011
34. Isavnin, A., E.K.J. **Kilpua**, and H.E.J. Koskinen, Grad-Shafranov reconstruction of magnetic clouds: overview and improvements, *Solar Physics*, 273, 205, 2011.
35. Agueda, N., D. Lario, V. Ontiveros, E.K.J. **Kilpua**, B. Sanahuja, B., and R. Vainio, Multi-spacecraft study of the 8 November 2000 SEP event: Electron injection histories 100° apart, *Solar Physics*, 10.1007/s11207-012-9959-y, 2011.
36. **Kilpua**, E.K.J., J.K. Lian, Y. Li., J.G. Luhmann, and C.T. Russell, Observations of ICMEs and ICME-like structures between 2007-2010 using near-Earth and STEREO observations, doi:10.1007/s11207-012-9957-0, *Solar Physics*, 2012.
37. Harrison, R.A., J.A. Davies, C. Möstl, Y. Liu, M. Temmer, M.M. Bisi, J.P. Eastwood, C.A. de Koning, N. Nitta, C.J. Farrugia, R.J. Forsyth, B.V. Jackson, E.A. Jensen, E.K.J. **Kilpua**, D. Odstrcil, and T. Rollett, D.F. Webb, An analysis of the onset and propagation of the multiple coronal mass ejection events of 01 August 2010, *The Astrophysical Journal*, doi:10.1088/0004-637X/750/1/45, 2012.
38. **Kilpua**, E.K.J., M. Mierla, L. Rodriguez, A.N. Zhukov, N. Srivastava, N., and M.J. West, Estimating travel times of coronal mass ejections to 1 AU using multi-spacecraft coronagraph data, *Solar Physics*, 279, 477-496, 2012.
39. Möstl, C., C. J. Farrugia, E.K.J. **Kilpua**, L. Jian, Y. Liu, J.P. Eastwood, R. Harrison, D. F. Webb, M. Temmer, D. Odstrcil, J.A. Davies, T. Rollett, J.G. Luhmann, N. Nitta, T. Mulligan, E.A. Jensen, R. Forsyth, B. Lavraud, C. A. de Koning, A. M. Veronig, A. B. Galvin, and T.L. Zhang, Multi-point shock and flux rope analysis of multiple interplanetary coronal mass ejections around 2010 August 1 in the inner heliosphere, *The Astrophysical Journal*, 758, 10, doi:10.1088/0004-637X/758/1/10, 2012.
40. **Kilpua**, E.K.J., Y. Li, J.G. Luhmann, L.K. Jian, and C. T. Russell. On the relationship between magnetic cloud field polarity and geoeffectiveness, *Annales Geophysicae*, 30, 1037, 2012.
41. Isavnin, A., V. Angelos, and E.K.J. **Kilpua**, Three-dimensional evolution of magnetic clouds from the Sun (2-20 Rs) to 1 AU, *Solar Physics*, 284, 203, 2013.
42. Luhmann, J.G., M. Ellenburg, P. Riley, D. Odstrcil, G. Petrie, E.K.J. **Kilpua**, L.K., Jian, C.T. Russell, K. Simunac, and A.B. Galvin, Large scale solar wind structure: Non-dipolar features and consequences, Twelfth International Solar Wind Conference, AIP Conference Proceedings (pre-refereed), 2013.
43. Yu, W., C.J. Farrugia, A. B. Galvin, K. D. C. Simunac, E. K. J. Kilpua, M. A. Popecki, C. Moestl, N. Lugaz, J.G. Luhmann, A. Opitz, and J.-A. Sauvaud, Small solar wind transients: Stereo-A observations in 2009, Twelfth International Solar Wind Conference, AIP Conference Proceedings (pre-refereed), 2013.

44. Andreeova, K., E.K.J. **Kilpua**, H. Hietala, H.E.J. Koskinen, A. Isavnin, and R. Vainio, Analysis of a substructure within a complex magnetic cloud on 03-04 September, 2008, *Annales Geophysicae*, 3, 555, 2013.
45. Turc L., D. Fontaine, P. Savioni, H. Hietala, E.K.J. **Kilpua**, A comparison of bow shock models with Cluster observations during low Alfvén Mach number magnetic clouds, *Annales Geophysicae*, 31, 1011, 2013.
46. **Kilpua**, E.K.J., A. Isavnin, A. Vourlidas, H.E.J. Koskinen, and L. Rodriguez, On the relationship between coronal mass ejections and magnetic clouds, *Annales Geophysicae*, 31, 1251, 2013.
47. **Kilpua**, E.K.J., H. Hietala, H.E.K. Koskinen, D. Fontaine, and L. Turc, Magnetic field and dynamic pressure fluctuations in coronal mass ejection-driven sheath regions, *Annales Geophysicae*, 31, 1559, 2013.
48. Snekvik, K., Tanskanen, E.I., and **Kilpua**, E.K.J., An automated identification method for Alfvénic streams and their geoeffectiveness, *Journal of Geophysical Research*, 10, 5986, 2013.
49. **Kilpua**, E.K.J., J.G. Luhmann, L.K. Jian, C.T. Russell, and Y. Li, Why have geomagnetic storms been so weak during the recent solar minimum and the rising phase of cycle 24?, *Journal of Atmospheric and Terrestrial Research*, 107, 12, 2014.
50. Isavnin, A., Vourlidas, and E.K.J. **Kilpua**, Three-Dimensional Evolution of Flux-Rope CMEs and Its Relation to the Local Orientation of the Heliospheric Current Sheet, *Solar Physics*, 289, 2141, 2014.
51. Li, Y., J.G. Luhmann, D. Lynch, and E.K.J. **Kilpua**, Magnetic clouds and their solar sources in STEREO era, *Journal of Geophysical Research*, doi:10.1002/2013JA019538, 2014.
52. Yu, W., C.J. Farrugia, N. Lugaz, A.B. Galvin, E.K.J. **Kilpua**, H. Kucharek, C. Möstl, M. Leitner, R.B.C. Torbert, K.D. Simunac, J.G. Luhmann, A. Szabo, L.B. Wilson, K.W. Ogilvie, and J.-A. Sauvaud, A statistical analysis of properties of small transients in the solar wind 2007-2009: STEREO and Wind observations *Journal of Geophysical Research*, 119, 689, 2014.
53. Hietala, H., **Kilpua**, E.K.J., Turner, D.L., and V. Angelopoulos, Depleting effects of ICME-driven sheath regions on the outer electron radiation belt, *Geophysical Research Letters*, 41, 2258, 2014.
54. Liu, Y.D., J.G. Luhmann, P. Kajdič, E.K.J. **Kilpua**, N. Lugaz, N.V. Nitta, C. Möstl, B. Lavraud, S.D. Bale, C.J. Farrugia, and A.B. Galvin, Observations of an extreme storm in interplanetary space caused by successive coronal mass ejections, *Nature Communications* 5, doi:10.1038/ncomms4481, 2014.
55. Turc, L., D. Fontaine, P. Savoini, and E.K.J. **Kilpua**, A model of the magnetosheath magnetic field during magnetic clouds, *Annales Geophysicae*, 32, 157, 2014.
56. Pulkkinen, T., N. Partamies, and E.K.J. **Kilpua**, Substorm occurrence during quiet solar wind driving, *Journal of Geophysical Research*, 119, 2978, 2014.
57. **Kilpua**, E.K.J., M. Mierla, L. Rodriguez, A. Zhukov, A. Vourlidas, and B. Wood, Solar sources of interplanetary coronal mass ejections during the Solar Cycle 23/24 minimum, *Solar Physics*, 289, 3773, 2014
58. Andreeova, K., L. Juusola, E.K.J. **Kilpua**, H.E.J. Koskinen, H., Analysis of double-step response to an interplanetary shock in the dayside magnetosphere, *Annales Geophysicae*, 32, doi:10.5194/angeo-32-1293-2014, 2014.
59. Turc, L., D. Fontaine, P. Savoini, and E.K.J. **Kilpua**, Magnetic clouds' structure in the magnetosheath as observed by Cluster and Geotail: four case studies, *Annales Geophysicae*, 32, 1247, 2014.
60. Myllys, M., E.K.J. **Kilpua**, and T.P. Pulkkinen, Solar wind control of plasma sheet dynamics, 33, 845, *Annales Geophysicae*, 2015.
61. **Kilpua**, E.K.J., E. Lumme, K. Andreeova, A. Isavnin, and H.E.J. Koskinen, Properties and drivers of fast interplanetary shocks near the orbit of the Earth (1995-2013), *Journal of*

- Geophysical Research*, 120, 4112, 2015.
62. **Kilpua**, E.K.J., N. Olsper, A. Grigorievskiy, M.J. Käpylä, E.I. Tanskanen, H. Miyahara, R. Kataoka, J. Pelt, and Y.D. Liu, Statistical study of strong and extreme geomagnetic disturbances and solar cycle characteristics, *Astrophysical Journal*, 806, 272, 2015.
 63. **Kilpua**, E.K.J., H. Hietala, D. Turner, H.E.J. Koskinen, T.I. Pulkkinen, J.V. Rodriguez, G.D., S.G. Claudepierre, and H.E., Spence, Unraveling the Drivers of the Storm-Time Radiation Belt Response, *Geophysical Research Letters*, doi:10.1002/2015GL063542, 2015.
 64. Turner, D. L., T.P., O'Brien, J.F., Fennell, S.G. Claudepierre, J.B. Blake, E.K.J. Kilpua, and Hietala, H., The effects of geomagnetic storms on electrons in Earth's radiation belts, 42, 9176, 2015.
 65. Kataoka, R., D. Shiota, E. **Kilpua**, and K. Keika, Pileup accident hypothesis of magnetic storm on 2015 March 17, *Geophysical Research Letter*, doi:10.1002/2015GL064816, 2015
 66. Lavraud et al. (with **E.K.J. Kilpua**), A small mission concept to the Sun-Earth Lagrangian L5 point for innovative solar, heliospheric and space weather sciences *Journal of Atmospheric and Solar-Terrestrial Physics*, 146, 171, 2016.
 67. Palmerio, E., E.K.J. **Kilpua**, and N. Savani, Planar magnetic structures in coronal mass ejection-driven sheath regions, *Annales Geophysicae*, 34, 313, 2016.
 68. Rodriguez, L., J.J. Masias-Meza, S. Dasso, P. Démoulin, A.N. Zhukov, A. Gulisano, M. Mierla, E.K.J. **Kilpua**, M. West, D. Lacatus, A. Paraschiv, and M. Janvier, Typical profiles and distributions of plasma and magnetic field parameters in magnetic clouds at 1 AU, *Solar Physics*, 291, doi: 10.1007/s11207-016-0955-5, 2016.
 69. Myllys, M., E.K.J. **Kilpua**, B. Lavraud, and T.I. Pulkkinen, Solar wind - magnetosphere coupling efficiency during ejecta and sheath region driven geomagnetic storms, *Journal of Geophysical Research*, 121, doi:10.1002/2016JA022407, 2016.
 70. Plotnikov, I., A.P. Rouillard, J.A. Davies, V. Bothmer, J.P. Eastwood, P. Gallagher, R.A. Harrison, E.K.J. **Kilpua**, C. Möstl, C.H. Perry, and L. Rodriguez, Long-Term Tracking of Corotating Density Structures using Heliospheric Imaging, *Solar Physics*, 291, doi:10.1007/s11207-016-0935-9, 2016
 71. Turc, L., Escoubet, C.P., Fontaine, D., E.K.J. **Kilpua**, and S. Enestam, Cone angle control of the interaction of magnetic clouds with the Earth's bow shock, *Geophysical Research Letter*, 43, doi:10.1002/2016GL068818, 2016.
 72. Yu, W., C.J. Farrugia, A.B. Galvin, N. Lugaz, J.G. Luhmann, K.D.C. Simunac, K.D.C., and E.K.J. **Kilpua**, Small Solar Wind Transients at 1 AU: STEREO Observations (2007-2014) and Comparison with Near-Earth Wind Results (1995 - 2014), *Journal of Geophysical Research*, 6 doi: 10.1002/2016JA022642, 2016
 73. **Kilpua**, E.K.J., M. Madjarska, N. Karna, T. Wiegmann, C. Farrugia, W. Yu, and K. Andreeva, Sources of The Slow Solar wind During the Solar Cycle 23/24 Minimum, *Solar Physics*, 298, doi: 10.1007/s11207-016-0979-x, 2016.
 74. Pulkkinen, T.I., A.P. Dimmock, A. Lakka, A. Osmane, E.K.J. **Kilpua**, M. Myllys, E.I. Tanskanen, and A. Viljanen, Magnetosheath control of solar wind magnetosphere coupling efficiency, *Journal of Geophysical Research*, 121, 8728, doi: 10.1002/2016JA023011, 2016.
 75. Lugaz, N., C. J. Farrugia, R.M. Winslow, N. Al-Haddad, E.K.J. **Kilpua**, P. Riley, Factors affecting the geoeffectiveness of shocks and sheaths at 1 AU, *Journal of Geophysical Research*, 121, doi:10.1002/2016JA023100, 2016.
 76. Dimmock, A., A. Osmane, T.I. Pulkkinen, K. Nykyri, E.K.J. **Kilpua**. Temperature variations in the dayside magnetosheath and their dependence on ion-scale magnetic structures: THEMIS statistics and measurements by MMS, *Journal of Geophysical Research*, 122, 6165, doi: 10.1002/2016JA023729, 2017.

77. Palmerio, E., E.K.J. **Kilpua**, A.W. James, L.M. Green, J. Pomoell, A. Isavnin, G. Valori, Determining the Intrinsic CME Flux Rope Type Using Remote-sensing Solar Disk Observations, *Solar Physics*, 292, doi:10.1007/s11207-017-1063-x, 2017
78. Turc, L. D. Fontaine, C. Escoubet, E. **Kilpua**, and A. Dimmock, Statistical study of the alteration of the magnetic structure of magnetic clouds in the Earth's magnetosheath, 122, 10.1002/2016JA023654, *Journal of Geophysical Research*, 2017.
79. Sanchez-Diaz, E., A. Rouillard, J. A. Davies, B. Lavraud, N. R. Sheeley, R. Pinto, E. **Kilpua**, I. Plotnikov, V. Genot, Observational evidence for the associated formation of blobs and raining inflows in the solar Corona, *Astrophysical Journal Letter*, 835, 10.3847/2041-8213/835/1/L7, 2017.
80. Sanchez-Diaz, E., A. Rouillard, J. A. Davies, B. Lavraud, R. Pinto, E. **Kilpua**, The Temporal and Spatial Scales of Density Structures Released in the Slow Solar Wind During Solar Activity Maximum, *Astrophysical Journal Letter*, 851, doi:10.3847/1538-4357/aa98e2, 2017
81. James, A., L.M. Green, E. Palmerio, G. Valori, H.A.S. Reid, D. Baker, D.H., Brooks, L. van Driel-Gesztelyi, E.K.J. **Kilpua**, On-disc observations of flux rope formation prior to its eruption, 292, 10.1007/s11207-017-1093-4, *Solar Physics*, 2017.
82. Myllys, M., E.K.J. **Kilpua**, and B. Lavraud, Interplay of solar wind parameters and physical mechanisms producing the saturation of the cross-polar cap potential, *Geophysical Research Letters*, 44, doi: <https://doi.org/10.1002/2017GL072676>, 2017
83. Möstl C. A. Isavnin, P. D. Boakes, E. K. J. **Kilpua**, J. A. Davies, R. A. Harrison, D. Barnes, V. Krupar, J. P. Eastwood, S. W. Good, R. J. Forsyth, V. Bothmer, M. A. Reiss, T. Amerstorfer, R. M. Winslow, B. J. Anderson, L. C. Philpott, L. Rodriguez, A. P. Rouillard¹, P. Gallagher and T. L. Zhang, Modeling observations of solar coronal mass ejections with heliospheric imagers verified with the Heliophysics System Observatory, *Space Weather*, 15, 955, doi:10.1002/2017SW001614, 2017.
84. Manchester, W., E. **Kilpua**, Y. D. Liu, N. Lugaz, P. Riley, T., Török, and B. Vrsnak, The physical processes of CME/ICME evolution, *Space Science Reviews*, 10.1007/s11214-017-0394-0, 2017.
85. **Kilpua**, E.K.J., A. Balogh, R. von Steiger, and Y. Liu, Geoeffective properties of solar transients and stream interaction regions, *Space Science Reviews*, 10.1007/s11214-017-0411-3, 2017.
86. **Kilpua** E.K.J., H.E.J. Koskinen, and T.I. Pulkkinen, Coronal Mass Ejections in Interplanetary Space, *Living Reviews in Solar Physics*, doi:10.1007/s41116-017-0009-6, 2017
87. Lumme, E., **Kilpua**, E.K.J., Pomoell J., Optimization of the photospheric electric field estimates, *Solar Physics*, 292, doi:10.1007/s11207-017-1214-0, 2017
88. Harrison, R., J. Davies, D. Barnes, J. Byrne, C. Perry, V. Bothmer, J. Eastwood, P. Gallagher, E. **Kilpua**, C. Moestl, L. Rodriguez, A. Rouillard, D. Odstroil, Coronal mass ejections in the heliosphere: I. Statistical analysis of the observational properties of coronal mass ejections detected in the heliosphere between 2007 and 2017 by STEREO/HI, *Solar Physics*, 293, doi: 10.1007/s11207-018-1297-2, 2017
89. Ala-Lahti, M.M., E.K.J. **Kilpua**, A.P. Dimmock, A. Osmane, T. Pulkkinen, J. Soucek, Statistical analysis of mirror mode waves in interplanetary coronal mass ejection sheath regions, *Annales Geophysics*, 36, doi:10.5194/angeo.36.793-2018, 2018.
90. Möstl, C., T. Amerstorfer, E. Palmerio, A. Isavnin, C. J. Farrugia, C. Lowder, R.M. Winslow, J. Donnerer, E.K.J. **Kilpua**, P.D. Boakes, Forward modeling of coronal mass ejection flux ropes in the inner heliosphere with 3DCORE, *Space Weather*, doi:10.1002/2017SW001735, 2018.
91. Dimmock, A., M. Alho, E. Kallio, S. Pope, T. Zhang, E.K.J. **Kilpua**, T. Pulkkinen, The response of the Venusian plasma environment to the passage of an ICME: hybrid simulation results and Venus Express observations, *Journal of Geophysical Research*, 123, doi: 10.1029/2017JA024852, 2018

92. Juusola, L., Hoilijoki, S., Pfau-Kempf, Y., Ganse, U., Järvinen, R., Battarbee, M., **Kilpua**, E., Turc, L., and Palmroth, M., Fast plasma sheet flows and X line motion in the Earth's magnetotail: results from a global hybrid-Vlasov simulation, 36, doi:10.5194/angeo-36-1183-2018, *Annales Geophysicae*, 2018
93. Palmerio, E., E.K.J. **Kilpua**, C. Möstl, V. Bothmer, A.W. James, L.M. Green, A. Isavnin, J.A. Davies, and R.A. Harrison, Coronal magnetic structure of Earthbound CMEs and in-situ comparison, *Space Weather*, 16, doi:10.1002/2017SW001767, 2018.
94. Blanco-Cano, X., M. Battarbee, L. Turc, A.P. Dimmock, E.K. J. **Kilpua**, S. Hoilijoki, U. Ganse, D.G. Sibeck, P.A. Cassak, R.C. Fear, R. Järvinen, L. Juusola, Y. Pfau-Kempf, R. Vainio, and M. Palmroth, Cavitons and spontaneous hot flow anomalies in a hybrid-Vlasov global magnetospheric simulation, 36, doi:10.5194/angeo-36-1081-2018, *Annales Geophysicae*, 2018.
95. Hoilijoki, S., U. Ganse, D.Sibeck, P.Cassak, R. Fear, M. Battarbee, X. Blanco-Cano, A. Dimmock E.K.J. **Kilpua**, R. Järvinen, L. Juusola, Y. Pfau-Kempf, L. Turc, M. Palmroth, Comparison of FTEs and dayside reconnection with and without a sunward tilt of the southward interplanetary magnetic field, *J. Geophys. Res.*, 124, doi: 10.1029/2019JA026821, 2019
96. Lakka, A., Pulkkinen, T.I., Dimmock, A.P., **Kilpua**, E., Ala-Lahti, M., Honkonen I., Palmroth M., Raukunen, O., CME impact at Earth with low and typical Mach number plasma characteristics, *Ann. Geophysics*, 37, doi:10.5194/angeo-37-561-2019, 2019
97. Morosan, D., E.P. Carley, L.A. Hayes, S.A. Murray, P. Zucca, R.A. Fallows, J. McCauley, E.K.J. **Kilpua**, G. Mann, C. Vocks, P.T. Gallagher, Multiple Regions of Shock Accelerated Particles, *Nature Astronomy*, doi:10.1038/s41550-019-0689-z, 2019.
98. Morosan, D., E.K.J. **Kilpua**, E.K.J., Carley, Variable emission mechanism of a Type IV radio burst, *Astron. Astrophys.* 623, doi:10.1051/0004-6361/201834510, 2019
99. Palmroth, M., R. Vainio, J. Praks, P. Janhunen, E.K.J. Kilpua et al., FORESAIL-1 cubesat mission to measure radiation belt losses and demonstrate de-orbiting, *J. Geophys. Res.*, doi: 10.1029/2018JA026354, 2019.
100. Turner, D., E.K.J. **Kilpua**, H. Hietala, S.G. Claudepierre, T.P. O'Brien, J.F. Fennell, J.B. Blake, A.N. Jaynes, S. Kanekal, D.N. Baker, H.E. Spence, J-F. Ripoll, and G.D. Reeves, The response of Earth's electron radiation belts to geomagnetic storms: Statistics from the Van Allen Probes era including effects from different storm drivers, *J. Geophys. Res.*, 10.1029/2018JA026066, 2019.
101. Pomoell J., E. Lumme. E.K.J., **Kilpua**, Time-dependent data-driven modeling of active region evolution using energy-optimized photospheric electric fields, *Solar Physics*, doi: 10.1007/s11207-019-1430-x, 2019.
102. **Kilpua**, E.K.J., D.L. Turner, A. Jaynes, H. Hietala, H.E.J. Koskinen, A. Osmane, M. Palmroth, T.I. Pulkkinen, R. Vainio, D. Baker, S. Claudepierre, Outer Van Allen radiation belt response to interacting interplanetary coronal mass ejections, *J. Geophys. Res.*, doi:10.1029/2018JA026238, 2019
103. **Kilpua**, E.K.J., N. Lugaz, L. Mays, M. Temmer, Forecasting the Structure and Orientation of Earthbound Coronal Mass Ejections, doi:10.1029/2018SW001944, *Space Weather*, 2019.
104. Barners, D., Davies, J.A., Harrison, R.A., Byrne, J.P., Perry, C.H., Bothmer, V., Eastwood, J.P., Gallagher, P.T., **Kilpua**, E.K.J., Möstl, C.M., Rodriguez, L., Rouillar, A.P., Ostrcil, D., CMEs in the Heliosphere: II. A Statistical Analysis of the Kinematic Properties Derived from Single-Spacecraft Geometrical Modelling Techniques Applied to CMEs Detected in the Heliosphere from 2007 to 2017 by STEREO/HI-1, 294, *Solar Physics*, doi:10.1007/s11207-019-1444-4, 2019
105. Good, S., E.K.J. **Kilpua**, A. Lamoury, R. Forsyth, J., Eastwood, and C. Mostl, Self-Similarity of ICME Flux Ropes in the Inner Heliosphere, doi:10.1029/2019JA026475, *J. Geophys. Res.*, 2019.

106. Lumme E., M. Kazachenko, G. Fisher, B. Welsch, J. Pomoell, and E.K.J. **Kilpua**, Probing the effect of cadence on the estimates of photospheric energy and helicity injections in eruptive active region NOAA AR 11158, 294, *Solar Physics*, doi: <https://doi.org/10.1007/s11207-019-1475-x>, 2019.
107. Ala-Lahti, M., E.K.J. **Kilpua**, J. Soucek, T.I. Pulkkinen, and A.P. Dimmock, Alfvén ion cyclotron waves in sheath regions driven by interplanetary coronal mass ejections, doi:10.1029/2019JA026579, *J. Geophys. Research*, 2019
108. Palmerio, E., C. Scolini, D. Barnes, J. Magdalenic, M. West, A. Zhukov, L. Rodriguez, M. Mierla, D. Morosan, E.K.J. **Kilpua**, J. Pomoell, S. Poedts, Multipoint Study of Successive Coronal Mass Ejections Driving Moderate Disturbances at 1 AU, 878, doi: <https://doi.org/10.3847/1538-4357/ab1850>, *Astrophysical Journal*, 2019
109. Price, D., J. Pomoell, E. Lumme, E.K.J. **Kilpua**, Time-dependent data-driven coronal simulations of AR 12673 from emergence to eruption, *Astronomy & Astrophysics*, 628, doi: <https://doi.org/10.1051/0004-6361/201935535>, 2019
110. **Kilpua**, E.K.J., S. Good, E. Palmerio, E. Asvestari, E. Lumme, M. Ala-Lahti, M. Kalliokoski, D.E. Morosan, J. Pomoell, D. Price, J. Magdalenic, S. Poedts, and Y. Futaana, Multipoint observations of the magnetic structure and coherence of the June 2012 interplanetary flux rope, *Frontiers in Space Physics*, doi:<https://doi.org/10.3389/fspas.2019.00050>, 2019
111. **Kilpua**, E.K.J., D. Fontaine, C. Moissard, M. Ala-Lahti, E. Palmerio, E. Yordanova, S.W. Good, M.M.H., Kalliokoski, E. Lumme, A. Osmane, M. Palmroth, L. Turc, Solar wind properties and geospace impact of coronal mass ejection-driven sheath regions: variation and driver dependence, *Space Weather*, doi:10.1029/2019SW002217, 2019.
112. Sanchez-Diaz, E., A.P., Rouillard, A.P.B. Lavraud, E. **Kilpua**, and J.A., Davies, In-situ measurements of the variable slow solar wind near sector boundaries, *ApJ*, 882. Doi: 10.3847/1538-4357/ab341c, 2019
113. Morosan, D., E. Palmerio, J. Pomoell, R. Vainio, M. Palmroth, E. **Kilpua**, The 3D Location of Shock Particle Acceleration Regions during a Flux Rope Eruption, *A&A*, doi: 10.1051/0004-6361/201937133, 2020
114. Oleynik, P., et al. with E. **Kilpua**, Particle Telescope aboard FORESAIL-1: simulated performance, *Advances in Space Physics*, 66, doi:10.1016/j.asr.2019.11.010, 2020
115. Asvestari, E., S. Heinemann, M. Temmer, J. Pomoell, E. **Kilpua**, and J. Magdalenic, Reconstructing coronal hole areas with EUHFORIA and adapted WSA model: optimising the model parameters, *J. Geophys. Res.*, doi:10.1029/2019JA027173, 2019.
116. Hinterreiter, J., J. Magdalenic, M. Temmer, C. Verbecke, I.C. Jebaraj, E. Samara, E. Asvestari, S. Poedts, E. **Kilpua**, L. Rodriguez, C. Scolini, and A. Isavnin, Testing the background solar wind modelled by EUHFORIA, *Solar Physics*, doi:10.1007/s11207-019-1558-8
117. Reinart et al. with E. **Kilpua**, Coulomb drag propulsion experiments of ESTCube-2 and FORESAIL-1, *Acta Astronautica*, 177, 2020
118. Good, S., M. Ala-Lahti, E. Palmerio, E. **Kilpua**, and A. Osmane, Radial Evolution of Magnetic Field Fluctuations in an Interplanetary Coronal Mass Ejection Sheath, *Astrophys. J.*, 893, doi: 10.3847/1538-4357/ab7fa2, 2020
119. Kalliokoski, M., E.K.J. **Kilpua**, A. Osmane, D.L. Turner, A.N. Jaynes, L. Turc, H. George, and M. Palmroth, Outer radiation belt and inner magnetospheric response to sheath regions of coronal mass ejections: A statistical analysis, *Annales Geophysicae*, 38, doi: 10.5194/angeo-38-683-2020, 2020
120. Morosan, D., E. Palmerio, B. Lynch, E. **Kilpua**, Extended radio emission associated with a breakout eruption from the backside of the Sun, 633, A1141, doi: <https://doi.org/10.1051/0004-6361/201936878>, *Astronomy&Astrophysic*, 2020

121. **Kilpua**, E.K.J., L. Juusola, M. Grandin, A. Kero, S. Dubyagin, N. Partamies, A. Osmane, H. George, M. Kalliokoski, T. Raita, and M. Palmroth, Cosmic noise absorption signature of particle precipitation during ICME sheaths and ejecta, *Ann. Geophysicae* 38, 557–574, 10.5194/angeo-38-557-2020, 2020
122. Scolini, C., E. Chane, M. Temmer, E. **Kilpua**, K. Dissauer, A. Veronig, E. Palmerio, J. Pomoell, M. Dumbovic, J. Guo, L. Rodriguez, S. Poedts, CME–CME Interactions as Sources of CME Geo-effectiveness: The Formation of the Complex Ejecta and Intense Geomagnetic Storm in Early September 2017, *The Astrophysical Journal Supplement Series*, doi: 10.3847/1538-4365/ab6216, 247, 2020
123. Jebaraj, I.C., J. Magdalenic, T. Podladchikova, C. Scolini, J. Pomoell, A. Veronig, K. Dissauer, V. Krupar, E.K.J., **Kilpua**, and S. Poedts, Can radio triangulation help us understand the origin of two subsequent type II radio bursts?, *Astronomy & Astrophysics*, 649, doi: 10.1051/0004-6361/201937273, 2020.
124. Davies, E. R. J. Forsyth; S.W. Good; E.K.J. **Kilpua**, On the Radial Evolution of a Magnetic Cloud: ACE/Wind, ARTEMIS and Juno Observations, *Solar Physics*, 295, 2020
125. Ala-Lahti, M. J., Ruohotie, S. Good, E. **Kilpua**, N. Lugaz, Spatial coherence of interplanetary coronal mass ejection sheaths at 1 AU, *J Geophys. Res.*, 125, doi: 10.1029/2020JA028002, 2020
126. George, H., E.K.J. **Kilpua**, A. Osmane, T. Asikainen, M.M.H. Kalliokoski, C.J. Rodger, S. Dubyagin, M. Palmroth, Outer Van Allen belt trapped and precipitating electron flux responses to two interplanetary magnetic clouds of opposite polarity, *Annales Geophysicae*, 38, doi: 10.5194/angeo-38-931-2020, 2020
127. Huovelin, J., R. Vainio, E. **Kilpua** et al., Solar Intensity X-Ray and Particle Spectrometer SIXS: Instrument Design and First Results, *Space Science Review*, 216, doi: 10.1007/s11214-020-00717-3, 2020
128. Asvetari, E., S.G. Heinemann, M. Temmer, J. Pomoell, E. **Kilpua**, J. Magdalenic, and J.S. Poedts, The impact of coronal hole characteristics and solar cycle activity in reconstructing coronal holes with EUHFORIA, *Journal of Physics: Conference Series*, 1548, doi:10.1088/1742-6596/1548/1/012004, 2020.
129. Milillo, A. et al. (with E. **Kilpua**), Investigating Mercury's Environment with the Two-Spacecraft BepiColombo Mission, *Space Science Review*, 216, doi: 10.1007/s11214-020-00712-8, 2020
130. Barnes, D., J.A. Davies¹, R.A. Harrison, J.P. Byrne¹, C.H. Perry, V. Bothmer, J.P. Eastwood, P.T. Gallagher, E.K.J. **Kilpua**, C. Mostl, L. Rodriguez, A.P. Rouillard, D. Odstrcil, CMEs in the Heliosphere: III. A Statistical Analysis of the Kinematic Properties Derived from Stereoscopic Geometrical Modelling Techniques Applied to CMEs Detected in the Heliosphere from 2008 to 2014 by STEREO/HI-1, *Solar Physics*, 295, 150, 2020.
131. Takahashi, K., L. Turc, E. **Kilpua**, N. Takahashi, A. Dimmock, P. Kajdic, M. Palmroth, Y. Pfau-Kempf, J. Soucek, T. Motoba, M.D. Hartinger, A. Artemyev, H. Singer, U. Ganse, and M. Battarbee, Propagation of Ultralow-Frequency Waves From the Ion Foreshock Into the Magnetosphere During the Passage of A Magnetic Cloud, *J. Geophys. Res.*, 126, doi: 10.1029/2020JA028474, 2021.
132. Poedts, S., A. Lani, C. Scolini, C. Verbeke, N. Wijsen, G. Lapenta, E. Chané, R. Van der Linden, L. Rodriguez, P. Vanlommel, R. Vainio, A. Afanasiev, E. **Kilpua**, J. Pomoell, A. Aran, E. Clarke, A. Thomson, A. Rouillard, R. Pinto, A. Marchaudon, B. Heber, A. Kochanov, J. Raeder, J. Depauw, EUropean Heliospheric FORecasting Information Asset 2.0 EUropean Heliospheric FORecasting Information Asset 2.0, *Journal of Space Weather and Space Climate*, 10, doi:https://doi.org/10.1051/swsc/2020055, 2020

133. Price, D., J. Pomoell and E.K.J. **Kilpua**, The coronal evolution of AR 12473 using time-dependent data-driven magnetofrictional modelling, *Astronomy & Astrophysics*, doi:10.1051/0004-6361/202038925, 2020
134. Morosan, D., E. Palmerio, J. Räsänen, E.K.J. **Kilpua**, J. Magdalenic, B.J., Lynch, A. Kumar, J. Pomoell, M. Palmroth, Electron acceleration and radio emission following the early interaction of two coronal mass ejections, *Astronomy & Astrophysics*, doi: 10.1051/0004-6361/202038801, 2020
135. Davies, E., B. Forsyth, G. Simon, and E. **Kilpua**, On the Radial and Longitudinal Variation of a Magnetic Cloud: ACE, Wind, ARTEMIS and Juno Observations, *Solar Physics*, 295, doi:10.1007/s11207-020-01714-z, 2021
136. Lynch, B., E. Palmerio, C.R. DeVore, M.D. Kazachenko, J.T. Dahlin, J. Pomoell, E.K.J. **Kilpua**, Modeling a Coronal Mass Ejection from an Extended Filament Channel. I. Eruption and Early Evolution, *The Astrophysical Journal*, 914, doi: 10.3847/1538-4357/abf9a9, 2021
137. **Kilpua**, E.K.J., D. Fontaine, S.W. Good, M. Ala-Lahti, A. Osmane, E. Palmerio, E. Yordanova, C. Moissard, L. Hadis, M. Janvier, Magnetic field fluctuation properties of coronal mass ejection-driven sheath regions in the near-Earth solar wind, *Annales Geophysics*, 38, doi: 10.5194/angeo-38-999-2020, 2020
138. Mangano, V. (with E. **Kilpua**), BepiColombo Science Investigations During Cruise and Flybys at the Earth, Venus and Mercury, *Space Science Reviews*, 217, doi: 10.1007/s11214-021-00797-9, 2021
139. Good, S., E.K.J. **Kilpua**, M. Ala-Lahti, A. Osmane, S. Bale, L.-L. Zhao, Cross Helicity of the November 2018 Magnetic Cloud Observed by the Parker Solar Probe, *Astrophys. J. Lett.*, 900, doi: 10.3847/2041-8213/abb021, 2020.
140. Kumari, A., D. Morosan, E.K.J. **Kilpua**, On the occurrence of type IV solar radio bursts in the solar cycle 24 and their association with coronal mass ejections, *Astrophys. J.*, 906, doi: 10.3847/1538-4357/abc878, 2021.
141. **Kilpua**, E.K.J, G. Simon, M. Ala-Lahti, A. Osmane, D. Fontaine, L. Hadid, M. Janvier, E. Yordanova, Statistical analysis of magnetic field fluctuations in CME-driven sheath regions, *Frontiers in Space Physics*, 7, doi: 10.3389/fspas.2020.610278, 2021.
142. Runov, A., M. Grandin, M. Palmroth, M. Battarbee, U. Ganse, H. Hietala, S. Hoilijoki, E. **Kilpua**, Y. Pfau-Kempf, S. Toledo-Redondo, L. Turc, and D. Turner, Ion distribution functions in magnetotail reconnection: Global hybrid-Vlasov simulation results, *Ann. Geophys.*, 34, doi: 10.5194/angeo-39-599-2021, 2021.
143. Zhao, L.-L., G. P. Zank, J. S. He, D. Telloni, Q. Hu, G. Li, M. Nakanotani, L. Adhikari, E. K. J. **Kilpua**, T. S. Horbury, H. O'Brien, V. Evans, and V. Angelini, Turbulence/wave transmission at an ICME-driven shock observed by Solar Orbiter and Wind, *A&A*, 656, doi:https://doi.org/10.1051/0004-6361/202140450, 2021
144. Daglis, I.A., L.C Chang, S. Dasso, N. Gopalswamy, O.V. Khabarova, E. **Kilpua**, R. Lopez, D. Marsh, K. Matthes, D. Nandi, A. Seppälä, K. Shiokawa, R. Thiéblemont, and Q. Zong, Predictability of the variable solar-terrestrial coupling, *Ann. Geophys.*, 39, doi:https://doi.org/10.5194/angeo-39-1013-2021, 2021.
145. Asvestari, E. J. Pomoell, E. **Kilpua**, S. Good, T. Chatzistergos, M. Temmer, E. Palmerio, S. Poedts, J. Magdalenic, Modelling a multi-spacecraft coronal mass ejection encounter with EUFORIA, *A&A*, 654, doi:10.1051/0004-6361/202140315, 2021
146. Pal, S., E. **Kilpua**, S. Good, J. Pomoell, D. Price, Uncovering erosion effects on magnetic flux rope twist, *Astronomy&Astrophysics*, 650, doi:10.1051/0004-6361/202040070, 2021
147. Kolhoff A. et al. (with E. **Kilpua**), The First Widespread Solar Energetic Particle Event Observed by Solar Orbiter on 2020 November 29, 656, *A&A*, doi:https://doi.org/10.1051/0004-6361/202140937, 2021.

148. Morosan, D., Kumari, A., E.K.J. **Kilpua**, A. Hamini, Moving solar radio bursts and their association with coronal mass ejections, 647, doi: 10.1051/0004-6361/202140392, 2021.
149. Lilensten J. (with E. **Kilpua**), Quo vadis, European Space Weather community?, *Journal of Space Weather and Space Climate*, 11, doi: 10.1051/swsc/2021009, 2021.
150. Palmerio, E., E.K.J. Kilpua, O. Witasse, D. Barnes, B. Sánchez-Cano, A.J. Weiss, T. Nieves-Chinchilla, C. Möstl, L.K. Jian, M. Mierla, A.N. Zhukov, J. Guo, L. Rodriguez, P.J. Lowrance, A. Isavnin, L. Turc, Lucile, Y. Futaana, M. Holmström, Mats, CME Magnetic Structure and IMF Preconditioning Affecting SEP Transport, *Space Weather*, 19, doi: 10.1029/2020SW002654, 2021
151. Yordanova E., Z. Vörös, L. Sorriso-Valvo, A. Dimmock, E.K.J. **Kilpua**, A possible link between turbulence and plasma heating, *Astrophys. J.*, 921, doi:10.3847/1538-4357/ac1942, 2021.
152. Hadid L., et al. (with E. **Kilpua**), BepiColombo's cruise phase: unique opportunity for synergistic observations, *Frontiers in Space Physics*, doi: <https://doi.org/10.3389/fspas.2021.718024>, 2021.
153. Turc, L., O.W. Roberts, D. Verscharen, A.P. Dimmock, P. Kajdic, M. Palmroth, Y. Pfau-Kempf, A. Johlander, M. Dubart, E.K.J. **Kilpua**, J. Soucek, K. Takahashi, N. Takahashi, M. Battarbee, and U. Ganse, Transmission of foreshock waves through Earth's bow shock, *Nature Physics*, doi:10.1038/s41567-022-01837-z, 2023.
154. Asvestari, E., T. Rindlishbacher, J. Pomoell, E.K.J. **Kilpua**, The spheromak tilting and how it affects modelling coronal mass ejection, *A&A*, doi: <https://doi.org/10.3847/1538-4357/ac3a73>, 2022
155. **Kilpua**, E.K.J., J. Pomoell, D. Price, R. Sarkar, and E. Asvestari, Estimating the magnetic structure of an erupting CME flux rope from AR12158 using data-driven modelling, *Frontiers in Space Physics*, <https://doi.org/10.3389/fspas.2021.631582>, 2021.
156. Nitta, N., Mulligan, T., **Kilpua** E.K.J., et al., Understanding the Origins of Problem Geomagnetic Storms Associated With "Stealth" Coronal Mass Ejections, *Space Sci. Rev.*, doi: 10.1007/s11214-021-00857-0, 2022.
157. Palmerio, E., T. Nieves-Chinchilla, E. K. J. **Kilpua**, D. Barnes, A.N. Zhukov, L.K. Jian, O. Witasse, G. Provan, C. Tao, L. Lamy, T.J. Bradley, M. Leila Mays, C. Möstl, E. Roussos, Y. Futaana, A. Masters, B. Sánchez-Cano, Magnetic Structure and Propagation of Two Interacting CMEs from the Sun to Saturn, *J. Geophys. Res.*, doi: 10.1029/2021JA029770, 2022.
158. **Kilpua**, E.K.J., S. Good, N. Dresing, R. Vainio, E.E. Davies, R.J. Forsyth, J. Gieseler, B. Lavraud, E. Asvestari, D.E. Morosan, J. Pomoell, D.J. Price, D. Heyner, T.S. Horbury, V. Angelini, H. O'Brien, V. Evans, J. Rodriguez-Pacheco, R. Gómez Herrero, G.C. Ho, R.F. Wimmer-Schweingruber, Multi-spacecraft observations of the sheath structure of an interplanetary coronal mass ejection and related energetic ion enhancement, *A&A*, doi: <https://doi.org/10.1051/0004-6361/202140838>, 2021.
159. Ala-Lahti, M., A. Dimmock, T. Pulkkinen, S. Good, E. Yordanova, L. Turc, E.K.J. **Kilpua**, Transmission of an ICME sheath into the Earth's magnetosheath and the occurrence of traveling foreshocks, *JGR*, doi: <https://doi.org/10.1029/2021JA029896>, 2021.
160. Osmane, A., M. Savola, E. **Kilpua**, H. Koskinen, J.E. Borovsky, and M. Kalliokoski, Quantifying the nonlinear dependence of energetic electron fluxes in the Earth's radiation belts with radial diffusion drivers, *Annales Geophysics*, <https://doi.org/10.5194/angeo-40-37-2022>, 2022.
161. Lumme, E., J. Pomoell, D. J. Price, E.K.J. **Kilpua**, M. D. Kazachenko, G. H. Fisher, B. T. Welsch, Data-driven time-dependent modeling of pre-eruptive coronal magnetic field configuration at the periphery of NOAA AR 11726, *A&A*, 658, doi:10.1051/0004-6361/202038744, 2022

162. Kalliokoski, M. E.K.J. **Kilpua**, A. Osmane, A.N. Jaynes, D.L. Turner, H. George, L. Turc, M. Palmroth, Phase Space Density Analysis of Outer Radiation Belt Electron Energization and Loss during Geoeffective and Nongeoeffective Sheath Regions, *J. Geophys. Res.* 876, doi: <https://doi.org/10.1029/2021JA029662>, 2022.
163. **Kilpua**, E.K.J., S. Good, M. Ala-Lahti, A. Osmane, S.Pal, J. Räsänen, L. Zhao, and S. Bale, Structure and fluctuations of a slow ICME sheath observed at 0.5~au by Parker Solar Probe, *A&A*, doi: 10.1051/0004-6361/202142191, 2022.
164. Rodriguez L et al. (with E.K.J. **Kilpua**), Comparing the Heliospheric Cataloging, Analysis, and Techniques Service (HELCASTS) Manual and Automatic Catalogues of Coronal Mass Ejections Using Solar Terrestrial Relations Observatory/Heliospheric Imager (STEREO/HI) Data, *Solar Physics*, 297, doi: 10.1007/s11207-022-01959-w, 2022.
165. Pal, S., E.K.J. **Kilpua**, S. Good, B. Lynch, E. Palmerio, E. Asvestari, J. Pomoell, and M.L. Stevens, Eruption and Interplanetary Evolution of a Stealth Streamer-blowout CME Observed by PSP at ~0.5 AU, *Frontiers in Astronomy and Space Sciences*, 9, doi:10.3389/fspas.2022.903676, 2022.
166. Kouloumvakos et al. (with E.K.J. **Kilpua**), The first widespread solar energetic particle event of solar cycle 25 on 2020 November 29. Shock wave properties and the wide distribution of solar energetic particles, *Astronomy & Astrophysics*, 660, doi: 10.1051/0004-6361/202142515, 2022.
167. Sishtla, C., J. Pomoell, E. **Kilpua**, S. Good, F. Daei, M. Palmroth, Flux tube dependent propagation of Alfvén waves in the solar corona, *Astronomy & Astrophysics*, 661, doi: 10.1051/0004-6361/202142999, 2022.
168. Good, S., L.M. Hatakka, M.A. Ala-Lahti, J.E. Soljento, A. Osmane, E. **Kilpua**, Cross helicity of interplanetary coronal mass ejections at 1~au, *Monthly Notices of the Royal Astronomical Society*, doi: 10.1093/mnras/stac1388, 2022.
169. Pal, S., D. Nandy, and E. **Kilpua**, Magnetic cloud prediction model for forecasting space weather relevant properties of Earth-directed coronal mass ejections, *A&A*, 665, doi: 10.1051/0004-6361/202243513, 2022.
170. Lehtolainen A., J. Huovelin, S. Korpela, E. **Kilpua**, et al. SUNSTORM 1/X-ray Flux Monitor for CubeSats (XFM-CS): Instrument characterization and first results, *Nuclear Inst. and Methods in Physics Research*, 1035, doi: 10.1016/j.nima.2022.166865, 2022.
171. George, H. A. Osmane, E.K.J. **Kilpua** et al., Estimating Inner Magnetospheric Radial Diffusion Using a Hybrid-Vlasov Simulation, *Frontiers in Astronomy and Space Sciences*, 9, doi: 10.3389/fspas.2022.866455, 2022.
172. Ruohotie, J., E.K.J. **Kilpua**, S. Good, M. Ala-Lahti, Small-scale flux ropes in ICME sheaths, *Frontiers in Astronomy and Space Sciences*, 9, doi:10.3389/fspas.2022.943247, 2022.
173. Morosan, D., J. Pomoell, A., Kumari, R. Vainio, E. **Kilpua**, Shock-accelerated electrons during the fast expansion of a coronal mass ejection, *A&A*, doi:<https://doi.org/10.1051/0004-6361/202244432> 2022.
174. Price, D, J. Pomoell, E.K.J. **Kilpua**, MAFIAT: Magnetic field analysis tools, *Frontiers in Astronomy and Space Sciences*, 9, doi:10.3389/fspas.2022.1076747, 2022
175. Trotta, D., L. Vuorinen, H. Hietala, T. Horbury, N. Dresing, J. Gieseler, A. Kouloumvakos, D.J. Price, F. Valentini, E. **Kilpua**, and R. Vainio, Single-spacecraft techniques for shock parameters estimation: A systematic approach, *Frontiers in Astronomy and Space Sciences*, 9, doi: <https://doi.org/10.3389/fspas.2022.1005672>, 2022
176. Kumari, A., D. Morosan, E.K.J. **Kilpua**, and F. Daei, Type II radio bursts and their association with coronal mass ejections in solar cycles 23 and 24, *A&A*, 675, doi:10.1051/0004-6361/202244015, 2023.

177. Kumari, A., D. Price, F. Daei, J. Pomoell, E.K.J. Kilpua, Effects of optimisation parameters on data-driven magnetofrictional modelling of active regions, *A&A*, 675, doi: 10.1051/0004-6361/202244650, 2023.
178. George, H., G. Reeves, G. Cunningham, M.M.H. Kalliokoski, E. **Kilpua**, A. Osmane, M. G. Henderson, S. K. Morley, S. Hoilijoki, and M. Palmroth, Contributions to loss across the magnetopause during an electron dropout event, *J. Geophys. Res.*, doi:10.1029/2022JA030751, 2023.
179. Trotta, D., H. Hietala, T. Horbury, N. Dresing, R. Vainio, L.B., Wilson, I. Plotnikov, E. **Kilpua**, Multi-spacecraft observations of shocklets at an interplanetary shock, *Monthly Notices of the Royal Astronomical Society*, 520, doi: <https://doi.org/10.1093/mnras/stad104>, 2023.
180. Rodriguez, L. et al. (with E. **Kilpua**), The Eruption of 22 April 2021 as Observed by Solar Orbiter: Continuous magnetic reconnection and heating after the impulsive phase, *Solar Physics*, 298, doi: 10.1007/s11207-022-02090-6, 2023.
181. Hoilijoki, S., E.K.J. **Kilpua**, A. Osmane, M.M.H. Kalliokoski, H. George, M. Savola, T. Asikainen, Using Mutual Information to investigate non-linear correlation between AE index, ULF Pc5 wave activity and electron precipitation, *Frontiers in Astronomy and Space Sciences*, doi:10.3389/fspas.2022.987913, 2023.
182. Dresing, N. et al. (with E.K.J. **Kilpua**), The 17 April 2021 widespread solar energetic particle event, *A&A*, 674, doi:10.1051/0004-6361/202345938, 2023.
183. Morosan, D. J. Pomoell, A. Kumari, E.K.J. **Kilpua**, and R. Vainio, A type II solar radio burst without a coronal mass ejection, *A&A*, 657, doi:10.1051/0004-6361/202245515, 2023.
184. Kalliokoski, M., M.G. Henderson, S.K. Morley, E.K.J. **Kilpua**, A. Osmane, L. Olfier, D.L. Turner, A. Jaynes, H. George, S. Hoilijoki, L. Turc, M. Palmroth, Outer Radiation Belt Flux and Phase Space Density Response to Sheath Regions: Van Allen Probes and GPS Observations, *J. Geophys. Res.* Doi: <https://doi.org/10.1029/2022JA030708>, 2023.
185. Daie, F., J. Pomoell, D.J. Price, A. Kumar, S. Good, and E.K.J. **Kilpua**, Modeling the formation and eruption of coronal structures by linking data-driven magnetofrictional and MHD simulations for AR 12673, *A&A*, 676, doi:10.1051/0004-6361/202346183, 2023.
186. Soljento, J. S. Good, E.K.J. **Kilpua**, and A. Osmane, Imbalanced Turbulence Modified by Large-scale Velocity Shears in the Solar Wind, *Astrophys. J. Lett.*, 946, doi: 10.3847/2041-8213/acc071, 2023
187. Ala-Lahti, M., T.I. Pulkkinen, J. Ruohotie, M. Akhavan-Tafti, S.W. Good, E.K.J. **Kilpua**, Multipoint Observations of the Dynamics at an ICME Sheath-Ejecta Boundary, *Astrophys. J.*, 956, doi:10.3847/1538-4357/acf99e, 2023.
188. C. Sishtla, J. Pomoell, V. Rami, E. **Kilpua**, G. Simon, Modelling the interaction of Alfvénic fluctuations with coronal mass ejections in the low solar corona, *A&A*, 679, doi: 10.1051/0004-6361/202347250, 2023.
189. **Kilpua**, E.K.J., R. Vainio, C. Cohen et al, Energetic ion enhancements in sheaths driven by interplanetary coronal mass ejections, *Astronomy and Space Sciences*, <https://doi.org/10.1007/s10509-023-04201-6>, 2023
190. Good, S., O.K. Rantala, A.S-M. Jylhä, C.H.K. Chen, C. Möstl, and E.K.J. **Kilpua**, Turbulence Properties of Interplanetary Coronal Mass Ejections in the Inner Heliosphere: Dependence on Proton Beta and Flux Rope Structure, *Astrophys. Lett.*, 956, doi:10.3847/2041-8213/acfd1c, 2023.
191. Wagner, A. E. K. J. **Kilpua**, S. Poedts, D.J., Price, J. Pomoell, A. Kumari, F. Daei, and R. Sarkar, The Automatic Identification and Tracking of Coronal Flux Ropes - Part I: Footpoints and Fluxes, *A&A*, 677, doi:<https://doi.org/10.1051/0004-6361/202346260>, 2023.
192. Palmerio, E. et al (E.K.J. **Kilpua**) Modeling a Coronal Mass Ejection from an Extended Filament Channel. II. Interplanetary Propagation to 1 au, *Astrophys. J.*, doi: 10.3847/1538-4357/ad0229, 958, 2023

193. Marius et al. (with E.K.J. **Kilpua**), Foresail-2: Space Physics Mission in a Challenging Environment, *Space Sci. Rev.*, 219, doi:10.1007/s11214-023-01012-7, 2023.
194. C. Sishtla, I.C. Jebaraj, J. Pomoell, N. Magyar, M. Pulupa, Marc E. **Kilpua**, S.D. Bale, The Effect of the Parametric Decay Instability on the Morphology of Coronal Type III Radio Bursts, 959, doi:10.3847/2041-8213/ad137e, 2023.
195. Pal., S., L. Balmaceda, A.J. Weiss, T. Nieves-Chinchilla, F. Carcaboso, E. **Kilpua**, C. Möstl, Global insight into a complex-structured heliosphere based on the local multi-point analysis, *Frontiers in Astronomy and Space Sciences*, 10, doi:10.3389/fspas.2023.1195805, 2023.
196. Kumar, M., K. Murawski, L. Kadowaki, B. Kuzma, and E. K. J. Kilpua, Impulsively generated waves in two-fluid plasma in the solar chromosphere: Heating and generation of plasma outflows, *A&A*, A&A, 681, <https://doi.org/10.1051/0004-6361/202245638>, 2024
197. Wagner, A, S. Bourgeois, E.K.J. **Kilpua**, et. al. The Automatic Identification and Tracking of Coronal Flux Ropes -- Part II: New Mathematical Morphology-based Flux Rope Extraction Method and Deflection Analysis, accepted for publication, *A&A*
198. Zhang, P., D. Morosan, A. Kumari, E. Kilpua, Spatially resolved radio signatures of electron beams in a coronal shock, in revision, *A&A*
199. Sarkar, R., J. Pomoell, E. **Kilpua**, E. Asvestari, N. Wijsen, A. Maharana, and S. Poedts, Studying the spheromak rotation in data-constrained CME modelling with EUHFORIA and assessing its effect on the Bz prediction, in revision, *A&A*
200. Sarkar, R., N. Srivastava, N. Gopalswamy, and E. **Kilpua**, Modelling the magnetic vectors of ICMEs at different heliocentric distances with INFROS", in revision, *A&A*
201. Lehtolainen, A. E.K.J. **Kilpua**, J. Huovelin, Evolution of plasma parameters and element abundances during M and X class solar flares and coronal mass ejections observed with X-ray Flux Monitor on-board SUNSTORM 1, in revision *A&A*
202. Morosan, D. E., J. Pomoell, J., C. Palmroos, N. Dresing, E. Asvestari, R. Vainio, E.K.J. **Kilpua**, J. Gieseler, A. Kumari, and I.C. Jebaraj, Connecting remote and in situ observations of shock-accelerated electrons associated with a coronal mass ejection, in revision *A&A*
203. Trotta, D. et al. (with E. **Kilpua**), Properties of an interplanetary shock observed at 0.07 and 0.7 Astronomical Units by Parker Solar Probe and Solar Orbiter, in revision *A&A*
204. **Kilpua**, E.K.J., S. Good, M. Ala-Lahti, A. Osmane, and V. Koikkalainen, Permutation entropy and complexity analysis of large-scale solar wind structures, in revision *Ann. Geophysics*
205. Sishtla, C., J. Pomoell, N. Magyar, E. **Kilpua**, S. Good, Validity of using Elsässer variables to study the interaction of compressible solar wind fluctuations with a coronal mass ejection, in revision, *A&A*
206. Salice, J., H. Nesse, N. Partamies, E. **Kilpua**, A. Kavanagh, M. Dectte, E. Babu, and C. Smith-Johnsen, Identifying conditions for the high-energy tail of energetic electron precipitation, submitted to *Earth and Other Planetary Systems*

B non-peer-reviewed scientific writing

B3 Article in conference proceedings

- [1] Huttunen , K.E.J., H.E.J. Koskinen, R. Schwenn, Response of magnetic indices to different solar wind disturbances, *Proceeding of the Second Solar Cycle and Space Weather Conference*, ESA, 339 - 342, 2002.
- [2] Huttunen , K. E. J., H. E. J. Koskinen, R. Schwenn, A. dal Lago, Causes of major storms near the last solar maximum, *Proceeding of 10th European Solar Physics Meeting*, ESA, 137-140,

2002.

- [3] Pulkkinen, T.I., H.E.J. Koskinen, K.E.J. Huttunen, K. Kauristie, E.I. Tanskanen, M. Palmroth, and G.D. Reeves, Effects of magnetic storms on substorm evolution, Proceedings of ICS-6, 2002.

C Scientific books

C1 Published scientific monograph

- [1] Koskinen & Kilpua: Physics of Earth's Radiation Belts – Theory and Observations, Springer, Open access, <https://link.springer.com/book/10.1007/978-3-030-82167-8>, doi: 10.1007/978-3-030-82167-8, 2022

D Publications intended for professional communities

- [1] Kilpua & Koskinen: Introduction to Plasma Physics, Limes Ry., 2017

G Thesis

D2 Master's thesis

- [1] Koronan massapurkaukset ja magneettiset myrskyt, University of Helsinki, June, 2000

D4 Doctoral thesis, articles

- [1] Interplanetary shocks, magnetic clouds and magnetospheric storms, University of Helsinki, April, 2005