

Full list of publications - Prof Giles Harrison

- | Number | Year | Title and citation |
|--------|------|---|
| 334 | 2024 | Harrison, R.G. and Riddick, J.C.: Atmospheric electricity observations at Eskdalemuir Geophysical Observatory, <i>Hist. Geo Space. Sci.</i> (in press) |
| 333 | | Giles Harrison , Weather and the Solar Eclipse - Nature's Meteorological Experiment. In: Henrike Lange and Tom McLeish (eds), Eclipse and Revelation: Total Solar Eclipses in Science, History, Literature and the Arts , Oxford University Press, 384pp |
| 332 | | C. Miller, K. Nicoll, C. Westbrook, and R.G. Harrison Evaluating atmospheric electricity changes as an indicator of fog formation <i>Quart Jour Roy Meteorol Soc</i> (in press) |
| 331 | | M.W. Airey, R.G. Harrison , K.L. Aplin, C. Pfrang, B. McGinness, Electrical effects on droplet behaviour , <i>J. Phys.: Conf. Ser.</i> 2702 012015 (2024) doi:10.1088/1742-6596/2702/1/012015 |
| 330 | | Nicoll, K.A., V. Escobar-Ruiz, R.G. Harrison , M.H.P. Ambaum, A.A. Alkamali, A charge emitter for use in evaluating aircraft rainfall enhancement , <i>J. Phys.: Conf. Ser.</i> 2702 012005 (2024) doi: 10.1088/1742-6596/2702/1/012005 |
| 329 | | C. Miller, K. Nicoll, C. Westbrook, and R.G. Harrison , The effect of fog on atmospheric electric fields , <i>J. Phys.: Conf. Ser.</i> 2702 012002 (2024) doi:10.1088/1742-6596/2702/1/012002 |
| 328 | | B. McGinness, R.G. Harrison , K.L. Aplin and M.W. Airey, Evaluation of a point discharge sensor as an atmospheric electricity instrument , <i>J. Phys.: Conf. Ser.</i> 2702 012004 (2024) doi:10.1088/1742-6596/2702/1/012004 |
| 327 | | R.G. Harrison , Keri A. Nicoll, Maarten H.P. Ambaum, Charge in non-thunderstorm clouds and fogs , <i>J. Phys.: Conf. Ser.</i> 2702 012001 (2024) doi:10.1088/1742-6596/2702/1/012001 |
| 326 | 2023 | Giles Harrison , “...since records began” – Christopher Wren’s first automatic weather station (Department of Meteorology and Reading Physics blog, September 2023) |
| 325 | | R. Giles Harrison , Veronica Escobar-Ruiz, Keri A. Nicoll, Maarten H.P. Ambaum, Isolated corona current monitoring using a compensated light-emitting diode as an unpowered sensor, <i>Rev Sci Instrum</i> 94, 094504 (2023) https://doi.org/10.1063/5.0170176 |
| 324 | | M.C. Prosser, P.D. Williams, G.J. Marlton, R.G. Harrison , Evidence for Large Increases in Clear-Air Turbulence over the Past Four Decades, <i>Geophys Res Lett</i> 50, e2023GL103814. https://doi.org/10.1029/2023GL103814 |
| 323 | | R. Giles Harrison and Kristian Schlegel, Atmospheric electricity observations by Reinhold Reiter around Garmisch-Partenkirchen <i>Hist. Geo Space. Sci.</i> 14, 71-75 https://doi.org/10.5194/hgss-14-71-2023 (2023). |
| 322 | | Denisenko, V.V., Rycroft, M.J., Harrison, R.G. , Mathematical model of the global ionospheric electric field generated by thunderstorms <i>Bulletin of the Russian Academy of Sciences:Physics</i> 87, 1, 118-123 (2023) DOI: 10.31857/S0367676522700260 |
| 321 | | R.G. Harrison , K.A. Nicoll, M. Joshi, E. Hawkins, Empirical evidence for multidecadal scale Global Atmospheric Electric Circuit modulation by the El Niño-Southern Oscillation <i>Environ Res Lett</i> 17, 124048 (2022) |
| 320 | | K.A. Nicoll, A. Readle, A. Al Kamali, R.G. Harrison , Surface atmospheric electric field variability at a desert site <i>J Atmos Sol-Terr Phys</i> 241, 105977 https://doi.org/10.1016/j.jastp.2022.105977 (2022) |
| 319 | | R. Giles Harrison and Keri A. Nicoll, The electricity of extensive layer clouds , <i>Weather</i> , 77, 11, 379-383 (2022) |
| 318 | | Ellard R. Hunting, Liam J. O’Reilly, R. Giles Harrison , Konstantine Manser, Sam J. England, Beth H. Harris, Daniel Robert. Observed electric charge of insect |

- swarms and their contribution to atmospheric electricity *iScience* 105241 (2022)
<https://doi.org/10.1016/j.isci.2022.105241>
- 317 **R. Giles Harrison**, Keri A. Nicoll, Graeme J. Marlton, Douglas J. Tilley, Pejman Iravani
 Ionic charge emission into fog from a remotely piloted aircraft
Geophys Res Lett 49, <https://doi.org/10.1029/2022GL099827>
- 316 **R.G. Harrison**, and J.C. Riddick, Atmospheric electricity observations at Lerwick
 Geophysical Observatory, *Hist. Geo Space. Sci.*, 13, 133–146,
<https://doi.org/10.5194/hgss-13-133-2022> , 2022.
- 315 **R.G. Harrison**, G.J. Marlton, M.H.P. Ambaum, K.A. Nicoll, [Modifying natural droplet
 systems by charge injection](#). *Phys Rev Res* 4, L022050. doi:
 10.1103/PhysRevResearch.4.L022050
- 314 Robin S. Matoza, David Fee, Jelle D. Assink *et al* (including **R. Giles Harrison**),
[Atmospheric waves and global seismoacoustic observations of the January 2022
 Hunga eruption, Tonga](#), *Science* 377, 6601, 95-100, 2022
 doi:10.1126/science.abo7063
- 313 Edward Hanna, Karen Aplin, Halldor Bjornsson, Robert G. Bryant, John Cappelen,
 Robert Fausto, Xavier Fettweis, Edward Graham, **R. Giles Harrison**, Trausti Jonsson,
 John Penman, Dilkushi de Alwis Pitts, Alexander J. Bilton, Meteorological effects and
 impacts of the solar eclipse of 10 June 2021 over the British Isles, Iceland and
 Greenland, *Weather* 78, 5, 124-135 (2023) <https://doi.org/10.1002/wea.4175>
- 312 **Giles Harrison**, Pressure anomalies from the January 2022 Hunga Tonga-Hunga
 Ha’apai eruption *Weather* 77, 3 87-90 (2022) <https://doi.org/10.1002/wea.4170>
- 311 **R.G. Harrison**, Measuring electrical properties of the lower troposphere using
 enhanced meteorological radiosondes, *Geosci. Instrum. Method. Data Syst.*
 11, 37–57, 2022 <https://doi.org/10.5194/gi-11-37-2022>
- 310 M.H.P. Ambaum, T. Auerswald, R. Eaves, **R.G. Harrison**, Enhanced attraction
 2021 between drops carrying fluctuating charge distributions *Proc Roy Soc Lond A* 478,
 2257, <https://doi.org/10.1098/rspa.2021.0714>, 2022
- 309 Airey, M.W., Nicoll, K.A., **Harrison, R.G.**, Marlton, G.J., [Characteristics of desert
 precipitation derived from a ceilometer dataset](#), *Atmosphere* 12, 1245,
 10.3390/atmos12101245, 2021
- 308 **Harrison G.**, Bennett, A. (2021) [Electricity measurements](#). In: Foken T., (ed.),
[Handbook of Atmospheric Measurements](#). Springer Nature, Switzerland, 431-456.
- 307 **R.G. Harrison** and S.D. Burt, [Quantifying uncertainties in climate data: measurement
 limitations of naturally ventilated thermometer screens](#) *Environ Res
 Commun* 3, 061005 (2021)
- 306 **R. Giles Harrison**, Keri A. Nicoll, Douglas Tilley, Pejman Iravani, Charge emission from
 a remotely piloted aircraft into fog *Proceedings of the 2021 meeting of the
 Electrostatics Society of America, University of Oklahoma, June 2021*
- 305 Saunders C.P.R, **R.G. Harrison**, Obituary: John Latham (1937-2021) *Weather*
<http://doi.org/10.1002/wea.4025>
- 304 Graeme Marlton, Andrew Charlton-Perez, **Giles Harrison**, Inna Polichtchouk, Alain
 Hauchecorne, Philippe Keckhut, Robin Wing, Thierry Leblanc, and
 Wolfgang Steinbrecht, [Using a global network of temperature lidars to identify
 temperature biases in the upper stratosphere in ECMWF reanalyses](#) *Atmos Chem
 Phys* 21, 6079–6092, 10.5194/acp-21-6079-2021 (2021)
- 303 Maarten Ambaum and **Giles Harrison**, [Consider a spherical bird](#) Reading physics blog
R. Giles Harrison, Keri A. Nicoll, Douglas J. Tilley, Graeme J. Marlton, Stefan Chindea,
 Gavin P. Dingley, Pejman Iravani, David J. Cleaver, Jonathan L. du Bois, David Brus
[Demonstration of a remotely piloted atmospheric measurement and charge release
 platform for geoengineering](#) *J.Atmos Oceanic Tech*, 38, 1, 63-75 (2021)

- 302 2020 **R.G. Harrison**, [Make your own Met measurements: build a digital barometer for about £10](#), *Weather* 76, 2, 45-47 (2021)
- 301 **R.G. Harrison** and M. Lockwood, [Rapid indirect solar responses observed in the lower atmosphere](#), *Proc Roy Soc A* 476, 2241 (2020)
- 300 **R.G. Harrison**, [Behind the curve: a comparison of historical sources for the Carnegie curve of the global atmospheric electric circuit](#), *Hist. Geo Space Sci* 11, 207-213, 2020
- 299 Ellard R. Hunting, James Matthews, Pablo Fernández de Arróyabe Hernández, Sam J. England, Konstantinos Kourtidis, Kuang Koh, Keri Nicoll, **R. Giles Harrison**, Konstantine Manser, Colin Price, Snezana Dragovic, Michal Cifra, Anna Odzimek & Daniel Robert, [Challenges in coupling atmospheric electricity with biological systems](#) *Int J Biometeorol* (2020)
- 298 **R.G. Harrison** and G.J. Marlton, [Fair weather electric field meter for atmospheric science platforms](#) *J. Electrostatics* 107, 103489, (2020)
- 297 K.A. Nicoll, **R.G. Harrison**, G.J. Marlton, M.W. Airey. [Consistent dust electrification from Arabian Gulf sea breezes](#) *Environ Res Lett* 15, 8 (2020)
- 296 K.L. Aplin, **R.G. Harrison**, M. Fullekrug, B. Lanchester, F. Becker [A scientific career launched at the start of the space age: Michael Rycroft at 80](#), *Hist. Geo Space Sci.*, 11, 105–121, 2020 doi: 10.5194/hgss-11-105-2020 (2020)
- 295 **R. Giles Harrison**, Keri A. Nicoll, Evgeny Mareev, Nikolay Slyunyaev, Michael J. Rycroft, [Extensive layer clouds in the global electric circuit: their effects on vertical charge distribution and storage](#) *Proc Roy Soc A* 476: 20190758 (2020)
- 294 **Giles Harrison**, [Cold war nuclear tests changed rainfall thousands of miles away](#) *The Conversation*
- 293 **R.G. Harrison**, Keri A. Nicoll, Maarten H.P. Ambaum, Graeme J. Marlton, Karen L. Aplin, Michael Lockwood, [Precipitation modification by ionisation](#) *Phys Rev Lett* 124 (19) 10.1103/PhysRevLett.124.198701
- 292 **R. Giles Harrison** and Barry C. Harrison, [Climatological summaries of Thomas Hughes' meteorological data, for Stroud, UK \(1775-1813\)](#), *Geosci Data J.* 7, 1, 44-60, 10.1002/gdj3.90 (2020)
- 291 **Giles Harrison** and Graeme Marlton, [Pressure on the boiling point](#), *Weather* 75 (4), 128-129 (2020)
- 290 2019 **Giles Harrison** and Stephen Burt, [Shall I compare thee to a summer's day?...](#) *Weather* 75 (6), 172-174, <https://doi.org/10.1002/wea.3662> (2020) [Preprint](#)
- 289 Denisenko V., Rycroft M.J., **Harrison R.G.**, A Mathematical Model of the [Ionospheric Electric Field Which Closes the Global Electric Circuit](#). In: G. Kocharyan and A. Lyakhov, (eds.), *Trigger Effects in Geosystems*, Springer Proceedings in Earth and Environmental Sciences (2019). pp455-463 https://doi.org/10.1007/978-3-030-31970-0_48
- 288 **R.G. Harrison**, G.J. Marlton, K.L. Aplin, K.A. Nicoll, [Shear-induced electrical changes in the base of thin layer-cloud](#) *Quart Jour Roy Meteorol Soc.* 145 (725), 3667-3679, 2019. <https://doi.org/10.1002/qj.3648>
- 287 Darielle Dexheimer, Martin Airey, Erika Roesler, Casey Longbottom, Fan Mei, Keri Nicoll, **R. Giles Harrison**, Stefan Kneifel, Graeme Marlton, Paul Williams. [Evaluation of ARM Tethered Balloon System instrumentation for supercooled liquid water and distributed temperature sensing](#) *Atmos. Meas. Tech.*, 12, 6845–6864, 2019.
- 286 **R. Giles Harrison** and Wen Xiaohang, [Meteorological Measurements and Instrumentation](#), *China Science Publishing & Media Ltd*, ISBN 9787030576422, 2019 (Chinese edition)
- 285 Graeme Marlton, Andrew Charlton-Perez, **Giles Harrison**, Elisabeth Blanc, Láslo Evers, Alexis Le Pichon, Pieter Smets, [Meteorological source variability in atmospheric gravity wave parameters derived from a tropical infrasound station](#)

- J Geophys Res- Atmospheres*, 124, 8, 4352-4364, 2019
- 284 Keri Nicoll, Martin Airey, Corrado Cimarelli, Alec Bennett, **Giles Harrison**, Damien Gaudin, Karen Aplin, Kuang Liang Koh, Marco Knuever, Graeme Marlton, [First in-situ observations of gaseous volcanic plume electrification](#) *Geophys Res Lett* 16425786,10.1029/2019GL082211, 2019
- 283 K.A. Nicoll, **R.G. Harrison**, V. Barta, J. Bor, R. Brugge, A. Chillingarian, J. Chum, A.K. Georgoulas, A. Guha, K. Kourtidis, M. Kubicki, E. Mareev, J. Matthews, H. Mkrtchyan, A. Odzimek, J.-P. Raulin, D. Robert, H.G. Silva, J. Tacza, Y. Yair, A global atmospheric electricity monitoring network for climate and geophysical research *J Atmos Sol-terr phys* 184, 18-29 (2019) <https://doi.org/10.1016/j.jastp.2019.01.003>
- 282 Hunting ER, **Harrison RG**, Bruder A, van Bodegom PM, van der Geest HG, Kampfraath AA, Vorenhout M, Admiraal W, Cusell C and Gessner MO. Atmospheric Electricity Influencing Biogeochemical Processes in Soils and Sediments. *Front. Physiol.* 10:378. doi: 10.3389/fphys.2019.00378 (2019)
- 281 B. Courtier, T. Stein, **R.G. Harrison**, K.Hanley, J. Wilkinson, [Intensification of Single Cell Storms Prior to Lightning Onset](#) *Atmos Sci Lett*, 10.1002/asl.873 (2019)
- 280 Marlton, G.J., Charlton Perez A., **Harrison R.G.**, Lee C., Calculating Atmospheric Gravity Wave Parameters from Infrasound Measurements. In: A. Le Pichon et al. (eds.), [Infrasound Monitoring for Atmospheric Studies](#), Springer, 2019.
- 2018
- 279 M. van der Does, P. Knippertz, P. Zschenderlein, **R.G. Harrison** and J.-B. Stuut, (2018) [The mysterious long-range transport of giant mineral dust particles](#). *Science Advances.* 4 (12),
- 278 V.V. Denisenko, M.J. Rycroft, **R.G. Harrison**, [Mathematical simulation of the ionospheric electric field as a part of the global electric circuit](#) (2018). *Surveys in Geophysics* 40, 1, 1-35
- 277 Andrew Charlton-Perez, Sally Wolkowski, Nina Brooke, Helen Dacre, Paul Davies, **R. Giles Harrison**, Pete Inness, Doug Johnson, Elizabeth McCrum, Sean Milton 2018. [Meteorological training for the digital age: A Blueprint for a new curriculum](#). *WMO Bulletin* 67(2), 62 (2018).
- 276 **R.G. Harrison** and K.A. Nicoll, Fair weather criteria for atmospheric electricity measurements *J Atmos Sol-terr phys* 179, 239-250 (2018) <https://doi.org/10.1016/j.jastp.2018.07.008>
- 275 Denisenko V.V., Rycroft M.J., **Harrison R.G.**, Influence of relief and oceans on the Global Electric Circuit. Proceedings of VIth International conference Atmosphere, Ionosphere, Safety / edited by I.V. Karpov, O.P. Borchevkina. Kaliningrad, 2018. Part 1. pp40-45. ISBN 978-5-9971-0490-0
- 274 **R. Giles Harrison**, Keri A. Nicoll, Graeme J. Marlton, Claire L. Ryder, Alec J. Bennett, [Saharan dust plume charging observed over the UK](#), *Environ Res Lett* 13 054018 (2018)
- 273 J.C. Matthews and **R.G. Harrison**, Meeting Report: CTR Wilson Meeting 2016, *Weather* <https://doi.org/10.1002/wea.3223>
- 272 2017 **R.G. Harrison**, Meeting report: [Atmospheric Electricity at Durham](#) (27th May 2017), *Weather*, (March 2018), 73, 3, 82-83 doi: 10.1002/wea.3197
- 271 **R. Giles Harrison**, Graeme Marlton, Keri Nicoll, Martin Airey, and Paul Williams, A self-calibrating wide range electrometer for in-cloud measurements *Rev Sci Instrum* **88**, 126109 <https://doi.org/10.1063/1.5011177> (2017)
- 270 K.L. Aplin and **R.G. Harrison**, Solar-driven variation in the atmosphere of Uranus *Geophys Res Lett* **44** <https://doi.org/10.1002/2017GL075374> (2017)
- 269 K.A. Nicoll, **R.G. Harrison**, H.G. Silva, R. Salgado., M. Melgao, D. Bortoli. [Electrical sensing of the dynamical structure of the planetary boundary layer](#) *Atmos Res* **202**, 81-95 (2018)

- 268 **R. Giles Harrison** and Suzanne L. Gray, [The weather's response to a solar eclipse](#), *Astronomy and Geophysics*, **58**, 4.11-4.16 (2017)
- 267 **Giles Harrison**, Martin Airey, Graeme Marlton, Keri Nicoll, Paul Williams, [Volcanic Disruption](#), *Meteorological Technology International*, September 2017, 54-56 (2017)
- 265 Thomas Frame, **Giles Harrison**, Tim Hewson, Nigel Roberts, [Meteorological risk: extra-tropical cyclones, tropical cyclones and convective storms](#), In: Karmen Poljansek et al (Editors), *Science for disaster risk management 2017: Knowing better and losing less*, EUR 28034 EN, Publications Office of the European Union, Luxembourg 2017 ISBN 978-92-79-60678-6, doi: 10.2788/688605, JRC102482
- 265 Martin Airey, **R. Giles Harrison**, Keri Nicoll, Paul Williams, and Graeme Marlton, [A miniature oscillating microbalance for sampling ice and volcanic ash from a small airborne platform](#) *Rev Sci Instrum* **88**, 086108 [10.1063/1.4998971](#) (2017)
- 264 **R.G. Harrison**, K.A. Nicoll, K.L. Aplin, [Evaluating stratiform cloud base charge remotely](#), *Geophys Res Lett*, **44**, [10.1002/2017GL073128](#) (2017)
- 263 **R.G. Harrison**, K.A. Nicoll, K.L. Aplin, [Remote sensing of cloud base charge](#) Proceedings of the 2017 meeting of the Electrostatics Society of America, University of Ottawa, June 2017.
- 262 **R. Giles Harrison**, Gavin Pretor-Pinney, Graeme J. Marlton, Graeme D. Anderson, Daniel J. Kirshbaum, Robin J. Hogan, Asperitas – a newly identified cloud supplementary feature, *Weather* **72** (May 2017), 5, 132-141 (2017)
- 261 K.L. Aplin, A.A. Briggs, **R.G. Harrison**, G.J. Marlton, Measuring ionizing radiation in the atmosphere with a new balloon-borne detector *Space Weather* **15**, 5, 663-672 (2017) [10.1002/2017SW001610](#)
- 260 Ralph D. Lorenz, Lynn D.V. Neakrase, John P. Anderson, **R. Giles Harrison**, Keri A. Nicoll, Point discharge current measurements beneath dust devils, *J Atmos Sol Terr Phys* 150–151,55–60 <http://dx.doi.org/10.1016/j.jastp.2016.10.017>
- 259 H.G. Silva, F. Lopes, S. Pereira, K. Nicoll, S.M. Barbosa, R. Conceição, S. Neves, **R.G. Harrison**, M. Collares Pereira, Saharan dust electrification perceived by a triangle of atmospheric electricity stations in Southern Portugal *J. Electrostatics* **84**, 106-120, (2016) <https://doi.org/10.1016/j.elstat.2016.10.002>
- 258 Roy Yaniv, Colin G. Price, Keri A. Nicoll, **R. Giles Harrison**, Ilya Usoskin, Balloon measurements of the vertical ionization profile over southern Israel and comparison to mid-latitude observations *J Atmos Sol-Terr Phys* **149**, 87–92 (2016)
- 257 K.L. Aplin and **R.G. Harrison** (2016) [Determining solar effects in Neptune's atmosphere](#). *Nature Comms.* **7**, 11976 doi: 10.1038/ncomms11976
- 256 A.M. Portas, L.M. Barnard, C. Scott, **R.G. Harrison**, The National Eclipse Weather Experiment: use and evaluation of a citizen science tool for schools' outreach. *Phil. Trans. R. Soc. A* **374**, 20150223. (doi:10.1098/rsta.2015.0223) (2016)
- 255 F. Lopes, H.G. Silva, R. Salgado, M. Potes, K.A. Nicoll, **R.G. Harrison**, Atmospheric electrical field measurements near a fresh water reservoir and the formation of the Lake Breeze *Tellus A* **2016**, 68, [31592](#) (2016)
- 254 K.A. Nicoll and **R.G. Harrison**, Stratiform cloud electrification: comparison of theory with multiple in-cloud measurements *Quart Jour Roy Meteorol Soc* **142**, 2679–2691 (2016) [10.1002/qj.2858](#)
- 253 L. Barnard, A. Portas, S.L. Gray and **R.G. Harrison**, The National Eclipse Weather Experiment: An assessment of citizen scientist weather observations *Phil Trans Roy Soc A* **374**, 20150220 (doi:10.1098/rsta.2015.0220) (2016)
- 252 **R.G. Harrison** and E. Hanna, The solar eclipse: a natural meteorological experiment, *Phil Trans Roy Soc A* **374** 20150225 (<http://dx.doi.org/10.1098/rsta.2015.0225>) (2016)
- 251 S.L. Gray and **R.G. Harrison**, Eclipse-induced wind changes over the British Isles on

- the 20 March 2015, *Phil Trans Roy Soc A* **374**, 20150224
(doi:10.1098/rsta.2015.0224) (2016)
- 250 K.L. Aplin, A.J. Bennett, **R.G. Harrison** and I.M.P. Houghton, Electrostatics and in situ sampling of volcanic plumes. In: Mackie S., Cashman C., Ricketts H., Rust A. and Watson M. (eds) *Volcanic ash: hazard observation and monitoring* Elsevier, Amsterdam ISBN 978-0-08-100405-0 (2016)
- 249 **R.G. Harrison**, G.J. Marlton, P.D. Williams, K.A. Nicoll, [Coordinated weather balloon solar radiation measurements during a solar eclipse](#), *Phil Trans Roy Soc A* **374**, 20150221 (doi:10.1098/rsta.2015.0221) (2016)
- 248 **R.G. Harrison**, E. Barth , F. Esposito , J. Merrison , F. Montmessin, K.L. Aplin , C. Borlina, J.J. Berthelier, G. Déprez, W.M. Farrell , I.M.P. Houghton, N.O. Renno , K.A. Nicoll, S.N. Tripathi, M. Zimmerman, Applications of electrified dust and dust devil electrostatics to Martian atmospheric electricity, *Space Science Reviews* **203**, 1–4, 299–345 [DOI: 10.1007/s11214-016-0241-8](#) (2016)
- 247 Christiane Helling, **R. Giles Harrison**, Farideh Honary, Declan A. Diver, Karen Aplin, Ian Dobbs-Dixon, Ute Ebert, Shu-ichiro Inutsuka, Francisco J. Gordillo-Vazquez, Stuart Littlefair, [Atmospheric electrification in dusty, reactive gases in the solar system and beyond](#). *Surveys in Geophysics* **37**, 4, 705-756 DOI: 10.1007/s10712-016-9361-7 (2016)
- 246 2015 C. Price, **R.G. Harrison**, M.J. Rycroft, [Impact of solar variability on the global electric circuit](#). In: J. Liliensten, T. Dudok de Wit and K. Matthes (Editors) *Earth's climate response to a changing Sun*, 4.8 pp281-288, EDP Sciences, 2015 ISBN 978-2-7598-1733-7
- 245 M.J. Owens, C.J. Scott, A.J. Bennett, S.R. Thomas, M. Lockwood, **R.G. Harrison**, and M.M. Lam, Lightning as a space-weather hazard: UK thunderstorm activity modulated by the passage of the heliospheric current sheet *Geophysical Research Letters*, **42** (22). 9624-9632. ISSN 0094-8276 doi: 10.1002/2015GL066802 (2015)
- 244 **R.G. Harrison**, K.A. Nicoll, M.H.P. Ambaum, On the microphysical effects of observed cloud edge charging *Quart Jour Roy Meteorol Soc* **141**, 2690-2699, [doi: 10.1002/qj.2554](#) (2015)
- 243 Irina A. Mironova, Karen L. Aplin, Frank Arnold, Galina A. Bazilevskaya, **R. Giles Harrison**, Alexei A. Krivolutsky, Keri A. Nicoll, Eugene V. Rozanov, Esa Turunen, Ilya G. Usoskin, Energetic particle influence on the Earth's atmosphere, *Space Science Reviews* **194**, 1–96 (2015) [DOI 10.1007/s11214-015-0185-4](#)
- 242 O.P. Tripathi, M. Baldwin, A. Charlton-Perez, M. Charron, S.D. Eckermann, E. Gerber, R.G. Harrison, D.R. Jackson, B-M Kim, Y. Kuroda, A. Lang, S. Mahmood, R. Mizuta, G. Roff, M. Sigmond, S-W Son, The predictability of extra-tropical winter Stratosphere and its impacts on the skills of Tropospheric sub-seasonal Forecasts, *Quart Jour Roy Meteorol Soc* **141**, 689, 987–1003 (2015) [doi: 10.1002/qj.2432](#)
- 241 R. Conceição, M. Melgão, H.G. Silva, K. Nicoll, **R.G. Harrison**, A.H. Reis, Transport of the smoke plume from Chiado's fire in Lisbon (Portugal) sensed by atmospheric electric field measurements *Air Quality, Atmosphere & Health* (2015) 1-9, 10.1007/s11869-015-0337-4
- 240 G.J. Marlton, **R.G. Harrison**, K.A. Nicoll and P.D. Williams, A balloon-borne accelerometer technique for measuring atmospheric turbulence *Rev Sci Instrum* **86**, 016109 (2015), <http://dx.doi.org/10.1063/1.4905529>
- 239 **R.G. Harrison**, K.A. Nicoll, Y. Takahashi, Y.Yair, High energy particles and atmospheric processes *Environ. Res. Lett.* **10** (2015) 100201 [doi:10.1088/1748-9326/10/10/100201](#)

- 238 Vladimir Makhmutov, Galina Bazilevskaya, Yuri Stozhkov, Maxim Philippov, Yoav Yair, Roy Yaniv, **Giles Harrison**, Keri Nicoll, Karen Aplin, [Cosmic ray measurements in the atmosphere at several latitudes in October 2014](#), Proc 34th International Cosmic Ray Conference, 30 July- 6 August, 2015, The Hague, The Netherlands
- 237 K.L. Aplin, **R.G. Harrison**, Ions in the Atmosphere. In: Gerald R. North (editor-in-chief), John Pyle and Fuqing Zhang (editors). *Encyclopedia of Atmospheric Sciences*, 2nd edition, Vol 3, pp. 9-13 (2015)
- 236 2014 H. Silva, R. Conceição, M. Melgão, K. Nicoll, P. Mendes, M. Tlemçani, A.H. Reis, **R.G. Harrison**, Atmospheric electric field measurements in urban environment and the pollutant aerosol weekly dependence, *Environ. Res. Lett.* **9** [114025](#) (2014)
- 235 M. Owens, C. Scott, M. Lockwood, **R.G. Harrison**, L. Barnard, K.A. Nicoll, C.E. Watt, A.J. Bennett, Modulation of UK lightning by heliospheric magnetic field polarity, *Environ Res Lett* **9** 115009 (2014) [doi:10.1088/1748-9326/9/11/115009](#)
- 234 G. Elhalel, Y. Yair, K. Nicoll, C. Price, Y. Reuveni, **R.G. Harrison**, Influence of short term solar disturbances on the fair weather conduction current *J. Space Weather Space Clim.* **4** A26 (2014) [DOI: 10.1051/swsc/2014022](#)
- 233 J. Tacza, J.-P. Raulin, E. Macotela, E. Norabuena, G. Fernandez, E. Correia, M.J. Rycroft, **R.G. Harrison**, A new South American network to study the atmospheric electric field and its variations related to geophysical phenomena *J Atmos Sol-Terr Phys* **120**, 70–79 (2014)
- 232 K.L. Aplin and **R.G. Harrison**, Atmospheric electric fields during the Carrington flare *Astronomy & Geophysics* **55** (5): 5.32-5.37 (2014) [doi: 10.1093/astrogeo/atu218](#)
- 231 **R.G. Harrison**, K.A. Nicoll and K.L. Aplin, [Vertical profile measurements of lower troposphere ionisation](#), *J Atmos Sol-Terr Phys* **119**, 203–210 (2014)
- 230 **R.G. Harrison** and K.A. Nicoll, Active optical detection of cloud from a balloon platform *Rev Sci Instrum* **85**, 066104 (2014); [doi: 10.1063/1.4882318](#)
- 229 K.A. Nicoll and **R.G. Harrison**, Detection of lower tropospheric responses to solar energetic particles at mid-latitudes *Phys Rev Lett* **112**, [225001](#) (2014)
- 228 C.J. Scott, **R.G. Harrison**, M.J. Owens, M. Lockwood, L. Barnard, Evidence for solar wind modulation of lightning *Environ Res Lett* **9** 055004 [doi:10.1088/1748-9326/9/5/055004](#)
- 227 **R.G. Harrison**, K.L. Aplin, M.J. Rycroft, Brief Communication: Earthquake–cloud coupling through the global atmospheric electric circuit, *Nat. Hazards Earth Syst. Sci.* **14**, 773-777, 2014. [doi:10.5194/nhess-14-773-2014](#)
- 226 M. Lockwood, H. Nevanlinna, L. Barnard, M.J. Owens, **R.G. Harrison**, A.P. Rouillard, and C.J. Scott, Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr – Part 4: Near-Earth solar wind speed, IMF, and open solar flux *Ann Geophys* **32**, 383-399, 2014 [doi:10.5194/angeo-32-383-2014](#)
- 225 M. Lockwood, H. Nevanlinna, M. Vokhmyanin, D. Ponyavin, S. Sokolov, L. Barnard, M.J. Owens, **R.G. Harrison**, A.P. Rouillard, and C.J. Scott, Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr – Part 3: Improved representation of solar cycle 11 *Ann Geophys* **32**, 367-381, 2014 [doi:10.5194/angeo-32-367-2014](#)
- 224 **R. Giles Harrison**, [Fair Weather Atmospheric Electricity: its Origin and Applications](#), Proceedings of the 2014 ESA Annual Meeting on Electrostatics, June 17-19, 2014 University of Notre Dame, Indiana

- 223 K.A. Nicoll, **R.G. Harrison**, [Surface atmospheric electrical responses to solar energetic particles at mid-latitudes](#), XV International Conference on Atmospheric Electricity, 15-20 June 2014, Norman, Oklahoma
- 222 K.A. Nicoll, **R.G. Harrison**, [Ahead in the clouds: detecting cloud from radiosondes](#), *Meteorological Technology International*, April 2014, 44-47.
- 221 **R. Giles Harrison**, *Meteorological measurements and instrumentation*, Wiley, 280pp, Chichester [ISBN: 978-1-118-74580-9](#) (2014)
- 220 2013 J.-B. Renard, S.N. Tripathi, M. Michael, A. Rawal, G. Berthet, M. Fullekrug, **R.G. Harrison**, C. Robert, M. Tagger, and B. Gaubicher, [In situ detection of electrified aerosols in the upper troposphere and stratosphere](#), *Atmos. Chem. Phys.*, 13, 11187-11194, doi:10.5194/acp-13-11187-2013, 2013
- 219 M. Lockwood, L. Barnard, H. Nevanlinna, M.J. Owens, **R.G. Harrison**, A.P. Rouillard, and C.J. Davis, [Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr – Part 2: A new reconstruction of the interplanetary magnetic field](#), *Ann Geophys*, 31, 1979-1992, doi:10.5194/angeo-31-1979-2013, 2013.
- 218 M. Lockwood, L. Barnard, H. Nevanlinna, M.J. Owens, **R.G. Harrison**, A.P. Rouillard, and C.J. Davis, [Reconstruction of geomagnetic activity and near-Earth interplanetary conditions over the past 167 yr – Part 1: A new geomagnetic data composite](#), *Ann Geophys*, 31, 1957-1977, doi:10.5194/angeo-31-1957-2013, 2013
- 217 Martin Füllekrug, Ivana Kolmasova, Ondrej Santolik, Thomas Farges, József Bór, Alec Bennett, Michel Parrot, William Rison, Ferruccio Zanotti, Enrico Arnone, Andrew Mezentsev, Radek Lan, Ludek Uhlir, **Giles Harrison**, Serge Soula, Oscar van der Velde, Jean-Louis Pinçon, Christiane Helling and Declan Diver, [Electron acceleration above thunderclouds](#) *Env Res Lett* 8 035027 (2013) doi:10.1088/1748-9326/8/3/035027
- 216 K.L. Aplin and **R.G. Harrison**, [Lord Kelvin's atmospheric electricity measurements](#) *History of Geo- and Space Sciences* 4, 83-95, 2013 doi:10.5194/hgss-4-83-2013
- 215 **R.G. Harrison**, K.A. Nicoll and A.G. Lomas, [Geiger tube coincidence counter for lower atmosphere radiosonde measurements](#) *Rev Sci Instrum* 84, 076103 (2013); doi: 10.1063/1.4815832
- 214 A.J. Bennett and **R.G. Harrison**, Lightning-induced extensive charge sheets provide long range electrostatic thunderstorm detection, *Phys Rev Lett* 111, 045003 (2013)
- 213 A. Rawal, S.N. Tripathi, M. Michael, A.K. Srivastava, **R.G. Harrison**, [Quantifying the importance of galactic cosmic rays in cloud microphysical processes](#) *J.Atmos Sol-Terr Phys* 102, 243-251, <http://dx.doi.org/10.1016/j.jastp.2013.05.017>
- 212 G.J. Marlton, **R.G. Harrison**, and K.A. Nicoll, Atmospheric point discharge current measurements using a temperature-compensated logarithmic current amplifier *Rev Sci Instrum* 84, 066103 (2013); doi: 10.1063/1.4810849
- 211 **R.G. Harrison** and M.H.P. Ambaum [Electrical signature in polar night cloud base variations](#) *Environ. Res. Lett.* 8 015027 doi: 10.1088/1748-9326/8/1/015027 (2013)
- 210 R.G. Harrison, [The Carnegie Curve](#) *Surv Geophys* 34, 2, 209-232, DOI: 10.1007/s10712-012-9210-2 (2013)
- 209 Martin Füllekrug, Declan Diver, Jean-Louis Pinçon, Alan D.R. Phelps, Anne Bourdon, Christiane Helling, Elisabeth Blanc, Farideh Honary, **R. Giles Harrison**, Jean-Andre´ Sauvau, Jean-Baptiste Renard, Mark Lester, Michael Rycroft, Mike Kosch, Richard B. Horne, Serge Soula, Stéphane Gaffet, Energetic charged particles above thunderclouds *Surv Geophys* 34, 1, 1-41 DOI 10.1007/s10712-012-9205-z (2013)

- 208 **R.G. Harrison**, K.L. Aplin and M.J. Rycroft, [Earthquake-cloud coupling through the global atmospheric electric circuit](#), nhess-2013-431: <http://www.nat-hazards-earth-syst-sci-discuss.net/1/7271/2013/>
- 207 **G. Harrison**, K.A. Nicoll, G. Marlton, P.D. Williams, [Balloon-borne measurements for Earth weather and Space Weather](#), *Meteorological Technology International*, August 2013, 79-82.
- 206 K.A. Nicoll and **R.G. Harrison**, [Potential solar influence on clouds through atmospheric electrical coupling](#), EPSC Abstracts Vol. 8, EPSC2013-353, 2013
- 205 **R.G. Harrison**, K.L. Aplin, K.A. Nicoll, I.M.P. Houghton, J. Lidgard and C.J. Davis, [Space weather balloon measurements in the upper troposphere lower stratosphere region](#), EPSC Abstracts Vol. 8, EPSC2013-180, 2013
- 204 G.J. Marlton, **R.G. Harrison**, K.A. Nicoll, [Atmospheric Point Discharge Currents measured with a bi-polar logarithmic current amplifier](#), EPSC Abstracts Vol. 8, EPSC2013-181, 2013
- 203 2012 **R.G. Harrison**, [Aerosol-induced correlation between visibility and atmospheric electricity](#) *J. Aerosol Sci* 52, 121-126.
- 202 **R.G. Harrison**, K.A. Nicoll and A.G. Lomas, Programmable data acquisition system for research measurements from meteorological radiosondes *Rev Sci Instrum* **83**, 036106 (2012) doi: 10.1063/1.3697717
- 201 S.L. Gray and **R.G. Harrison**, [Diagnosing eclipse-induced wind changes](#) *Proc Roy Soc Lond A* 468, 2143 1839-1850 (2012) doi: 10.1098/rspa.2012.0007
- 200 K.A. Nicoll and **R.G. Harrison**, Balloon-borne disposable radiometer *Rev Sci Instrum* **83**, 025111 (2012) doi: 10.1063/1.3685252
- 199 **R.G. Harrison** and C.R. Wood, Ventilation effects on humidity measurements in thermometer screens *Quart Jour Roy Meteorol Soc* **138**, 665, 1140-1120 DOI: 10.1002/qj.985 (2012)
- 198 M.J. Rycroft and **R.G. Harrison**, Electromagnetic atmosphere-plasma coupling: The global atmospheric electric circuit, *Space Science Rev* 168, 1, 363-384 (2012) doi: 10.1007/s11214-011-9830-8
- 197 K.A. Nicoll and **R.G. Harrison**, Cloud droplet detector for radiosonde use *Proc. Aerosol Society Conf*, 36-38, 2012
- 196 **R.G. Harrison**, Aerosol Effects on visibility and atmospheric electricity *Proc. Aerosol Society Conf*, 8-10, 2012
- 195 2011 **R.G. Harrison**, [The cloud chamber and CTR Wilson's legacy to atmospheric science](#), *Weather* **66** (10), 276-279, doi: 10.1002/wea.830 (2011)
- 194 **R.G. Harrison**, M. Joshi, K. Pascoe, [Inferring convective responses to El Niño with atmospheric electricity measurements at Shetland](#) *Environ Res Lett* 6 (2011) 044028
- 193 K.A. Nicoll, **R.G. Harrison**, Z. Ulanowski, Observations of Saharan dust layer electrification *Environ Res Lett*, **6**, 1 (2011) 014001 <http://stacks.iop.org/1748-9326/6/014001>
- 192 **R.G. Harrison**, Lag-time effects on a naturally ventilated large thermometer screen *Quart Jour Roy Meteorol Soc* **137**, 655, 402-408 <http://dx.doi.org/10.1002/qj.745> (2011)
- 191 M. Lockwood, **R.G. Harrison**, M.J. Owens, L. Barnard, T. Woollings, and F. Steinhilber, [The solar influence on the probability of relatively cold UK winters in the future](#) *Environ Res Lett* 6 034004 doi:10.1088/1748-9326/6/3/034004
- 190 **R.G. Harrison**, [Fair Weather Atmospheric Electricity](#) *J. Phys.: Conf. Ser.* 301 012001 (2011) doi: 10.1088/1742-6596/301/1/012001

- 189 K.A. Nicoll and **R.G. Harrison**, [Charge measurements in stratiform cloud from a balloon based sensor](#) *J. Phys.: Conf. Ser.* 301 012003 (2011) doi: 10.1088/1742-6596/301/1/012003
- 188 **R.G. Harrison**, M.H.P. Ambaum and M. Lockwood, [Cloud base height and cosmic rays](#) *Proc Roy Soc Lond A* 467, 2777-2791, (2011) doi:10.1098/rspa.2011.0040
- 187 C.R. Wood and **R.G. Harrison**, [Mining the geophysical archive: scorch marks from the sky](#) *Weather* 66, 2, 39-41 (2011) <http://dx.doi.org/10.1002/wea.657>
- 186 Rycroft, M.J. and **R.G. Harrison**, A.C./D.C. atmospheric global electric circuit phenomena, General Assembly and Scientific Symposium, 2011 XXXth URSI (International Union of Radio Science), 1- 3, 10.1109/URSIGASS.2011.6050770
- 185 Ambaum, M.H.P., **R.G. Harrison**, J. Buiting, and Th. Beckers, The chaos machine: analogue computing rediscovered (2). *Elektor*, **418**, 72-75, 2011 (also published in German, French, Dutch, Spanish)
- 184 Ambaum, M.H.P., and **R.G. Harrison**, The chaos machine: analogue computing rediscovered (1). *Elektor*, **416**, 76-79, 2011 (also published in German, French, Dutch, Spanish)
- 183 2010 **R.G. Harrison** and M.H.P. Ambaum, [Observing Forbush decreases in cloud at Shetland](#) *J Atmos Solar-Terr Phys* **72** (2010) 1408–1414 doi: 10.1016/j.jastp.2010.09.025
- 182 K.L. Aplin and **R.G. Harrison**, Compact cosmic ray detector for unattended atmospheric ionisation monitoring *Rev Sci Instrum* **81**, 12 DOI: 10.1063/1.3514986 (2010)
- 181 L. Gray, J. Beer, M. Geller, J.D. Haigh, M. Lockwood, K. Matthes, U. Cubasch, D. Fleitmann, **G. Harrison**, L. Hood, J. Luterbacher, G.A. Meehl, D. Shindell, B. van Geel, and W. White, Solar influence on climate, *Rev. Geophys.*, 48, RG4001 doi:10.1029/2009RG000282 (2010)
- 180 M. Lockwood, C. Bell, T. Woollings, **R.G. Harrison**, L.J. Gray and J.D. Haigh, [Top-down solar modulation of climate: evidence for centennial-scale change](#) *Environ. Res. Lett.*, **5**, 034008, (2010)
- 179 K. Walesby and **R.G. Harrison**, A thermally-stable tension meter for atmospheric soundings using kites *Rev Sci Instrum* **81**, 076104 doi: 10.1063/1.3465560 (2010)
- 178 K.A. Nicoll and **R.G. Harrison**, [Experimental determination of layer cloud edge charging from cosmic ray ionisation](#), *Geophys. Res. Lett.*, 37, L13802, doi:10.1029/2010GL043605 (2010)
- 177 **R.G. Harrison**, K.A. Nicoll, Z. Ulanowski, T.A. Mather, [Self-charging of the Eyjafjallajökull volcanic ash plume](#), *Environ Res Lett* **5** 024004 (2010) <http://stacks.iop.org/1748-9326/5/024004>
- 176 M. Lockwood, **R.G. Harrison**, T. Woollings, and S.K. Solanki, [Are cold winters in Europe associated with low solar activity?](#) *Environ Res Lett* **5** 024001 (2010) doi: 10.1088/1748-9326/5/2/024001
- 175 **R.G. Harrison**, [Natural ventilation effects on temperatures within Stevenson screens](#) *Quart Jour Roy Meteorol Soc* 136, 646, 253-259 (2010)
- 174 **R.G. Harrison**, K.L. Aplin and M.J. Rycroft, [Atmospheric electricity coupling between earthquake regions and the ionosphere](#) *J. Atmos Solar-Terr Physics* **72**, 376-381 (2010) <http://dx.doi.org/10.1016/j.jastp.2009.12.004>

- 173 **R.G. Harrison** and I. Usoskin, [Solar modulation in surface atmospheric electricity](#) *J. Atmos Solar-Terr Physics* 72, 176-182 (2010)
http://dx.doi.org/10.1016/j.jastp.2009.11.006.
- 172 Duplissy, J., Enghoff, M. B., Aplin, K. L., Arnold, F., Aufmhoff, H., Avngaard, M., Baltensperger, U., Bondo, T., Bingham, R., Carslaw, K., Curtius, J., David, A., Fastrup, B., Gagné, S., Hahn, F., **Harrison, R. G.**, Kellett, B., Kirkby, J., Kulmala, M., Laakso, L., Laaksonen, A., Lillestol, E., Lockwood, M., Mäkelä, J., Makhmutov, V., Marsh, N. D., Nieminen, T., Onnela, A., Pedersen, E., Pedersen, J. O. P., Polny, J., Reichl, U., Seinfeld, J. H., Sipilä, M., Stozhkov, Y., Stratmann, F., Svensmark, H., Svensmark, J., Veenhof, R., Verheggen, B., Viisanen, Y., Wagner, P. E., Wehrle, G., Weingartner, E., Wex, H., Wilhelmsson, M., and Winkler, P. M.: Results from the CERN pilot CLOUD experiment, *Atmos. Chem. Phys.*, **10**, 1635-1647, doi:10.5194/acp-10-1635-2010 (2010)
- 171 K. Nicoll and **G. Harrison**, [Rising to the Challenge: Research radiosonde high-altitude systems](#) *Meteorological Technology International*, November 2010, 140-143
- 170 K.A. Nicoll, Z. Ulanowski, **R.G. Harrison**, P.H. Kaye, Balloon-borne charge measurements within a Saharan dust layer *Proc. Aerosol Society Conf*, 44-46, 2010
- 169 K.L. Aplin and **R.G. Harrison**, Ion-induced aerosol variations in the atmospheres of the outer planets *Proc. Aerosol Society Conf*, 47-49, 2010
- 168 2009 K.A. Nicoll and **R.G. Harrison**, [Vertical current flow through extensive layer clouds](#) *J. Atmos Solar-Terr Physics* 71, 12, 1219-1221 (2009) doi:10.1016/j.jastp.2009.09.011
- 167 A.J. Bennett and **R.G. Harrison**, [Evidence for global circuit current flow through water droplet layers](#), *J. Atmos Solar-Terr Physics* **71**, 12, 1219-1221 (2009)
doi:10.1016/j.jastp.2009.04.011
- 166 **R.G. Harrison**, A.M. Heath, R. J. Hogan and G.W. Rogers, Comparison of balloon-carried atmospheric motion sensors with Doppler lidar turbulence measurements *Rev Sci Instrum* **80**, 026108, 10.1063/1.3086432 (2009)
- 165 **R.G. Harrison**, [Two daily smoke maxima in eighteenth century London air](#), *Atmos Environ* 43, 1364-1366 (2009) http://dx.doi.org/10.1016/j.atmosenv.2008.11.034
- 164 **R.G. Harrison** and M.H.P. Ambaum, Observed atmospheric electricity effect on clouds, *Environ. Res. Lett.* **4** 014003 (2009)
- 163 K.A. Nicoll, and **R.G. Harrison**, A lightweight balloon-carried cloud charge sensor, *Rev Sci Instrum* **80**, 014501 (2009) DOI: 10.1063/1.3065090
- 162 C.R. Wood, and **R.G. Harrison**, An anthropogenic snowfall event in the UK: an example of urban weather modification? *Weather* **64**, 10, 277-280 (2009)
- 161 J. Duplissy et al, Results from the CERN pilot CLOUD experiment *Atmos. Chem. Phys. Discuss.*, 9, 18235-18270, 2009
- 160 C.R. Wood, **R.G. Harrison**, [Some reports of snowfall from fog during the UK winter of 2008/09](#). http://arxiv.org/abs/0902.1326
- 159 **R.G. Harrison**, Nuclear explosion effects on atmospheric electricity *Proc. Aerosol Society Conf*, 2009
- 158 2008 **R.G. Harrison**, K.L. Aplin, F. Leblanc, Y.Yair, Planetary Atmospheric Electricity, *Space Science Reviews* **137**, 5-10 doi: 10.1007/s11214-008-9419-z (2008)
- 157 K.L. Aplin, **R.G. Harrison** and M.J. Rycroft, [Investigating Earth's atmospheric electricity: a role model for planetary studies](#) *Space Sci Rev* 137, 11-27
doi: 10.1007/s11214-008-9372-x (2008)

- 156 Michael J. Rycroft, **R. Giles Harrison**, Keri A. Nicoll and Evgeny A. Mareev, An Overview of Earth's Global Electric Circuit and Atmospheric Conductivity *Space Sci Rev* **137**, 83-105 doi: 10.1007/s11214-008-9368-6 (2008)
- 155 **R.G. Harrison** and H. Tammet, Ions in the terrestrial atmosphere and other solar system atmospheres *Space Sci Rev* **137**, 107-118 doi: 10.1007/s11214-008-9356-x (2008)
- 154 G.A. Bazilevskaya, I.G. Usoskin, E.O. Flückiger, **R.G. Harrison**, L. Desorgher, R.B. Bütikofer, M.B. Krainev, V.S. Makhmutov, Y.I. Stozhkov, A.K. Svirzhetskaya, N.S. Svirzhetsky, G.A. Kovaltsov, Cosmic ray induced ion production in the atmosphere *Space Sci Rev* **137**, 149-173 doi: 10.1007/s11214-008-9339-y (2008)
- 153 S.N. Tripathi, M. Michael, and **R.G. Harrison**, Profiles of Ion and Aerosol Interactions in Planetary Atmospheres *Space Sci Rev* **137**, 193-211 doi: 10.1007/s11214-008-9367-7 (2008)
- 152 J. Kazil, **R.G. Harrison**, N. Lovejoy, Tropospheric new particle formation and the role of ions *Space Science Reviews* **137**, 241-255 doi: 10.1007/s11214-008-9388-2 (2008)
- 151 M.R. James, L. Wilson, S.J. Lane, J.S. Gilbert, T.A. Mather, **R.G. Harrison**, R.S. Martin, Electrical charging of volcanic plumes, *Space Sci Rev* **137**, 399-418 doi: 10.1007/s11214-008-9362-z (2008)
- 150 **R. Giles Harrison**, Nicola Chalmers and Robin J. Hogan, [Retrospective cloud determinations from surface solar radiation measurements](#) *Atmos Res* **90**, 54-62 (2008) doi:10.1016/j.atmosres.2008.04.001
- 149 K.A. Nicoll and **R.G. Harrison**, A double-Gerdien instrument for simultaneous bipolar air conductivity measurements on balloon platforms, *Rev Sci Instrum* **79**, 084502 (2008)
- 148 A.J. Bennett and **R.G. Harrison**, Surface measurement system for the atmospheric electrical vertical conduction current density, with displacement current correction *J. Atmos Solar-Terr Physics* **70**, 1373-1381, doi: 10.1016/j.jastp.2008.04.014
- 147 **R.G. Harrison** and K.A. Nicoll, Air-earth current density measurements at Lerwick; implications for seasonality in the global electric circuit *Atmos Res* **89**, 1-2, 181-193, doi:10.1016/j.atmosres.2008.01.008
- 146 **R.G. Harrison** and M.H.P. Ambaum, Enhancement of cloud formation by droplet charging *Proc Roy Soc Lond A* **464**, 2561-2573 doi: 10.1098/rspa.2008.0009
- 145 **R.G. Harrison**, [Discrimination between cosmic ray and solar irradiance effects on clouds, and evidence for geophysical modulation of cloud thickness](#) *Proc Roy Soc Lond A* **464**, 2575-2590 doi: 10.1098/rspa.2008.0081
- 144 M.K. Latha, A.J. Bennett, E.J. Highwood and **R.G. Harrison**, [Retrieval of global atmospheric electrical activity at a polluted urban site.](#) *J Phys:Conf* **142**, 012013 (2008)
- 143 A.J. Bennett and **R.G. Harrison**, [Variability in surface atmospheric electric field measurements.](#) *J Phys:Conf* **142**, 012046 (2008)
- 142 F. Leblanc, K.L. Aplin, Y. Yair, **R.G. Harrison**, J.P. Lebreton, M. Blanc, (eds), *Planetary Atmospheric Electricity*. Springer, Dordrecht, 532pp. ISBN 987-0-387-87663-4 (2008)
- 141 2007 **R.G. Harrison**, G.W. Rogers, and R.J. Hogan, A three-dimensional magnetometer for motion sensing of a balloon-carried atmospheric measurement package *Rev Sci Instrum* **78**, 12, 124501 DOI: 10.1063/1.2815349 (2007)
- 141 **R.G. Harrison** and F. Märckz, Heliospheric timescale identified in surface atmospheric electricity *Geophys Res Lett* **34**, L23816, doi:10.1029/2007GL031714 (2007)

- 140 A.J. Bennett and **R.G. Harrison**, Atmospheric electricity in different weather conditions *Weather* **62**, 10, 277-283, (2007)
- 139 **R.G. Harrison** and A.J. Bennett, [Multi-station synthesis of early twentieth century surface atmospheric electricity measurements for upper tropospheric properties](#) *Adv Geosci* **13**, 17-23 (2007)
- 138 A.J. Bennett and **R.G. Harrison**, A simple atmospheric electrical instrument for educational use *Adv Geosci* **13**, 11-15 (2007)
- 137 **R.G. Harrison** and R.J. Hogan Reply to Comment on “In-situ atmospheric turbulence measurement using the terrestrial magnetic field – a compass for a radiosonde” by Ralph D. Lorenz *J Atmos and Oceanic Tech* **24**, 8, 1521-1522 (2007)
- 136 **R.G. Harrison** and K.L. Aplin, [Water vapour changes and atmospheric cluster ions](#), *Atmos Res* **85**, 199-208, (2007) doi: 10.1016/j.atmosres.2006.12.006
- 135 **R.G. Harrison** and A.J. Bennett, Cosmic ray and air conductivity profiles retrieved from early twentieth century balloon soundings of the lower troposphere *J Atmos Sol-Terr Phys* **69**, 4-5, 515-527 (2007) doi:10.1016/j.jastp.2006.09.008
- 134 **R.G. Harrison**, Electrical properties of surface atmospheric air at Eskdalemuir, 1909-1911 *Atmos Res* **84**, 2, 182-188 (2007) doi:10.1016/j.atmosres.2006.08.001
- 133 T.A. Mather, **R.G. Harrison**, V.I. Tsanev, D.M. Pyle, M.L. Karumudi, A.J. Bennett, G.M. Sawyer and E.J. Highwood. Observations of the plume generated by the December 2005 oil depot explosions and prolonged fire at Buncefield (Hertfordshire, UK) and associated atmospheric changes *Proc Roy Soc A*, **463**, 1153-1177, (2007) doi:10.1098/rspa.2006.1810
- 132 F. Marcz and **R.G. Harrison**, Long term changes in atmospheric electricity observed at European stations during several decades in the last century. *Geophysical Observatory Reports of the Hungarian Academy of Science* (50th Anniversary Volume), 129-137, 2007.
- 131 **Giles Harrison**, Robert Bingham, Karen Aplin, Barry Kellett, Ken Carslaw, Joanna Haigh, Clouds in atmospheric physics, *Astronomy and Geophysics*, **48**, 2.7, April 2007.
- 130 K.A. Nicoll and **R.G. Harrison**, An inexpensive instrument to measure the vertical profile of atmospheric air’s electrical conductivity, *Proc. 18th UK Aerosol Society Conf.*, University College London, UK, 2nd-3rd April 2007.
- 129 T.A. Mather, **R.G. Harrison**, V.I. Tsanev, D.M. Pyle, M.L. Karamudi, A.J. Bennett, G.M. Sawyer, E.J. Highwood, Observations of the aerosol and gases in the plume generated by the December 2005 oil depot explosions and prolonged fire at Buncefield oil depot and associated atmospheric changes. *Proc. 18th UK Aerosol Society Conf.*, University College London, UK, 2nd-3rd April 2007.
- 128 K.L. Aplin and **R.G. Harrison**, Measurements of molecular cluster ions, *Proc. 18th UK Aerosol Society Conf.*, University College London, UK, 2nd-3rd April 2007
- 127 2006 **R.G. Harrison** and G.W. Rogers, [Fine wire resistance thermometer amplifier for atmospheric measurements](#) *Rev Sci Instrum* **77**, 116112 doi:10.1063/1.2400013
- 126 **R.G. Harrison** and J.R. Knight, Thermopile radiometer signal conditioning for surface atmospheric radiation measurements *Rev Sci Instrum* **77**, 116105 doi: 10.1063/1.2370752
- 125 S.N. Tripathi, S. Vishnoi, S. Kumar, **R.G. Harrison**, Computationally-efficient expressions for the collision efficiency between electrically charged aerosol particles and cloud droplets *Quart Jour Roy Meteorol Soc* **132**, 1717-1731 (2006).

- 124 T.A. Mather and **R.G. Harrison**, Electrification of volcanic plumes *Surveys in Geophysics* **27**, 4, 387-432 (2006).
- 123 A.J. Bennett and **R.G. Harrison**, Surface determination of the air-earth electrical current density using co-located sensors of different geometry *Rev Sci Instrum* **77**, 066104 (2006)
- 122 **R.G. Harrison**, Urban smoke concentrations at Kew, London, 1898-2004 *Atmos Environ* **40**, 18, 3327-3332, doi: 10.1016/j.atmosenv.2006.01.042 (2006)
- 121 F. Märçz and **R. G. Harrison**, Comment on “Shielding effects of trees on the measurement of the Earth's electric field: Implications for secular variations of the global electrical circuit” by E. Williams et al., *Geophys. Res Lett.*, **33**, L12803, doi:10.1029/2005GL025574.
- 120 **R. Giles Harrison** and Robin J. Hogan, In-situ atmospheric turbulence measurement using the terrestrial magnetic field – a compass for a radiosonde *J Atmos and Oceanic Tech* **23**, 3, 517-523 (2006)
- 119 A.J. Bennett and **R.G. Harrison**, In situ calibration of atmospheric air conductivity measurements *Rev Sci Instrum* **77**, 016103 (2006)
- 118 **R. Giles Harrison** and David B. Stephenson, Empirical evidence for a nonlinear effect of galactic cosmic rays on clouds *Proc Roy Soc A* **462**, 2068, 1221-1233 doi: 10.1098/rspa.2005.1628
- 117 M.K. Latha, A. Bennett, **R. Giles Harrison** and Eleanor J. Highwood, Urban aerosol modulation of the atmospheric electric field *Proc. 17th annual conference, The Aerosol Society*, London, 28th-29th March 2006
- 116 Madhavi Latha Karumudi, Eleanor J. Highwood and **R. Giles Harrison**, Perturbation of aerosol properties associated with Bonfire events in the UK *Proc. 17th annual conference, The Aerosol Society*, London, 28th-29th March 2006
- 115 A.J. Bennett and **R.G. Harrison**, Inexpensive instrument for the measurement of atmospheric electrical parameters *Proc. 17th annual conference, The Aerosol Society*, London, 28th-29th March 2006
- 114 A.J. Bennett and **R.G. Harrison**, Retrieval of columnar aerosol properties by surface measurement of the air-earth current *Proc. 17th annual conference, The Aerosol Society*, London, 28th-29th March 2006
- 113 2005 **R.G. Harrison**, [Meteorological radiosonde interface for atmospheric ion production rate measurements](#) *Rev Sci Instrum* **76**, 126111 doi:10.1063/1.2149005
- 112 F. Märçz and **R.G. Harrison**, Further signatures of long-term changes in atmospheric electrical parameters observed in Europe *Annales Geophysicae* **23**, 6, 1987-1995 (2005)
- 111 R.J. Wilding and **R.G. Harrison**, Aerosol modulation of small ion growth in coastal air *Atmos Environ* **39**, 32, 5876-5883 (2005)
- 110 **R.G. Harrison** and R.J. Wilding, The Programmable Ion Mobility Spectrometer: time resolution improvement and ion counter comparison *Rev Sci Instrum* **76**, 086109 (2005)
- 109 T.J. Brazenor, and **R.G. Harrison**, Aerosol modulation of the optical and electrical properties of urban air *Atmos Environ* **39**, 5205-5212 (2005)
- 108 **R.G. Harrison**, [Aurora Diaries](#) *Astron & Geophys* **46** (August 2005), 4.31-4.34
- 107 K.L. Aplin, **R.G. Harrison** and A.J. Bennett, [Effect of the troposphere on surface neutron counter measurements](#) *Adv Space Res* **35** (8), 1484-1491, doi:10.1016/j.asr.2005.02.055

- 106 **R.G. Harrison**, and W.J. Ingram, [Air-earth current measurements at Kew, London, 1909-1979](#) *Atmos Res* **76**, (1-4), 49-64, doi:10.1016/j.atmosres.2004.11.022
- 105 **R.G. Harrison**, Columnar resistance changes in urban air *J. Atmos. Solar-Terr Physics* **67** (8-9), 763-773 (2005).
- 104 **R.G. Harrison**, Inexpensive multichannel digital data acquisition system for a meteorological radiosonde *Rev Sci Instrum* **76**, 026103 (2005) doi:10.1063/1.1841971 (2005)
- 103 Gray L.J., J.D. Haigh, **R.G. Harrison**. [The Influence of Solar Changes on the Earth's Climate. Hadley Centre Technical Note 62, \(Meteorological Office\)](#)
http://www.metoffice.gov.uk/research/hadleycentre/pubs/HCTN/HCTN_62.pdf
- 102 Haigh S. and **Harrison R.G.**, Penetration of current through lightning puncture holes in aluminium sheets, International Conference on Lightning and Static Electricity, Seattle, Washington (8pp), 2005
- 101 2004 **R.G. Harrison**, [The global atmospheric electrical circuit and climate](#) *Surveys in Geophysics* **25**, (5-6), 441-484, doi: 10.1007/s10712-004-5439-8 (2004)
- 100 **R.G. Harrison**, Long-range correlations in measurements of the global atmospheric electric circuit *J. Atmos. Solar-Terr Physics* **66**/13-14, 1127-1133, (2004)
- 99 E. Black, M. Blackburn, **G. Harrison**, B. Hoskins and J. Methven, Factors contributing to the summer 2003 European heatwave *Weather* **59**, 8, 217-223, (2004)
- 98 **R.G. Harrison**, Atmospheric turbulence and surface atmospheric electricity observations *Institute of Physics Conference Series* **178**, 7, 337-342 (2004)
- 97 **R.G. Harrison**, Long term measurements of the global atmospheric electric circuit at Eskdalemuir, Scotland, 1911-1981 *Atmos Res* **70** (1), 1-19, 10.1016/j.atmosres.2003.09.007 (2004)
- 96 Wilding R.J., and **Harrison R.G.**, Characterisation of ion production in the surface layer *Proc. 15th Annual Conference, The Aerosol Society*, Manchester, 14th-15th April 2004, 44-47 (2004)
- 95 **Harrison R.G.**, Detection of charged aerosol layers in the troposphere *Proc. 15th Annual Conference, The Aerosol Society*, Manchester, 14th-15th April 2004, p92-95 (2004)
- 94 Wilding R.J. and **Harrison R.G.**, Cosmic-ray induced aerosol particle charging, implications for exposure to children and pregnant women in aircraft *Childhood Leukaemia: Incidence, causal mechanisms and prevention*, London 6th-10th September 2004, P2-14.
- 93 **Harrison R.G.**, Twentieth century air pollution near London: a reconstruction from measurements of atmospheric electricity. *Childhood Leukaemia: Incidence, causal mechanisms and prevention*, London 6th-10th September 2004, P4-6.
- 92 2003 **R.G. Harrison**, and K.S. Carslaw, Ion-aerosol-cloud processes in the lower atmosphere *Rev Geophys* **41** (3), 1012, 10.1029/2002RG000114 (2003)
- 91 **R.G. Harrison**, and K.L. Aplin, Nineteenth century Parisian smoke variations inferred from Eiffel Tower atmospheric electrical observations *Atmos Environ* **37**, 5319-5324 doi:10.1016/j.atmosenv.2003.09.042 (2003)
- 90 F. Märcz, and **R.G. Harrison**, Long-term changes in atmospheric electrical parameters observed at Nagycenk (Hungary) and the UK Observatories at Eskdalemuir and Kew *Annales Geophysicae* **21**, 2193-2200 (2003)

- 89 **R.G. Harrison**, Reply to comment on “Twentieth century secular decrease in the atmospheric potential gradient”. *Geophys Res Lett* **30**, (15), 1804
10.1029/2003GL017381 (2003)
- 88 **R.G. Harrison**, [Twentieth century atmospheric electrical measurements at the observatories of Kew](#), Eskdalemuir and Lerwick *Weather* **58**, 11-19, (2003)
- 87 K.L. Aplin, and **R.G. Harrison**, Meteorological effects of the eclipse of 11th August 1999 in cloudy and clear conditions *Proc Roy Soc Lond A*, **459**, 2030, 353-372
(10.1098/rspa.2002.1042) (2003)
- 86 **Harrison R.G.**, Climate change and long-term variations in the atmospheric electrical system *Proc.12th International Conference on Atmospheric Electricity*, Versailles, **vol2**, 703-706, 2003.
- 85 **Harrison R.G.**, and Aplin K.L. Nineteenth century air pollution in Paris inferred from Potential Gradient measurements made on the Eiffel Tower. *Proc.12th International Conference on Atmospheric Electricity*, Versailles, **vol2**, 789-792, 2003.
- 84 Kirkby J. and **Harrison R.G.**, Cosmic rays and atmospheric ions: their importance for clouds and climate *Proc. 12th International Conference on Atmospheric Electricity*, Versailles, **vol1**, 377-380, 2003
- 83 Tripathi S.N. and **Harrison R.G.**, Radioactive aerosols in the environment *Proc.12th International Conference on Atmospheric Electricity*, Versailles, **vol1**, 443-446, 2003.
- 82 **Harrison R.G.**, Long-term changes in aerosol and the electrical conductivity of oceanic air *Proc. 14th annual conference, The Aerosol Society*, Reading, 2nd-3rd April 2003, 22-25
- 81 *Atmospheric Electricity In: Encyclopedia of Global Environmental Change*, Volume 1, The Earth System - Physical and Chemical Dimensions of Global Environmental Change. Editors: Michael C. MacCracken and John S. Perry, (Wiley, 2003)
- 80 2002 K.S. Carslaw, **R.G. Harrison** and J. Kirkby, Cosmic rays, clouds and climate *Science* **298**, 5599, (Nov 29), 1732-1737 (2002)
- 79 **R.G. Harrison**, Twentieth century secular decrease in the atmospheric electric circuit *Geophys Res Lett*, 29(14) DOI 10.1029/2002GL014878, (2002)
- 78 **R.G. Harrison** and K.L. Aplin, Mid-nineteenth century smoke concentrations near London *Atmos Environ* **36**, 25 4037-4043, (2002)
- 77 S.N. Tripathi, and **R.G. Harrison**, Enhancement of contact nucleation by scavenging of charged aerosol *Atmos Res* **62** 57-70 (2002)
- 76 **R.G. Harrison**, Radiolytic particle production in the atmosphere *Atmos Environ* **36**, 159-160 (2002)
- 75 **R.G. Harrison**, A wide-range electrometer voltmeter for atmospheric measurements in thunderstorms and disturbed meteorological conditions *Rev Sci Instrum* **73**, 2, 482-483 (2002)
- 74 **R.G. Harrison** and K.L. Aplin, Aerosol variations inferred from historical atmospheric electrical data *Proc. XIIIth Annual Conference The Aerosol Society*, Lancaster, April 2002, 113-116
- 73 *Ions in the atmosphere In Encyclopaedia of Atmospheric Sciences* Editors: J. Holton, J. Pyle, J. Curry (Academic Press, 2002) pp733-738 (vol 2)
- 72 2001 **R.G. Harrison**, and K.L. Aplin, Atmospheric condensation nuclei formation and high-energy radiation *J. Atmos. Solar-Terr Physics* **63**, 17, 1811-1819 (2001)
- 71 K.L. Aplin, and **R.G. Harrison**, A self-calibrating programmable mobility spectrometer for atmospheric ion measurements *Rev Sci Instrum*, **72**, 8 3467-3469 (2001)

- 70 **R.G. Harrison**, A balloon-carried electrometer for high-resolution atmospheric electric field measurements in clouds *Rev Sci Instrum* **72**, 6 2738-2741 (2001)
- 69 **R.G. Harrison**, Ultrasonic detection of atmospheric humidity variations *Rev Sci Instrum* **72**, 3, 1910-1913, (2001)
- 68 **R.G. Harrison**, and M.A. Pedder, Fine wire thermometer for air temperature measurement *Rev Sci Instrum*, **72**, 2, .1539-1541 (2001)
- 67 S.N. Tripathi, and **R.G. Harrison**, Scavenging of electrified radioactive aerosol *Atmos Environ*, **35**, 33, 5817-5821 (2001)
- 66 Aplin K.L. and **Harrison R.G.**, The effect of meteorological conditions on fair-weather atmospheric conductivity *Proc. XIIth Annual Conference The Aerosol Society*, Bath, June 2001, 57-60 (2001)
- 65 Aplin K.L. and **Harrison R.G.**, Tropospheric Ion Measurements *European Physical Society Workshop on Ion-Aerosol-Cloud Interactions*, CERN, Geneva, CERN-2001-007 87-92 (2001)
- 64 **Harrison R.G.**, Atmospheric electricity and cloud microphysics *European Physical Society Workshop on Ion-Aerosol-Cloud Interactions*, CERN, Geneva, CERN-2001-007 75-86, (2001)
- 63 2000 **R.G. Harrison** and K.L. Aplin (On Yu F. and Turco R.P., Ultrafine aerosol formation via ion-mediated nucleation *Geophys Res Lett*, **27**, 883-886, 2000), *Geophys Res Lett* **27**, 13, July 1st 2000
- 62 **R.G. Harrison**, Cloud formation and the possible significance of charge for atmospheric condensation and ice nuclei *Space Sci Rev* **94** 381-396 (2000)
- 61 K.L. Aplin, and **R.G. Harrison**, A multimode electrometer for atmospheric ion measurements *Rev Sci Instrum*, **71**, 12, 4683-4685 (2000)
- 60 K.L. Aplin, and **R.G. Harrison**, A computer-controlled Gerdien atmospheric ion counter *Rev Sci Instrum* **71**, 8, 3037-3041 (2000)
- 59 **R.G. Harrison**, and K.L. Aplin, Femtoampere current reference stable over atmospheric temperatures *Rev Sci Instrum* **71**, 8, 3231-3232 (2000)
- 58 **R.G. Harrison**, A temperature-compensated meteorological barometer *Rev Sci Instrum* **71**, 4, 1909-1910 (2000)
- 57 C.F. Clement, and **R.G. Harrison**, Enhanced localised charging of radioactive aerosols *J. Aerosol Sci* **31**, 3, 363-378 (2000)
- 56 P. Louka, S.E. Belcher, and **R.G. Harrison**, Coupling between airflow in streets and the well-developed boundary layer aloft *Atmos Environ* **34**, 2613-2621 (2000)
- 55 K.L. Aplin, and **R.G. Harrison**, Multimode ion counter *J. Aerosol Sci* **31**, S1, 1027-1028 (2000)
- 54 K.L. Aplin, and **R.G. Harrison**, Radioactivity and atmospheric condensation nuclei *J Aerosol Sci* **31**, S1, 1021-1022 (2000)
- 53 Tripathi, S.N., and **R.G. Harrison**, Sensitivity of contact nucleation of ice to electrical parameters of aerosol *J Aerosol Sci* **31**, S1, 297-298 (2000)
- 52 Tripathi, S.N., and **R.G. Harrison**, Atmospheric removal of radioactive aerosols *J Aerosol Sci* **31**, S1, 472-473 (2000)
- 51 *Atmospheric Electricity In: Oxford companion to the Earth*. Editors: P.L. Hancock and B.J. Skinner (Oxford University Press, 2000), pp49-51
- 50 1999 **R.G. Harrison**, and K.L. Aplin, The interaction between air ions and aerosol particles in the atmosphere In: Taylor D.M (ed.), Institute of Physics Conference series **163**, 411-414 (1999)

- 49 **R.G. Harrison** and K.P. Shine, A review of recent studies of the influence of solar changes on the Earth's climate, *Hadley Centre Technical Note 6*, (Met Office)
- 48 K.L. Aplin and **R.G. Harrison**, Ion-aerosol interactions in atmospheric air. In: H.J. Christian (ed) *Proc.11th International Conference on Atmospheric Electricity*, Guntersville, Alabama 7th-11th June 1999 (NASA/CP-1999-209261), 598-601 (1999)
- 47 J.F. Barlow and **R.G. Harrison**, Turbulent transfer of space charge in the atmospheric surface layer. In: H.J. Christian (ed) *Proc 11th International Conference on Atmospheric Electricity*, Guntersville, Alabama 7th-11th June 1999 NASA/CP-1999-209261, 575-578 (1999)
- 46 Barlow J.F. and **Harrison G.** *Shaded by trees?* Arboricultural Practice Note 5, Arboricultural Advisory and Information Service, Farnham, UK.
- 45 Louka, P., S.E. Belcher, **R.G. Harrison** (1999), Measurements of airflow within and above a street. *Proc. 2nd International Conference in Urban Air Quality*, 77-78 (Madrid, Spain, 3-5th March 1999)
- 44 1998 **R.G. Harrison** and B.N. Lodge, A calorimeter to detect freezing in supercooled water droplets *Rev Sci Instrum* **69**, 11, 4004-4005 (1998)
- 43 P. Louka, S.E. Belcher and **R.G. Harrison**, Modified street canyon flow *J.Wind Eng Ind Aerodyn* **74-76**, 485-493 (1998)
- 42 Aplin K.L., **Harrison R.G.** and Wilkinson S., An electrical method of urban pollution measurement *J.Aerosol Sci* **29**, S1, S869-870 (1998)
- 41 Barlow J.F. and **Harrison R.G.**, Turbulent transfer of charged aerosol in the atmospheric surface layer *J.Aerosol Sci* **29**, S1, S1019-1020 (1998)
- 40 Clement C.F. and **Harrison R.G.**, Charging of radioactive aerosols with depleted ion concentrations *J.Aerosol Sci* **29**, S1, S465-466 (1998)
- 39 **Harrison R.G.**, The atmospheric significance of charged species *J.Aerosol Sci* **29**, S1, S843-844 (1998)
- 38 Tripathi S.N. and **Harrison R.G.**, Dry deposition of electrically charged aerosols *J.Aerosol Sci* **29**, S1, S809 (1998)
- 37 Louka, P., S.E. Belcher, **R.G. Harrison** (1998), A new perspective of the airflow in and above an urban street *Proc. 4th UK Conference on Wind Engineering*, 147-153, (Bristol, UK, 2-4 September 1998)
- 36 1997 **R.G. Harrison**, Climate change and the global atmospheric electrical system *Atmos Environ* **31**, 20, 3483-3484 (1997)
- 35 **R.G. Harrison**, A noise-rejecting current amplifier for surface atmospheric ion flux measurements *Rev Sci Instrum* **68**, 9, 3563-3565 (1997)
- 34 **R.G. Harrison**, An antenna electrometer system for atmospheric electrical measurements *Rev Sci Instrum* **68**, 3, 1599-1603 (1997)
- 33 J.H.C. Gash, P. Kabat, B.A. Monteny, M. Amadou, P. Bessemoulin, H. Billing, H.A.R. de Bruin, J.A. Elbers, T. Friborg, **R.G. Harrison**, C.J. Holwill, C.R. Lloyd, J-P. Lhomme, J.B. Moncrieff, D. Puech, H. Soegaard, J.D. Taupin, A. Tuzet, A. Verhoef, The variability of surface fluxes during the HAPEX-Sahel Intensive Observation Period, *J. Hydrol* **188-189** 385-399 (1997)
- 32 **Harrison R.G.**, Doubts about Altnaharra's minimum temperature record *Weather*, **52**, 360-361 (1997)
- 31 **Harrison R.G.**, Measuring the Urban Environment *Urban Nature*, **3**, No 1, (Spring 1997), 28-29 (1997)

- 30 Louka, P., **Harrison, R.G.**, and Belcher, S.E., Modified street canyon flow, In: Solari G., *Proc 2nd European and African Conference on Wind Engineering (2EACWE) vol 1*, 767-774, (Genova, Italy, 22-26 June 1997).
- 29 1996 **R.G. Harrison**, An atmospheric electrical voltmeter follower *Rev Sci Instrum* **67**, 7 2636-2638 (1996)
- 28 Clement C.F. and **Harrison R.G.**, Nucleation from atmospheric fluctuations, In: Kulmala M. and Wagner P.E. (eds.) Nucleation and atmospheric aerosols. *Proc. 14th International conf on nucleation and atmospheric aerosols*, Helsinki, Pergamon, 216-219 (1996)
- 27 Clement C.F. and **Harrison R.G.**, The motion of radioactive aerosol in electric fields *J. Aerosol Sci.* **27**, S1, S191-192, (1996)
- 26 **Harrison R.G.**, Design for a narrow-band, voltage-controlled oscillator *Electronics World* 102, (1718) January 1996, p63
- 25 **Harrison R.G.**, Ionisers and electrical aerosol removal *Proc. Xth annual conference, The Aerosol Society*, Swansea, April 1996, 38-43 (1996) and *J. Aerosol Sci.* **27**, S1, S191-192, (1996)
- 24 Louka P., **Harrison R.G.** and Belcher S.E., Urban Meteorological influences on vehicular aerosol emissions *Proc. Xth Annual Conference, The Aerosol Society*, Swansea, April 1996, 156-161 (1996)
- 23 1995 **R.G. Harrison**, A portable picoammeter for atmospheric electrical use In: S.A. Cunningham (ed.), *Institute of Physics Conference series* **143**, p223-226 (1995)
- 22 **R.G. Harrison**, A null method for electric field measurement. In: S.A. Cunningham (ed.), *Institute of Physics Conference series* **143**, p319-322 (1995)
- 21 C.F. Clement, R.A. Clement and **R.G. Harrison**, Charge distributions and coagulation of radioactive aerosols *J. Aerosol Sci* **26**, 8, 1207-1226 (1995)
- 20 J.C. Barrett, C.F. Clement and **R.G. Harrison**, The diffusive penetrability of particles into energy barriers *J. Aerosol Sci* **26**, 5, 735-743 (1995)
- 19 C.F. Clement and **R.G. Harrison**, Electrical behaviour of radioactive aerosol in the environment *Proc. IXth Annual Conference, The Aerosol Society*, Norwich, March 1995, 59-63 (1995)
- 18 1994 **R.G. Harrison** and H.M. ApSimon, Krypton-85 pollution and atmospheric electricity *Atmos Environ* **28**, 4, 637-648 (1994)
- 17 C.F. Clement, D.M.J. Calderbank and **R.G. Harrison**, Radioactive aerosol charging with spatially varying ion concentrations *J. Aerosol Sci* **25**, 4 623-637 (1994)
- 16 Barrett J.C., Clement C.F. and **Harrison R.G.** (1994) The diffusive penetrability of particles into energy barriers *Fourth International Aerosol Conference*, Los Angeles, 1994 (vol.1 p.163)
- 15 Clement C.F., Clement R.A. and **Harrison R.G.**, Gaussian approximations to the charge distributions of a disperse radioactive aerosol *Fourth International Aerosol Conference*, Los Angeles, 1994 (vol.2 p.788)
- 14 **Harrison R.G.**, Experimentally derived coefficients for surface temperature parameterisation (European Geophysical Society, Grenoble), *Annales Geophysicæ*, 12, SII, p460(1994)
- 13 Clement C.F. and **Harrison R.G.**, On the neutralisation of charged aerosol with radioactive sources *Proc. VIIIth annual conference, The Aerosol Society*, York, March 1994, 96-100 (1994)

- 12 R.G. Harrison and Zioutas K., [A potential application of accelerators in atmospheric physics In: Scientific annals of 2nd Hellenic Conference on Meteorology](#), Climatology and Atmospheric Physics, University of Thessalonica, 275-284, September 1994
- 11 1993 **R.G. Harrison** and C.F. Clement, Air conductivity and charged aerosol *Proc. VIIth annual conference, The Aerosol Society*, Bristol, June 1993, 47-52
- 10 C.F. Clement, D.M.J. Calderbank, and **R.G. Harrison**, A method for estimating radioactive aerosol charge with spatially inhomogeneous ion concentrations, *J.Aerosol Sci* **25**, S1, S329-S330 (1993)
- 9 1992 C.F. Clement and **R.G. Harrison**, The charging of radioactive aerosols *J.Aerosol Sci* **23**, 5, 481-504 (1992)
- 8 C.F. Clement, R.A. Clement and **R.G. Harrison**, The coagulation of radioactive aerosols, *J.Aerosol Sci.* **23**, S1, S145-148 (1992)
- 7 C.F. Clement and **R.G. Harrison**, Self-charging of radioactive aerosols *J.Aerosol Sci.* **22**, S1, S175-178 (1992)
- 6 H.M. ApSimon and **R.G. Harrison**, The potential effects of release of Krypton-85, HM Pollution Inspectorate report, March 1992
- 5 1991 C.F. Clement and **R.G. Harrison**, Charge distributions on aerosols *Institute of Physics Conference Series* **118**, 275-280 (1991)
- 4 1990 C.F. Clement and **R.G. Harrison**, Asymmetric charging of radioactive aerosols, *Proc. IVth annual conference, The Aerosol Society*, Guildford, April 1990, 229-232
- 3 C.F. Clement and **R.G. Harrison**, Electric charge effects on aerosol behaviour, Workshop on Aerosol Behaviour and Thermal-Hydraulics in the Containment, CEC/NEA Fontenay-aux-Roses, France, November 1990
- 2 C.F. Clement and **R.G. Harrison**, Radioactivity and Atmospheric Electricity, Harwell Laboratory Report AERE M3770, HMSO, January 1990
- 1 **R.G. Harrison**, Coaxial cable losses on the VHF and UHF bands *Rad Commn*, 41-42, March 1990