



LIST OF PUBLICATIONS -- BERNARD VONNEGUT

"Supplement to 'Production of monodisperse liquid particles by electrical atomization'" (1953), B. Vonnegut and R. L. Neubauer, *J. Colloid Sci.* 8, 5, pp 551-552.

"Possible mechanism for the formation of thunderstorm electricity" (1955), B. Vonnegut, *Geophys. Res. Paper No. 42, Proc. Conf. Atmos. Electr., AFCRC-TR-55-222*, pp 169-181.

"Electrical activity associated with the Blackwell-Udall tornado" (1957), B. Vonnegut and C. B. Moore, *J. Meteor.* 14, 3, pp 284-285.

"Simple electrometer employing an electrified, nonconducting fiber" (1957), B. Vonnegut and D. A. McCaig, *Rev. Sci. Instrum.* 28, 12, pp 1097-1098.

"Determining the concentration of fogs and other aerosols by a space-charge measuring instrument" (1957), B. Vonnegut, C. B. Moore, J. Ehrenfeld and C. R. Smallman, *Artificial Stimulation of Rain*, Pergamon Press (London), pp 122-130.

"Preliminary investigation of the distribution of space charge in the lower atmosphere" (1957), B. Vonnegut, C. B. Moore and M. Blume, *Artificial Stimulation of Rain*, Pergamon Press (London), pp 131-141.

"Results of an experiment to determine initial precedence of organized electrification and precipitation in thunderstorms" (1958), C. B. Moore, B. Vonnegut, and A. T. Botka, *Recent Advances in Atmospheric Electricity*, Pergamon Press (London), pp 33-360.

"Giant electrical storms" (1958), B. Vonnegut and C. B. Moore, *Recent Advances in Atmospheric Electricity*, Pergamon Press (London), pp 399-411.

"Preliminary attempts to influence convective electrification in cumulus clouds by the introduction of space charge into the lower atmosphere" (1958), B. Vonnegut and C. B. Moore, *Recent Advances in Atmospheric Electricity*, Pergamon Press (London), pp 317-331.

"Luminosity accompanying St. Louis tornado - February 10, 1959" (1959), B. Vonnegut, *Mon. Weath. Rev.* 87, 2, p 64.

"Preliminary results of an experiment to determine initial precedence of organized electrification and precipitation in thunderstorms" (1959), B. Vonnegut, C. B. Moore and A. T. Botka, *J. Geophys. Res.* 64, 3, pp 347-357.

"Electrical theory of tornadoes" (1960), B. Vonnegut, *J. Geophys. Res.* 65, 1, pp 203-212.

"Visual confirmation of the junction process in lightning discharges" (1960), M. Brook and B. Vonnegut, *J. Geophys. Res.* 65, 4, pp 1302-1303.

"Observations of electrification and lightning in warm clouds (1960), C. B. Moore, B. Vonnegut, B. A. Stein, and H. J. Survilas, *J. Geophys. Res.* 65, 7, pp 1907-1910

"Estimates of raindrop collection efficiencies in electrified clouds" (1960), C. B. Moore and B. Vonnegut, *Physics of Precipitation, Monogr. No. 5, Amer. Geophys. Union*, pp 291-304.

"A possible effect of lightning discharge on precipitation formation process" (1960), B. Vonnegut and C. B. Moore, *Physics of Precipitation, Monogr. No. 5, Amer. Geophys. Union*, pp 287-290.

"Airplane instrument for measurement and vectorial presentation of electrical potential gradient" (1960), B. Vonnegut and D. A. McCaig, *J. Geophys. Res.* 65, 7, pp 1959-1963.

"Stabilization of a high-voltage discharge by a vortex" (1960), B. Vonnegut, C. B. Moore, and C. K. Harris, *J. Meteor.* 17, 4, pp 468-471.

"Technique for introducing low-density space charge into the atmosphere" (1961), B. Vonnegut, K. Maynard, W. G. Sykes, and C. B. Moore, *J. Geophys. Res.* 66, 3, pp 823-830.

"Airborne filters for the measurement of atmospheric space charge" (1961), C. B. Moore, B. Vonnegut, and F. J. Mallahan, *J. Geophys. Res.* 66, 10, pp 3219-3226.

"Artificial initiation of lightning discharges" (1961), M. Brook, G. Armstrong, R. P. H. Winder, B. Vonnegut, and C. B. Moore, *J. Geophys. Res.* 66, 11, pp 3967-3969.

"Apparatus using radioactive probes for measuring the vertical component of atmospheric potential gradient from an airplane" (1961), B. Vonnegut and C. B. Moore, *Bull. Amer. Meteor. Soc.* 42, 11, pp 773-777.

"Agrimeter for measurement of atmospheric electrical potential gradient" (1961), B. Vonnegut, C. B. Moore, and C. K. Harris, *J. Meteor.* 18, 6, pp 812-815.

"Radar observations of rain gushes following overhead lightning strokes" (1962), C. B. Moore, B. Vonnegut, J. A. Machado, and H. J. Survilas, *J. Geophys. Res.* 67, 1, pp 207-

220.

"Fair-weather atmospheric electric potential gradient and space charge over central Illinois, summer 1960" (1962), C. B. Moore, B. Vonnegut, R. G. Semonin, J. W. Bullock, and W. Bradley, *J. Geophys. Res.* 67, 3, pp 1061-1071.

"Artificial modification of atmospheric space charge" (1962), B. Vonnegut, C. B. Moore, G. E. Stout, D. W. Staggs, J. W. Bullock, and W. E. Bradley, *J. Geophys. Res.* 67, 3, pp 1073-1083.

"Wilson cloud chamber effect under natural conditions" (1962), B. Vonnegut, *J. Atmos. Sci.* 19, 2, pp 194-195.

"Effect of atmospheric space charge on initial electrification of cumulus clouds" (1962), B. Vonnegut, C. B. Moore, R. H. Semonin, J. W. Bullock, D. W. Staggs, W. E. Bradley, *J. Geophys. Res.* 67, 10, pp 3909-3922.

"Electrostatic hazards associated with the transfer and storage of liquid hydrogen" (1962), L. Cassutt, D. Biron, and B. Vonnegut, *Advances in Cryogenic Engineering* 7, H4, pp 327-335.

"Some facts and speculations concerning the origin and role of thunderstorm electricity" (1963), B. Vonnegut, *Meteor. Monographs.* 5, 27, pp 224-241.

"Authors' reply to comments on a paper by B. Vonnegut et al., 'Effect of atmospheric space charge on initial electrification of cumulus clouds' by Horace R. Byers" (1963), B. Vonnegut and C. B. Moore, *J. Geophys. Res.* 68, 2, p 592.

"Electric-field perturbations caused by eruption of Yellowstone geysers" (1963), V. J. Schaefer and B. Vonnegut, *J. Atmos. Sci.* 20, 2, pp 180-182.

"Behavior of evaporating electrically charged droplets" (1964), A. Doyle, D. R. Moffett, and B. Vonnegut, *J. Colloid Sci.* 19, 2, pp 136-143.

"Gushes of rain and hail after lightning" (1964), C. B. Moore, B. Vonnegut, E. A. Vrablik, and D. A. McCaig, *J. Atmos. Sci.* 21, 6, pp 646-665.

"Electricity in volcanic clouds" (1965), R. Anderson, S. Bjornsson, D. C. Blanchard, S. Gathman, J. Hughes, S. Jonasson, C. B. Moore, H. J. Survilas, and B. Vonnegut, *Science* 148, 3674, pp 1179-1189.

"A note on electric potential gradient measurements near Icelandic geyser and steam plume from geothermal well" (1965), S. Bjornsson and B. Vonnegut, *J. Appl. Meteor.* 4, 2, pp 295-296.

"Thunderstorm theory" (1965), B. Vonnegut, *Problems of Atmospheric and Space*

Electricity, S. C. Coroniti, ed., Elsevier Publishing Co., (New York), pp 285-292.

"Electrification of frost deposits" (1965), B. Vonnegut, *Quart. J. Roy. Meteor. Soc.* 91, 389, pp 369-374.

"Orientation of ice crystals in the electric field of a thunderstorm" (1965), B. Vonnegut, *Weather* 20, 10, pp 310-312.

"Nucleation of ice formation in supercooled clouds as the result of lightning" (1965), B. Vonnegut and C. B. Moore, *J. Appl. Meteor.* 4, 5, pp 640-642.

"Further comments on 'Note on the potentialities of cumulonimbus and hurricane seeding experiments'" (1966), Bernard Vonnegut, *J. Appl. Meteor.* 5, 1, pp 134-135.

"Luminous phenomena accompanying tornadoes" (1966), B. Vonnegut and J. R. Weyer, *Weatherwise* 19, 2, pp 66-68.

"Luminous phenomena in nocturnal tornadoes" (1966), B. Vonnegut and J. R. Weyer, *Science* 153, 3741, pp 1213-1220.

"Effects of a lightning discharge on an airplane" (1966), B. Vonnegut, *Weather* 21, 8, pp 277-279.

"Thunderstorm electrification" (1966), B. Vonnegut, *J. Atmos. Terrest. Phys.* 28, 10, pp 1027-1028.

"Penetration of thunderstorm anvils by convective cells" (1966), B. Vonnegut, C. B. Moore, R. P. Espinola, and H. H. Blau, Jr., *Bull. Amer. Meteor. Soc.* 47, 11, p 886.

"Electric potential gradients above thunderstorms" (1966), H. H. Blau, R. P. Espinola, C. B. Moore, and B. Vonnegut, *J. Atmos. Sci.* 23, 6, pp 764-770.

"Technique for the introduction into the atmosphere of high concentrations of electrically charged aerosol particles" (1967), B. Vonnegut, C. R. Smallman, C. K. Harris, and W. G. Sykes, *J. Atmos. Terrest. Phys.* 29, 7, pp 781-792.

"Enhanced charge transfer in dielectric fluids containing conducting particles" (1967), B. Vonnegut and P. Felsenthal, *Brit. J. Appl. Phys.* 18, 12, pp 1801-1806.

"The design, construction, and use of an ice crystal counter for ice crystal cloud studies by aircraft" (1970), J. D. McTaggart-Cowan, G. G. Lala, and B. Vonnegut, *J. Appl. Meteor.* 9, pp 294-299.

"Eyewitness tornado observations obtained with telephone and tape recorder" (1970), R. T. Ryan and B. Vonnegut, *Weatherwise* 23, 3, pp 126-130.

"Miniature whirlwinds produced in the laboratory by high-voltage electrical discharges" (1970), R. T. Ryan and B. Vonnegut, *Science* 168, 3937, pp 1349-1351.

"Charging of droplets by impulse corona" (1970), C. T. Phelps and B. Vonnegut, *J. Geophys. Res.* 75, 24, pp 4483-4490.

"A laboratory investigation of the effect of particle collisions on the generation of electric fields in thunderstorms" (1971), A. K. Kamra and B. Vonnegut, *J. Atmos. Sci.* 28, 4, pp 640-644.

"Meteorological phenomenon called crown flash" (1971), M. E. Graves, J. C. Gall, Jr., and B. Vonnegut, *Nature* 231, 5300, p 258.

"Formation of a vortex by an elevated electrical heat source" (1971), R. T. Ryan and B. Vonnegut, *Nature* 233, 42, pp 142-143.

"Lightning" (1972), B. Vonnegut, *Weather* 27, 5, p. 213.

"Comment on 'A quantitative assessment of precipitation mechanisms of thunderstorm electrification'" (1972), B. Vonnegut, *J. Meteor. Soc. Japan* 50, 3, pp 238-241.

"Electrical breakdown caused by dust motion in low-pressure atmospheres: considerations for Mars" (1973), H. F. Eden and B. Vonnegut, *Science* 180, pp 962-963.

"Corona produced by splashing of water drops on a water surface in a strong electric field" (1973), C. T. Phelps, R. F. Griffiths, and B. Vonnegut, *J. Appl. Phys.* 44, 7, pp 3082-3986.

"Direct measurement of vertical potential differences in the lower atmosphere" (1973), B. Vonnegut, R. Markson, and C. B. Moore, *J. Geophys. Res.* 78, 21, pp 4526-4528.

"Increased rates of rainfall production in electrified clouds—Reply" (1973), C. B. Moore and B. Vonnegut, *Quart. J. Royal Meteor. Soc.* 99, 422, pp 779-786

"Charge transfer from a highly electrically stressed water surface during drop impact" (1973), R. F. Griffiths, C. T. Phelps, and B. Vonnegut, *J. Atmos. Terrest. Phys.* 35, 11, pp 1967-1978.

"Electric potential above ocean waves" (1974), B. Vonnegut, *J. Geophys. Res.* 79, 24, pp 3480-3481.

"Instrument for measuring maximum thunderstorm electric field intensity" (1974), B. Vonnegut and B. W. Rechnitzer, *Rev. Sci. Instrum.* 45, 9, pp 1172-1174.

"Comment on 'The electrification of thunderclouds and the rain gush' by Z. Levin and A. Ziv" (1975), B. Vonnegut, *J. Geophys. Res.* 80, 3, p 438.

"Comments on 'Electrification of condensing and evaporating liquid drops'" (1975), R. F. Griffiths and B. Vonnegut, *J. Atmos. Sci.* 32, 1, pp 226-227.

"Electrostatic technique for measuring velocity of small projectiles in transit through glass barrel" (1975), B. Vonnegut and D. Keller, *J. Electrostatics* 1, 1, pp 91-93.

"Tape recorder photocell instrument for detecting and recording lightning strokes" (1975), R. F. Griffiths and B. Vonnegut, *Weather* 30, 8, pp 254-257.

"Comment on 'On the relation of electrical activity to tornadoes' by R. P. Davies-Jones and J. H. Golden" (1975), *J. Geophys. Res.* 80, 33, pp 4559-4560.

"Detachment of pendant water drops by high voltage pulses" (1975), M. Nifuku and B. Vonnegut, *J. Appl. Meteor.* 14, 8, pp 1617-1619.

"Chicken plucking as measure of tornado wind speed" (1975), B. Vonnegut, *Weatherwise* 28, 5, p 217.

"Electrical detection of waves at water-air surface" (1975), Bernard Vonnegut and Ralph Markson, *Proceedings Civil Engineering in the Oceans/III*, Vol. 2, Am. Soc. of Civil Engineers (New York), 1137-1151.

"Lightning strikes to fresh water" (1976), B. Vonnegut, *Weather* 31, 2, p. 69.

"Luminous electrical phenomena associated with nocturnal tornadoes in Huntsville, Ala., 3 April 1974" (1976), O. H. Vaughan, Jr., and B. Vonnegut, *Bull. Amer. Meteor. Soc.* 57, 10, pp 1220-1224.

"Charged drops produced by bursting of bubbles at the surface of organic liquids" (1976/1977), M. Nifuku, B. Vonnegut and D. C. Blanchard, *J. Electrostatics* 2, 3, pp 279-282.

"Measurement of maximum electric field intensities over water during thunderstorms" (1977), R. B. Toland and B. Vonnegut, *J. Geophys. Res.* 82, 3, pp 438-440.

"Lightning detection from satellites" (1977), R. E. Orville and B. Vonnegut, In *Electrical Processes in Atmospheres*, H. Dolezalek and R. Reiter, eds., Steinkopff (Darmstadt), pp 750-752.

"Electric discharges inside tornadoes", (1978), D. C. Watkins, J. D. Cobine and B. Vonnegut, *Science* 199, pp 171-174.

"Modified cine sound camera for photographing thunderstorms and recording lightning" (1978), B. Vonnegut and R. E. Passarelli, Jr., *J. Appl. Meteor.* 17, 7, pp 1079-1081.

"Electric rainfall intensity sensor" (1978), T. E. Battalino and B. Vonnegut, *J. Appl. Meteor.* 17, 8, pp 1225-1231.

"Comments on 'Electrification de gouttes de solutions salines aqueuses par evaporation ou par condensation de la vapeur d'eau'" (1978), E. Barreto and B. Vonnegut, *J. Rech. Atmos.* 12, 4, pp 301-304.

"Comments on the exchange between Kamra and Saunders concerning the inductive charging mechanism in thunderclouds" (1978), B. Vonnegut, *J. Atmos. Sci.* 35, pp 2037-2038.

"Lightning - observations from space" (1979), B. Vonnegut, *Weather* 34, p 291.

"Cloud-to-stratosphere lightning" (1980), B. Vonnegut, *Weather* 35, pp 59-60.

"Initiation of freezing in supercooled cloud droplets by ionizing radiation" (1980), A. Detwiler and B. Vonnegut, *J. Atmos. Sci.* 37, 2, pp 479-480.

"Simultaneous observations of lightning radiations from above and below clouds" (1980), M. Brook, R. Tennis, C. Rhodes, P. Krehbiel, B. Vonnegut, and O. H. Vaughan, Jr., *Geophys. Res. Letters* 7, 4, pp 267-270.

"Apparatus for the simulation of rain in the laboratory" (1981), D. R. Derenzo and B. Vonnegut, *J. Appl. Meteor.* 20, 1, pp 36-41.

"Misconception about cloud seeding with dry ice" (1981), B. Vonnegut, *J. Weath. Mod.* 13, 1, pp 9-11.

"Humidity required for ice nucleation from the vapor onto silver iodide and lead iodide aerosols over the temperature range -6 to 67°C" (1981), A. G. Detwiler and B. Vonnegut, *J. Appl. Meteor.* 20, 9, pp 1006-1012.

"Automatic apparatus for nucleation investigations" (1982), M. Baldwin and B. Vonnegut, *Rev. Sci. Instrum.* 53, 12, pp 11-14.

"Technique for producing uniform small droplets by capillary waves excited in a small meniscus" (1982), H. Jonsson and B. Vonnegut, *Rev. Sci. Instrum.* 53, 12, pp 15-19.

"Lightning to the ionosphere?" (1982), O. H. Vaughan, Jr., and B. Vonnegut, *Weatherwise* 35, 2, pp 70-72.

"Comments on the paper 'The electrification of thunderstorms' by John Latham" (1983), B. Vonnegut, *Quart. J. Roy. Meteor. Soc.* 109, pp 262-265.

"Some scientific objectives of a satellite-borne lightning mapper" (1983), M. H. Davis, M. Brook, H. Christian, B. G. Heikes, R. E. Orville, C. G. Park, R. G. Roble, and B.

Vonnegut, Bull. Amer. Meteor. Soc. 64, 2, pp 114-119.

"Observations of optical lightning emissions from above thunderstorms using U-2 aircraft" (1983), H. J. Christian, R. L. Frost, P. H. Gillaspy, S. J. Goodman, O. H. Vaughan, Jr., M. Brook, B. Vonnegut, and R. E. Orville, Bull. Amer. Meteor. Soc. 64, 2, pp 120-123.

"Photographs of lightning from the space shuttle" (1983), B. Vonnegut, O. H. Vaughan, Jr., and M. Brook, Bull. Amer. Meteor. Soc., 64, 2, pp 150-151.

"Deductions concerning accumulations of electrified particles in thunderclouds based on electric field changes associated with lightning" (1983), B. Vonnegut, J. Geophys. Res. 88, 6, pp 3911-3912.

"Reduction of thunderstorm electric field intensity produced by corona from a nearby object" (1984), B. Vonnegut, J. Geophys. Res. 89, D1, pp 1468-1470.

"Comments on 'Ion-drop interaction during drop evaporation'" (1984), B. Vonnegut, A. J. Illingworth, and P. R. Krehbiel, J. Atmos. Sci. 41, 23, p 3431.

"Vertical lightning" (1984), B. Vonnegut, Weatherwise 37, p 61.

"Low light level TV images of lightning from space" (1984), O. H. Vaughan, B. Vonnegut, and S-H Huang, Bull. Amer. Meteorol. Soc. 65, p 373.

"Mesoscale observations of lightning from space shuttle" (1985), B. Vonnegut, O. H. Vaughan, Jr., M. Brook, and P. Krehbiel, Bull. Amer. Meteor. Soc. 66, 1, pp 20-29.

"Nighttime observations of thunderstorm electrical activity from a high altitude airplane" (1985), M. Brook, C. Rhodes, O. H. Vaughan, Jr., R. E. Orville, and B. Vonnegut, J. Geophys. Res. 90, D4, pp 6111-6120.

"Abnormal polarity of thunderclouds grown from negatively charged air" (1986), C. B. Moore, B. Vonnegut, T. D. Rolan, J. W. Cobb, D. N. Holden, R. T. Hignight, S. M. McWilliams, G. W. Cadwell, Science 233, pp 1413-1416.

"Comments on 'The "rain gush," lightning, and the lower positive charge center in thunderstorms' by E. R. Jayaratne and C. P. R. Saunders" (1986), B. Vonnegut and C. B. Moore, J. Geophys. Res. 91, D10, p 10,949.

"Comments on 'Thunderstorm electrification: The effect of cloud droplets' by E. R. Jayaratne and C. P. R. Saunders" (1987), B. Vonnegut and C. B. Moore, J. Geophys. Res. 92, D3, p 3139.

"Comment on 'Factor of 2 error in balloon-borne, atmospheric conduction current measurements' by A. A. Few and A. J. Weinheimer" (1987), B. Vonnegut, R. Markson,

and C. B. Moore, *J. Geophys. Res.* 92, D4, p 4337.

"Comments on 'New measurements of the ion content of evaporation-humidified air'" (1987), Bernard Vonnegut and Volker A. Mohnen, *J. Chem. Phys.* 87, 9, p 5580.

"Measurements of the electrical conductivities of air over hot water" (1988), C. B. Moore and B. Vonnegut, *J. Atmos. Sci.* 45, 5, pp 885-890.

"The horizontal growing features of lightning" (1988), S. H. Huang and B. Vonnegut, *Scientia Meteorologica Sinica*, 2, pp 51-55.

"Comment on 'The Electrification of Thunderstorms'" (1989), Bernard Vonnegut and Charles B. Moore, *Scientific American* 261, 1, p 8.

"Recent observations of lightning discharges from the top of a thundercloud into the clear air above" (1989), O. H. Vaughan, Jr., and B. Vonnegut, *J. Geophys. Res.* 94, D11, pp 13,179-13,182.

"Anomalous electric fields associated with clouds growing over a source of negative space charge" (1989), C. B. Moore, B. Vonnegut, and D. N. Holden, *J. Geophys. Res.* 94, D11, pp 13,127-13,134.

"Electrical measurements over thunderstorms" (1989), R. J. Blakeslee, H. J. Christian, and B. Vonnegut, *J. Geophys. Res.* 94, D11, pp 13,135-13,140.

"Thunderstorm electrification mechanisms" (1989), B. Vonnegut and C. B. Moore, *Weather* 44, 9, pp 391-392.

"Nocturnal Photographs Taken from a U-2 Airplane Looking Down on Tops of Clouds Illuminated by Lightning" (1989), B. Vonnegut, O. H. Vaughan, Jr., and M. Brook, *Bull. Amer. Meteor. Soc.* 70, 10, pp 1263-1271.

"Comments on 'A Radar Study of the Plasma and Geometry of Lightning'" (1991), C. B. Moore and B. Vonnegut, *J. Atmos. Sci.* 48, 2, pp 369-370.

"How the External Currents Flowing to a Thundercloud Influence Its Electrification" (1991), B. Vonnegut, *Ann. Geophysicae* 9, pp 34-36.

"Apparatus for Measurements of the Electrical Conductivity of Rainwater with High Resolution in Space and Time" (1991), H. H. Jonsson and B. Vonnegut, *J. Appl. Meteor.* 30, 8, pp 1220-1227.

"Problems for research in atmospheric electricity" (1991), B. Vonnegut, *Publ. Inst. Geophys. Pol. Acad. Sc.*, D-35, 238, pp 13-16.

"Lightning induced brightening in the airglow layer" (1992), W. L. Boeck, O. H.

Vaughan, Jr., R. Blakeslee, B. Vonnegut, and M. Brook, *Geophys. Res. Lett.* 19, 2, pp 99-102.

"Comments on 'Observations of two regions of charge during initial thunderstorm electrification' by J. E. Dye, J. J. Jones, A. J. Weinheimer and W. P. Winn" (1992), C. B. Moore and B. Vonnegut, *Quart. J. Roy. Meteor. Soc.* 118, 504, pp 395-400.

"A cloud-to-space lightning as recorded by the space shuttle payload-bay TV cameras (Picture of the Month)" (1992), William L. Boeck, Bernard Vonnegut, Marx Brook, and John McKune, Jr., *Mon. Wea. Rev.* 120, pp 1459-1461.

"Processes causing electrification of ice crystals in thunderclouds" (1992), B. Vonnegut and C. B. Moore, *Atmos. Res.* 28, pp 185-186.

"Miniature Vortices Produced by Electrical Corona" (1993), H. H. Jonsson and B. Vonnegut, *J. Geophys. Res.* 98, pp 5245-5248.

"The Atmospheric Electricity Paradigm" (1994), B. Vonnegut, *Bull. Amer. Meteor. Soc.* 75, 1, pp 53-61.

"Comment on 'A Review of Thunderstorm Electrification Processes'" (1994), B. Vonnegut, *J. Appl. Meteorol.* 33, 11, p 1376.

"Observations of Lightning in the Stratosphere" (1995), William Boeck, Otha H. Vaughan, Jr, Richard Blakeslee, Bernard Vonnegut, Marx Brook, and John McKune, Jr., *J. Geophys. Res.* 100, D1, pp 1465-1475.

"Importance of electricity in weather?" (1995), Bernard Vonnegut, *Weather* 50, 2, pp 62-63.

"An explanation for anomalous lightning from forest fire clouds" (1995), B. Vonnegut, D. J. Latham, C. B. Moore and S. J. Hunyady, *J. Geophys. Res.* 100, D3, pp 5037-5050.

"Jovian Lightning After Comet Impacts?" (1995), Bernard Vonnegut, *Science* 268, p 1829.

"Comment on 'Negatively charged precipitation in a New Mexico thunderstorm' by Thomas C. Marshall and Stephen J. Marsh and 'Charged precipitation measurements before the first lightning flash in a thunderstorm' by Stephen J. Marsh and Thomas C. Marshall" (1995), H. H. Jonsson and B. Vonnegut, *J. Geophys. Res.* 100, D8, pp 16,867-16,868.

"Weather and Climate Changes Arising From Solar Wind Effects on Thunderstorm Electrification" (1995), B. Vonnegut and C. B. Moore, *EOS, Transactions, Amer. Geophys. Union* 76, 32, pp 315 and 327.

“Comment on ‘Trip Illumines Lightning’ by R. D. Hill” (1995), B. Vonnegut, EOS, Transactions, Amer. Geophys. Union 76, 50, p 516.

“Role of cumulus downdrafts in stratosphere-troposphere exchange and in cloud electrification” (1997), Bernard Vonnegut, Atmospheric Research 43, 2, pp 197-199.

“The Smell of Tornadoes” (1997), Howard G. Altschule and Bernard Vonnegut, Weatherwise 50, 2, pp 24-25.

“The role of the space shuttle videotapes in the discovery of sprites, jets and elves” (1998), William L. Boeck, Otha H. Vaughan, Jr., R. J. Blakeslee, Bernard Vonnegut, and Marx Brook, J. Atmos. and Solar-Terrestrial Phys. 60, 6-9, pp 669-677.

CHAPTERS CONTRIBUTED TO BOOKS

"Atmospheric Electrostatics" (1973), B. Vonnegut, in *Electrostatics and Its Applications* (Chapter 17), A. D. Moore, ed., John Wiley & Sons (New York), pp 390-424.

"The thundercloud" (1977), C. B. Moore and B. Vonnegut, in *Lightning*, R. H. Golde, ed., Vol. 1: *Physics of Lightning*, Academic Press (New York), pp 51-98.

"The Physics of Thunderclouds" (1982), B. Vonnegut, in *CRC Handbook of Atmospheric*, H. Volland, ed., Vol. 1, CRC Press, Inc. (Boca Raton, Florida) pp 1-22.

"Comparisons between electrical processes occurring over land and over water" (1986), B. Vonnegut, *Oceanic Whitecaps and Their Role in Air-Sea Exchange Processes*, E. C. Monahan and G. Mac Niocaill eds., D. Reidel Publishing Co. (New York), pp 219-226.

TECHNICAL REPORTS

A Study of Techniques for Measuring the Concentration of Space Charge in the Lower Atmosphere (1958), B. Vonnegut and C. B. Moore, Final Report to Geophysics Research Directorate, Air Force Cambridge Research Laboratories under contract to Arthur D. Little, Inc., 163 pp.

Observations of Thunderstorms in New Mexico (1959), C. B. Moore, B. Vonnegut, and A. G. Emslie, Report to the Office of Naval Research, the Aerology Division, Bureau of Aeronautics, and the National Science Foundation, under contract to Arthur D. Little, Inc., 110 pp.

Research on Electrical Phenomena Associated with Aerosols (1962), B. Vonnegut, D. R. Moffett, P. M. Sliney, and A. W. Doyle, Final Report to U. S. Army Chemical Corps under contract to Arthur D. Little, Inc., 60 pp.

Some Atmospheric Electric Instruments for Use in Air Force Operations (1962), C. B. Moore, P. R. Leavitt, B. Vonnegut, and E. A. Vrablik, Technical Report No. AFCRL-62-233 to Geophysics Research Directorate, Air Force Cambridge Research Laboratories under contract to Arthur D. Little, Inc., 81 pp.

Instructions for The Detector of Atmospheric Electric Disturbances (1964), B. Vonnegut and C. B. Moore, Technical Report No. AFCRL-62-233 to Office of Aerospace Research, Air Force Cambridge Research Laboratories under contract to Arthur D. Little, Inc., 89 pp.

Electrical Behavior of an Airplane in a Thunderstorm (1965), B. Vonnegut, Technical Report No. FAA-ADS-36 to Federal Aviation Agency under contract to Arthur D. Little, Inc., 58 pp.

Luminous electrical phenomena in Huntsville, Alabama, tornadoes on April 3, 1974 (1976), O. H. Vaughan, Jr., and B. Vonnegut, NASA Technical Memorandum NASA TM X-73301, G. C. Marshall Space Flight Center, Alabama, 37 pp.

Mesoscale Observations of Lightning from Space Shuttle (1984), B. Vonnegut, O. H. Vaughan, Jr., M. Brook, and P. Krehbiel. NASA Technical Memorandum 86451.

Nighttime Observations of Thunderstorm Electrical Activity from a High Altitude Airplane (1984), M. Brook, C. Rhodes, O. H. Vaughan, Jr., R. E. Orville, and B. Vonnegut. NASA Technical Memorandum 86455.

ENCYCLOPEDIA ARTICLES

"Atmospheric electricity" (1967), B. Vonnegut, McGraw-Hill Yearbook of Science & Technology, pp 635-636.

"Tornado" (1969), B. Vonnegut, McGraw-Hill Yearbook of Science & Technology.

"Electrical balance in the lower atmosphere" (1973), B. Vonnegut, Annual Review of Earth and Planetary Sciences 1, pp 297-311.

"Atmospheric electricity" (1978), B. Vonnegut, McGraw-Hill Yearbook of Science & Technology, pp 99-101.

BOOK REVIEWS

Lightning by Martin A. Uman (1969), B. Vonnegut, Science 164, pp 938-939.

Atmospheric Electricity, Vol. 2, Fields, Charges, Currents, by H. Israel with H. Dolezalek (1975), B. Vonnegut, EOS, Transactions of the American Geophysical Union 56, pp 189-

190.

Lightning and Its Spectrum -- An Atlas of Photographs by Leon E. Salanave (1981), B. Vonnegut, World Meteorological Organization Bulletin.

Atmospheric Electrodynamics by Hans Volland (1984), Jai S. Kim and Bernard Vonnegut, Physics Today October 1985, pp 109-110.

The Earth's Electrical Environment, National Academy Press (1987), PAGEOPH 125, 5, pp 867-873.

POPULAR ARTICLES

“Thundercloud Electricity” (1965), B. Vonnegut, Discovery, St. Stephen’s Bristol Press Ltd., Bristol, England, 6 pp.

“Inside the Tornado” (1972), Bernard Vonnegut, Marvels and Mysteries of the World Around Us, The Readers Digest Association, Pleasantville, NY, pp 285-289.

“Inside the Tornado” (1972), Bernard Vonnegut, Natural History, American Museum of Natural History, New York, New York, pp 26-33.