ESF NETWORK

SPECIAL Bibliography

Books: A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
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Books

== A ==

== B ==

Brasseur, G. and S. Solomon, Aeronomy of the Middle Atmosphere, D. Reidel, Dordrecht, 1984.

(Middle atmosphere, chemical concepts, structure and dynamics, radiation, composition and chemistry, ions, possible perturbations and atmospheric responses)

== C ==

Chalmers, J. A., Atmospheric Electricity, Pergamon Press, London, 1957.

(General principles, ions, vertical potential gradient, conductivity, air-earth current, point discharge currents, precipitation current, thunder cloud, lightning discharge, separation of charge)

Coroniti, S. C. and Hughes, (eds.), Planetary Electrodynamics I-II., Gordon and Breach, New York, 1969.

(Fair weather and disturbed electricity, tropospheric ionization, electrification processes, physics of lightning, monitoring, simulation, planetary atmospheric electricity and its measurement)

Coroniti, S. C. (ed.), Problems of Atmospheric and Space Electricity, Elsevier, Amsterdam, 1965.

(Proceedings of the third international conference on atmospheric and space electricity)

Crosby, N., E. Daly, and A. Hilgers, Space Weather, ESA WPP-155, 1999.

(A collection of ~100 papers presented at the ESTEC workshop on the subject (Nordwijk, the Netherlands, 11-13 November 1998). 528 pages. A must.)

== D ==

Dolezalek, H. and R. Reiter (eds.), Electrical Processes in Atmospheres.

(Proceedings of the fifth international conference on atmospheric electricity)

== E ==

The Earth's electrical environment (Studies in geophysics), Washington, USA, 1986.

(It reviews the different components of global electric circuit such as lightning, thunderstorm, electrical processes in atmospheric regions and telluric current.)

== F ==

== G ==

== H ==

Hansen, J. E. and T. Takahashi (eds.), Climate Processes and Climate Sensitivity, AGU, Washington, 1984.

(Atmosphere and ocean dynamics, hydrologic cycle and clouds, albedo and radiation processes, cryospheric processes, ice cores and glacial history, ocean chemistry)

Hargreaves, J. K., The Upper Atmosphere and Solar-Terrestrial Relations, von Nostrand, New York, 1979.

(Vertical structure of the undisturbed upper atmosphere, spatial and temporal variations, winds, currents, waves, irregularities, structure of the magnetosphere, dynamical magnetosphere and substorm, waves in the magnetosphere, solar flares, storms)

Hargreaves, J. K., The Solar-Terrestrial Environment, Cambridge University Press, Cambridge, 1992.

(An introduction to geospace - the science of the terrestrial upper atmosphere, ionosphere and magnetosphere) (This is the revision of Hargreaves [1979])

Holton, J. R. and T. Matsuno (eds.), Dynamics of the Middle Atmosphere. Terra, Tokyo, 1984.

(Gravity waves, tides and oscillations, large scale waves and wave-mean flow interaction, radiation, transport of traces, modeling)

Hoyt D.V. and K.H. Schatten, The Role of the Sun in Climate Change, Oxford University Press, Oxford, UK, 1997.

(A tutorial examination of solar activity through history, observational accounts, present-day theories, sun/climate connection.)

== I ==

Israel, H., Das Gewitter, Akademische Verlagsgesellschaft, Leipzig, 1950.

(Theory of thunderstorms, lightning discharges, strokes and electromagnetic radiation, recent observational results)

Israel, H., Atmosphärische Elektrizität I-II. Akademische Verlagsgesellschaft, Leipzig, 1957, 1961.

(Fundamentals, conductivity of the atmosphere and its causes, measurement technics, tables - atmospheric electric field, charges, currents, supplement)

== J ==

== K ==

Kilinsky, E., Lehrbuch der Luftelektrizität, Akademische Verlagsgesellschaft, Leipzig, 1958.

(Conductivity and ions, atmospheric electric field, currents flowing in the atmosphere, cloud and thunderstorm electricity)

Kondratev, K. Ya., Changes in Global Climate, Balkema, Rotterdam, 1986.

(Contemporary global climatic changes and radiation budget of the Earth, gaseous composition and radiant heat flux, effect of aerosol on radiative transfer and climate)

== L ==

== M ==

McCormac, B. M. and Th. A. Seliga (eds.), Solar-Terrestrial Influences on Weather and Climate, Reidel, Publ. Co., Dordrecht, 1978.

(Proceedings of a symposium held at the Fawcett Center for Tomorrow, Ohio State University)

Magono, Ch., Thunderstorms, Elsevier, Amsterdam, 1980.

(Structure of thunderstorms, precipitation electricity, charge generation, non precipitating thunderstorms, lichtning discharge, recent advances)

Malone, T. F. and J. G. Roederer, (eds.), Global Change, Cambridge University Press, cambridge, 1985.

(Overview and unifying concepts, atmosphere and hydrosphere, life sys tems, solid earth, sun and space, tools and technology, geosphere - biosphere and human activity)

== N ==

== O ==

== P ==

== Q ==

== R ==

Rawer, K. (ed.), Winds and Turbulence in Stratosphere, Mesosphere and Ionosphere, North-Holland, Amsterdam, 1968.

(Proceedings of the NATO Advanced Study Institute Lindau, Germany)

Reiter, R., Meteorologie und Elektrizität der Atmosphäre, Akademische Verlag, Leipzig, 1960.

(Nature, characteristics of indicator elements and their dependence on weather, meteorobiological investigations on the basis of atmospheric electric indicator elements, solar eruptions, their relation to weather and life of people, general conclusions connected with the weather dependence of people)

Reiter, R., Fields, Currents and Aerosols in the Lower Troposphere, Steinkopf, Darmstadt, 1985.

(Network of stations, their geographical location and equipment, relationship between the atmospheric electric elements and meteorological conditions, solar-terrestrial relationships, atmospheric radioactivity and ionization of air, results of the study of atmospheric radioactivity and its effects)

Reiter, R., Phenomena in Atmospheric and Environmental Electricity, Elsevier, Amsterdam, 1992.

(History and fundamentals, ions-aerosols-air conductivity, fair and pseudo-fair weather-global atmospheric electricity, phenomena due to orography, altitude and environment without precipitation, phenomena preceeding and during precipitation, solar-terrestrial relationships)

Ruhnke, L. H. and J. Latham (eds.), Proceedings in Atmospheric Electricity, Deepak Publ., Hampton, Vi. 1983.

(Selected abstracts from the VI th international conference on atmospheric electricity)

== S ==

Smith, L. G. (ed.), Recent Advances in Atmospheric Electricity, Pergamon, London, 1958.

(Proceedings of the second conference on atmospheric electricity)

Speranza, A., S. Tibaldi and R. Fantechi (eds.), Global Change, EUR, Brussels, 199l.

(Conceptual basis for understanding climate and its variations, what are the limitations of our data base, do we have adequate methodologies of model validitation, do we understand the carbon cycle, what are the consequencies of climate changes and possible remedial measures)

== T ==

Troen, I. (ed.), Global Change, Climate Change and Climate Change Impacts, EUR, Brussels, 1993.

(Global climate modeling, climate change impacts, past climates, climate processes, integrated regional studies)

== U ==

Uman, M. A., The Lightning Discharge, Academic Press, New-York, 1987.

(Lightning phenomenology, cloud and lightning charges, stepped leader, attachment process, return stroke, dart leader, continuing current, J and K processes, positive lightning, cloud discharges)

== V ==

Volland, H. (ed.), Handbook of Atmospherics I-II., CRC Press, Boca Raton 1982.

(Physics of thunderclouds, lightning, low and high frequency noise, sferics, whistlers, theory of propagation)

Volland, H., (ed.), Handbook of Atmospheric Electrodynamics I-II. CRC Press, Boca Raton, 1995.

(Thunderstorms, lightning, lightning and atmospheric chemistry, radiofrequency radiation, other natural electromagnetic phenomena)

== W ==

== X ==

== Y ==

== Z ==

Articles

== A ==

Abbas, M. A. and J. Latham, The electrofreezing of supercooled water droplets, *J. Fluid Mech.*, *30*, 663-670, 1967.

(Original publication of the effects of disruption on inducing freezing)

Anyamba, E., E.R. Williams, J. Susskind, A.C. Fraser-Smith, and M. Füllekrug, The manifestation of the Madden-Julian oscillation in global deep convection and in the Schumann resonance intensity, *J. Atmo. Sci.*, , in press.

(Evidence for modulation of tropical lightning activity and convective cloud cover with the solar rotation period.)

== B ==

Bauer S. J., Zum Problem Sonnenaktivität, *Wetter und Klima, Wetter und Leben*, *34*, 221-226, 1982

(Influence of the Galactic Cosmic Ray variations on the atmosphere transparency.)

Beard, K. V., Ice initiation in warm-base convective clouds: An assessment of microphysical mechanisms, *Atmosph. Res.*, *28*, 125-152, 1992.

(A review of problems and possibilities for ice nucleation processes)

Beard, K. V. and H. T. Ochs, Charging mechanisms in clouds and thunderstorms, in *The Earth's Electrical Environment*, pp. 114-130, National Academy Press, Washington, D.C., 1986.

(A review of processes leading to charging of droplets)

Bencze, P., The distribution of the quantities of charge transported by point discharge, *Acta Technica*, *43*, 289-292, 1963.

(Annual variation of the quantities of negative and positive charges transported by point discharge recorded in Nagycenk Observatory and its explanation)

Bencze, P., Über den täglichen und jährlichen Gang der luftelektrischen Unruhe, *Acta Technica*, *47*, 87-95, 1964.

(Daily and annual variation of the atmospheric electric agitation is described for four group of periods and sources of the agitation studied)

Bencze, P., Zur Frage der Entstehung der luftelektrischen Unruhe, *Pure and Aplied Geophysics*, *61*, 173-182, 1965.

(Annual variation of atmospheric electric agitation has an opposite variation as compared with the annual variation of conductivity at a continental station)

Bencze, P., The annual variation of the ratio of the quantities of negative to positive charge transported by point discharge, *Acta Geodaet. Geoph. Mont. Hung.*, *1*, 93-105, 1966.

(In summer the hourly quantity of negative charge exceeding that of the positive charge is more frequent in summer, types of point discharge current changes attributed to different charge distribution in clouds are presented)

Bencze, P., G. Sátori and P. Szemerédy, Variation of the level of atmospheric radio noise - II. *Acta Geodaet. Geoph. Mont. Hung.*, *8*, 427-435, 1973.

(Cross-correlation between atmospheric radio noise and geomagnetic activity has indicated a periodicity of about 14 days and explained by planetary waves)

Bencze, P. and P. Szemerédy, Variation of the level of atmospheric radio noise after geomagnetic disturbances. - I. *Acta Geodaet. Geoph. Mont. Hung.*, *8*, 251-257, 1973.

(Level of atmospheric radio noise (27 kHz) has shown a geomagnetic after effect occurring with delay as compared to geomagnetic activity increasing with decreasing latitude)

Bencze, P., I. Szemerey and F. Märcz, The measurement of the air-earth current in the Geophysical Observatory near Nagycenk, *Acta Geodaet. Geoph. Mont. Hung.*, *19*, 347-352, 1984.

(Equipment for the recording of the air-earth current set up in the Nagycenk observatory is described)

Bering III, E. A., A. A. Few, and J. R. Benbrook. The global electric circuit; *Physics Today, 51* (10), 24-30, 1998.

(The review of the modern state of understanding the processes in the global electric circuit and relevant unsolved problems; for a non-specialist audience)

Besprozvannaya, A.S., G.I. Ohl, B.I. Sazonov, I.A. Sherba, T.I. Schuka, and O.A. Troshichev, Influence of short-term changes in solar activity on baric field perturbations in the stratosphere, *J. Atmos. Solar-Terrestr. Phys., 59*, 1233-1244, 1997.

(Response of the stratospheric circulation to different manifestations of the solar activity: changes in the galactic cosmis ray flux, interplanetary sector crossings. Modulation of these responses by the phase of the quasi-biennial oscillation (QBO) or by the volcanic aerosols content in the stratosphere is also considered.)
(Original publication of the baric field perturbations (the Sazonov index) being correlated with the short-term changes in solar activity, such as active regions, Forbush decrease, and the IMF sector structure)

Bilitza, D., Science tools on the Internet - Access to information, data and models, *J. Atmos. Solar-Terrestr. Phys., 61*, 167-180, 1999.

(An attempt to list the major web sites relevant to Solar-Terrestrial Physics.)

Blinova E. N. (ed.) *Tables of the zonal circulation indices at various constant pressure levels for 1949-1975*, Hydrometeoizdat, St. Petersburg, 1978 (in Russian).

(Description of atmosphere's zonal circulation indices - Blinova indices.)

Borszák, I. B. and P. Cummings, Electrofreezing of water in molecular dynamics simulation accelerated by oscillatory shear, *Phys. Rev. E, 56*, R6279-R6282, 1997.

(Original publication on combined action of electric fields and shear for freezing)

Bourdarie, S., D. Boscher, T. Beutier, J.-A. Sauvaud, and M. Blanc, Electron and proton radiation belt dynamic simulation during storm periods: A new asymetric convection-diffusion model, J. Geophys. Res., 102, 17541-17552, 1997.

(A theoretical model for the evolution (in space and time) of the proton and electron distributions during magnetically disturbed periods, by using a non axisymetric model for the internal magnetic field.)

Boyle, C.B., P.H. Reiff, and M.R. Hairston, Empirical polar cap potentials, *J. Geophys. Res., 102*, 111-125, 1997.

(An empirical formula relating the polar cap potential to solar wind parampeters: SW velocity, amplitude and elevation (with respect to the ecliptic plane) of the SW magnetic field. Data come from two DMSP satellites and IMP8 spacecraft.)

Burns, G. B., A. V. Frank-Kamenetsky, O. A. Troshichev, E. A. Bering, and V. O. Papitashvili, The geoelectric field: a link between the troposphere and solar variability, *Ann. Glaciology, 27*, 651-654, 1998.

(Evidences are presented that the geoelectric field at Vostok is modulated by the duskward component of the Interplanetary Magnetic Field (IMF By))

Butterweck, G., Natürliche Radionuclide als Tracer zur Messung des turbulenten Austaushes und der trockenen Deposition in der Umwelt. Doktordissertation, Universität Göttingen, 1991.

(A good and detailed review of the radon in the nature written from the position of the Gättingen school.)

== C ==

Callis, L.B., and J.D. Lambeth, NOy formed by precipitating electron events in 1991 and 1992: Descent into the stratosphere as observed by ISAMS, *Geophys. Res. Letters, 25*, 1875-1878, 1998.

(Observation of NO2 concentration increases at lower and lower altitudes (and lower and lower latitudes) after intense polar electron precipitation events.)

Chanin, M.-L, P. Keckhut, A. Hauchecorne and K. Labitzke, The solar activity-QBO effect in the lower thermosphere, *Ann. Geophys., 7*, 463-470, 1989.

(Extension to the thermosphere of the relationship between temperature, QBO and solar cycle seen by K. Labitzke below)

Chanin, M.-L. and Keckhut, P., Influence on the middle atmosphere of the 27-day and 11-year solar cycles: radiative and/or dynamical forcing ?, *J. Geomagn. Geoelectr., 43*, 647-655, 1991.

(Comparison between the signatures of the 2 cycles on the temperature of the middle atmosphere. interpretation in terms of planetary waves)

Chanin, M.-L. and G. F. Toulinov, The polar thermospheric temperature behaviour during the 11 year solar cycle, *J. Geophys. Res., 84*, 406-410, 1979.

(Evidence of an anti-correlation between the temperature of the polar thermosphere and the 11-year solar cycle)

Cho, M. and D. E. Hastings, Dielectric Charging Processes and Arcing Rates of High Voltage Solar Arrays, *J. Spacecraft and Rockets, 28* 698-706, 1991.

(Computer simulation of spacecraft charging by ionospheric plasma)

Cho, M. and D. E. Hastings, An Analytical and Particle Simulation Study of Localized Semi-Vacuum Gas Breakdown Phenomena on High Voltage Surfaces in Low Earth Orbit, *Phys. Fluid B., 4,* 2614-2625, 1992.

(Computer simulation of arcing around a spacecraft in low earth orbit)

Cho, M. and D. E. Hastings, Computer Particle Simulation of High Voltage Solar Array Arcing Onset, *J. Spacecraft and Rockets, 30,* 189-201, 1993.

(Computer simulation of arcing around a spacecraft in low earth orbit)

Cho, M., Ionosphere Ionization Effects on Sheath Structure around a High Voltage Spacecraft, *J. Spacecraft and Rockets, 32,* 1018-1026, 1995.

(Computer simulation of arcing around a spacecraft with a positive potential with respect to ionospheric plasma)

Cho, M., and M.J. Rycroft, The decomposition of CFCs in the tropsohere by lightning *J. Atm. Sol.-Terr. Phys., 59,* 1373-1379, 1997.

(Theoretical analsyis on decomposition method of CFC by lightning energy)

Cho, M., and M.J. Rycroft, Computer simulation of the electric field structure and optical emission from cloud-top to the ionosphere, *J. Atmos. Sol.-Terr. Phys., 60,* 871-888, 1998.

(Computer simulation of sprites and elves caused by positive cloud-to-ground lightning discharge)

Cho, M., Sheath Structrure around a High Voltage Body in Magnetized Non-flowing Ionospheric Plasma, *J. Spacecraft and Rockets, 35,* 82-89, 1998.

(Computer simulation and theoretical analysis of plasma conditions around a spacecraft with a positive high potential with respect to ionospheric plasma)

Cho, M., Ionization around a High Voltage Body in Magnetized Non-flowing Ionospheric Plasma *J. Spacecraft and Rockets, 35,* 90-99, 1998.

(Computer simulation and theoretical analysis of arcing around a spacecraft with a positive high potential with respect to ionospheric plasma)

Cho M., N. Miyata, M. Hikita, and S. Sasaki, Discharge over Insulator Surafce of Spacecraft in Low Earth Orbit Plasma Environment *IEEE Transaction on Dielectrics and Electrical Insulation, 6,* 501--506, 1999.

(Experiment of arcing on spacecraft insulator surface charged by ionospheric ions)

Cho M., N. Miyata, and M. Hikita, Effects of Arcing on Insulator Surface Potential in Plasma: Image Observation, *J. Spacecraft and Rockets,* to be published, 2000.

(Experiment of arcing on spacecraft insulator surface charged by ionospheric ions)

== D ==

Dodson, H. W. and E. R. Hedeman, An experimental Comprehensive Flare Index and its derivation for "major" flares, 1955-1969, *WDC-A Report UAG-14, U.S. Dept. of Commerce, NOAA,,* 1-25, 1971.

(Characterization of solar flares using a special method developed at the McMath-Hulbert Observatory)

== E ==

Ebihara, Y., M. Ejiri, and M. Miyaoka, Coulomb lifetime of the ring current ions with time varying plasmasphere, Earth Planets Space, 50, 371-382, 1998.

(A model of particle diffusion and convection during three successive magnetic storms in April 1997. The flux of the injected particle is empirically deduced from the measured solar wind plasma density by using the Borowski et al. formula (JGR, 102, 22089, 1997). The convection electric field is related to the Kp index through the Maynard and Chen model (JGR, 80, 1009, 1975).)

Ebihara, Y., and M. Ejiri, Modeling of the solar wind control of the ring current build up: A case study of the magnetic storms in April 1997, *Geophys. Res. Letters, 25,* 3751-3754, 1998.

(A model of the proton losses by Coulomb collision and charge exchange during magnetic storms. Comparison with data obtained with EXOS B.)

Elster, J. and H. Geitel, Beschreibung des Verfahrens zur Gewinnung vorübergehend radioaktiver Stoffe aus der atmosphärischen Luft. *Phys. Z., 3,* 305-310, 1902.

(A historical landmark of the research of the natural radioactivity of the air, including first consideration of the effect of electric field)

Etcheto, J., R. Gendrin, and J.-F. Karczewski, Enregistrement simultane des resonances de la cavite Terre-ionosphere en deux stations distantes de 12000 km, *Ann. Geophys., 22,* 646-648, 1966.

(The diurnal variation of the intensity of the first mode measured on two orthogonal magnetic antennas at two stations (Chambon-la-Foret, France, and Kerguelen islands, Indian Ocean) gives a convincing information about the source region.)

== F ==

Fram, R. A., J. D. Winningham, J. R. Sharber, R. Link, G. Crowley, E. E.Gaines, D. L.Chenette, B. J. Anderson, and T. A. Potemera, The diffuse aurora: A significant source of ionization in the middle atmosphere, *J. Geophys. Res., 102,* 28,203-28,214, 1997.

(Original model of ionization production by relativistic electrons down to 20 km)

Frank-Kamenetsky, A. V., G. B.Burns, O. A.Troshichev, E. A. Bering and W. J. R.French, The geoelectric field at Vostok, Antarctica: it's relation to the interplanetary magnetic field and the polar cap potential, *J. Atmos. Solar Terr. Phys.,* submitted 1999.

(Original analysis of solar wind effects on surface electric field at Vosyok, Antarctica)

Frank-Kamenetsky, A. V., O. A. Troshichev, G. B. Burns, and V. O. Papitashvili, Variations of the atmospheric electric field in the near-pole region related to the interplanetary magnetic field, *J. Geophys. Res.*, in press, 2000.

(It is shown that atmospheric electric field Ez at the antarctic station Vostok is strongly affected by variations in both the IMF By and Bz components. An effect of By is dominant during geomagnetic daytime hours (1100-1400 UT at Vostok): Ez grows when By increases and reduces when By decreases. The IMF Bz effect is mainly seen at dawn (Ez grows for Bz < 0) and dusk (Ez grows for Bz > 0))

Friis-Christensen, E. and K. Lassen, Length of the solar cycle: an indicator of solar activity closely associated with climate, *Science, 254*, 698-700, 1991.

(Original publication of the solar cycle length being correlated with the northern hemisphere land surface temperatures.)

Fuchs, N. A., The Mechanics of Aerosols, Pergamon Press, Oxford, 1964.

(A comprehensive high-level textbook of aerosol physics)

Füllekrug, M., Schumann-Resonances in Magnetic-Field Components, *J. Atmos. Terr. Phys., 57*, 655, 1994.

(Report on lightning flash excitation by reoccurring whistlers.)

Füllekrug, M., Schumann resonances in magnetic field components, *J. Atmos. Terrestr. Phys., 57*, 479-484, 1995.

(The diurnal variation of the intensity of the first mode measured on two orthogonal magnetic antennas at one station (Göttingen) is representative of the displacement of the source region in longitude. [But the peak frequencies of the two components have different diurnal variations].)

Füllekrug, M., E.A. Bering, A.C. Fraser-Smith, and A.A. Few, On the Hourly Contribution of Global Cloud-to-Ground Lightning Activity to the Atmospheric Electric Field in the Antarctic during December 1992, *J. Atmos. Sol.-Terr. Phys., 61*, 745-750, 1999.

(Evidence for little contribution of global lightning activity to the atmospheric electric field on the hourly time scale.)

Füllekrug, M., and S. Constable, Global Triangulation of Intense Lightning Discharges, *Geophys. Res. Lett., 27*, 333-336, 2000.

(Report on the determination of global lightning activity by earth-ionosphere cavity resonances.)

Füllekrug, M., and A.C. Fraser-Smith, Further Evidence for a Global Correlation of the Earth-Ionosphere Cavity Resonances, *Geophys. Res. Lett., 23*, 2773-2776, 1996.

(The daily mean values of the intensities of the first two modes on one magnetic component at three stations (Antarctica, Greenland, and California), for 4 months in 1990, presents a semi-periodicity of 20-30 days, in close connection with the fluctuation of the sunspot number.)
(Evidence for modulation of global lightning activity with the solar rotation period.)

Füllekrug, M., and A.C. Fraser-Smith, Global Lightning and Climate Variability Inferred From ELF Magnetic Field Variations, *Geophys. Res. Lett., 24*, 2411-2414, 1997.

(Determination of climate properties by use of global lightning activity.)

Füllekrug, M., A. C. Fraser-Smith, E. A. Bering, and A. A. Few. On the hourly contribution of global cloud-to ground lightning activity to the atmospheric electric field in the Antarctic during December 1992; *J. Atmos. Sol.-Terr. Phys. 61*, 745-750, 1999.

(It was found the quantitative contribution of thunderstorm generator to the value and variation of electric field near the ground.)

Füllekrug, M., and S.C. Reising, Excitation of Earth-Ionosphere Cavity Resonances by Sprite-Associated Lightning Flashes, *Geophys. Res. Lett., 25*, 4145-4148, 1998.

(Connection between sprites and earth-ionosphere cavity resonance excitations.)

Fukuta, N, A study of a mechanism for contact ice nucleation, *J. Atmos. Sci., 32*, 1597-1603, 1975.

(Original discussion of microphysics of contact nucleation)

== G ==

Gendrin, R., and R. Stefant, Effet de l'explosion thermonucleaire a tres haute altitude du 9 juillet 1962 sur la resonance de la cavite Terre-ionosphere: Resultats experimentaux, *C.R. Acad. Sci. Paris, 255*, 2273-2275, 1962.

(The peak frequencies of the first three modes (one magnetic component at Chambon la Foret) had decreased after the high altitude thermo-nuclear explosion. [This is opposite to the result obtained by Schlegel and Füllekrug (J.G.R., 104, 10111, 1999, see below), who have observed an increase of the frequency of the first mode following intense solar electron events].)

Gierens, K., and M. Ponater, Comment on "Variation of cosmic ray flux and global cloud coverage - a missing link in solar-climate relationships", *J. Atmos. Solar-Terr. Phys., 61*, 795-797, 1999.

(A strong criticism of Svensmark and Friis-Christensen's findings (see below))

== H ==

Hastings, D. E. and M. Cho, Ion Drag for a Negatively Biased Solar Array in Low Earth Orbit, *J.Spacecraft and Rockets, 27* 279-284, 1990.

(Computer simulation of spacecraft plasma environmental interaction in ionospheric plasma)

Hastings, D.E., M. Cho, and H. Kuninaka, The Arcing Rate for a High Voltage Solar Array: Theory, Experiment and Predictions, *J. Spacecraft and Rockets, 29* 538-554, 1992.

(Computer simulation and experiment of arcing induced by spacecraft charging in ionosphere)

Hastings, D.E., M. Cho, and J. Wang, Space Station Freedom Structure Floating Potential and the Probability of Arcing, *J. Spacecraft and Rockets, 29*, 830-834, 1992.

(Computer simulation of charging of large spacecraft in ionosphere)

Hays, P.B. and R.G. Roble, A quasi-static model of global atmospheric electricity, I. The lower atmosphere, *J. Geophys. Res., 84*, 3291-3305, 1979.

(Original model of global electric circuit, focussing on troposphere)

Heath, D.F. and A.J. Krueger, Solar proton event: influence on stratospheric ozone, *Science, 197*, 886-889, 1977.

()

Henshaw, D. L., Ross, A. N., Fews, A. P., and Preece, A. W., Enhanced deposition of radon daughter nuclei in the vicinity of power frequency electromagnetic fields. *Int. J. Radiat. Biol., 69*, 25-38, 1996.

(The paper that has initiated a hot discussion about the effect of electric field on the deposition of radioactive substances)

Herman, J. R. and R. A. Goldberg, *Sun, Weather, and Climate*, NASA, SP-426, Washington, D. C., 1978.

(Extensive account of observations and theories of solar activity influencing weather and climate)

Hines, C. O. and I. Halevy, On the reality and nature of a certain Sun-weather correlation, *J. Atmos. Sci., 34*, 382-404, 1977.

(Independent analysis confirms reality of Wilcox effect of Vorticity Area Index)

Hobbs, P. V. and A. L. Rangno, Ice particle concentrations in clouds, *J. Atmos. Sci., 42*, 2523-2549, 1985.

(Original paper on aircraft data on clouds, suggesting contact nucleation by unknown process)

== I ==

Israelsson, S., E. Knudsen, and H. Tammet, An experiment to examine the covariation of atmospheric vertical currents at two separate stations, *J. Atm. Electr., Vol.14, No.1,*, 63-73, 1994.

(Simultaneous measurements with two long-wire antennas have been carried out. The distance between the antennas was 13 km)

Israelsson S., and R. Lelwala, Space charge density measurements downwind from a traffic route, *J. Atm. Res., 51* 301-307, 1999.

(On the distribution of space charge density downwind from a traffic route, E4. Experimental results)

== J ==

== K ==

Keckhut, P. and Chanin, M. L., Middle atmosphere response to the 27-day solar rotation as observed by lidar, *Geophys. Res. Lett.*, *19*, 809-812, 1992.

(Further study of the variation of the temperature with the 27-day cycle)

Keckhut, P., Hauchecorne, A. and Chanin, M. L., Midlatitude long-term variability of the middle atmosphere: Trends and cyclic and episodic changes, *J. Geophys. Res.*, *100*, 18887-18897, 1995.

(The 11-year solar cycle is shown to be modulating the long term cooling observed on the middle atmosphere temperature)

Kirkland, M. W., B. A. Tinsley and J. T. Hoeksema, Are stratospheric aerosols the missing link between tropospheric vorticity and earth transits of the heliospheric current sheet? *J. Geophys. Res.*, *101*, 29,689-29,699, 1996.

(Original analysis confirms Wilcox effect returned with Pinatubo stratospheric volcanic sulfuric acid)

Kischka, P.V., I.V. Dmitrieva, and V.N. Obridko, Long-term variations of the solar-geomagnetic correlation, solar irradiance, and northern hemisphere temperature (1868-1997), J. Atmos. Solar-Terrestr. Phys., 61, 799-808, 1999.

(Content of the paper is precisely defined in the title.)

Kodera, K., Influence of the solar cycle on climate through stratospheric processes, in "The stratosphere and its role in the climate system", G.P. Brasseur ed., Springer Verlag, 1997, pp. 83-98.

(A review of the relationships between the 11 year solar cycle, the quasi-biennial oscillation and the atmospheric circulation at stratospheric altitudes.)

Kondratyev K. Ya., Nikolsky G. A., The solar constant and climate, *Solar Phys.*, *89*, 215, 1983

(The cyclic variation of the galactic cosmic ray flux intensity causes a corresponding variation of the atmospheric transparency at stratospheric heights.)

Kozira, J.U., V.K. Jordanova, R.B. Horne, and R.M. Thorne, Modeling of the contribution of electromagnetic ion cyclotron (EMIC) waves to storm time ring current erosion, in "Magnetic Storms", Geophysical Monograph 98, American Geophysical Union, 1997, pp. 187-202.

(A semi-morphological model of the possible role of EMIC on proton precipitation during a geomagnetic storm.)

Kundt, W. and Thuma G., Geoelectricity: atmospheric charging and thunderstorms, J. Atmos. Sol.-Terr. Phys., 61, 955-963, 1999.

(I added another term to Maxwell's current: the falling, heavy aerosols. I should be most interested in seeing that paper tested.)

== L ==

Labitzke, K., Sunspots, the QBO and the stratospheric temperature in the north polar region, *Geophys. Res. Lett.*, *14*, 535-537, 1987.

(Report on links between solar activity and atmospheric parameters also regarding QBO)

Labitzke, K. and M.-L. Chanin, Changes in the Middle Atmosphere in Winter related to the 11-year solar cycle, *Ann. Geophys.*, *6*, 643-644, 1988.

(evidence of a signature of alterned sign of the solar influence on the temperature of the middle atmosphere)

Lambour, R.L., L.A. Weiss, R.C. Elphic, and M.F. Thomsen, Global modeling of the plasmasphere following storm sudden commencements, J. Geophys. Res., 102, 24351-24368, 1997.

(Study of the plasmaspheric and ionospheric refilling processes after Ssc events. Description of the Rice University "Magnetospheric Specification and Forecast Model (MSFM)".)

Lanzerotti, L.J., L.V. Medford, D.S. Sayres, C.G. Maclennan, R.P. Lepping, and A. Szabo, Space weather: Response of large-scale geopotentials to an interplanetary magnetic cloud, J. Geophys. Res., 103, 9351-9356, 1998.

(Relationship between the potential difference induced in a submarine transmission cable, the Akasofu e parameter and the Dst magnetic index.)

Larsen, M. F. and M. C. Kelley, A study of an observed and forecasted meteorological index and its relation to the interplanetary magnetic field, *Geophys. Res. Lett.*, *4*, 337-340, 1977.

(Analysis shows Wilcox effect detected even when weak by correlations with forecasted VAI)

Lastovicka, J., Influence of the IMF sector boundaries on cosmic rays and tropospheric vorticity, *Stud. Geophys. Geod.*, *31*, 213-218, 1987.

(Original analysis shows Wilcox effect not due to cosmic ray changes)

Lauter, E. A. and R. Knuth, Precipitation of high energy particles into the upper atmosphere at medium latitudes after magnetic storms, *J. Atmos. Terr. Phys.*, *29*, 411-417, 1967.

(Presentation of evidences for changes in the lower ionosphere associated with ionizing particles precipitating from the magnetosphere following geomagnetic disturbances)

Lelwala, R., S. Israelsson and K. P. S. C. Jayaratne, Measurement of space charge density over flat ground in nearly neutral stratified atmospheric surface layer, *J. Atmos. Electr., Vol. 17, No. 2* 59-68, 1997.

(Distrubution of space charge density over flat ground in different meteorological conditions)

Lemaire, J.F., Hydrostatic equilibrium and convective stability in the plasmasphere, J. Atmos. Solar-Terrestr. Phys., 61, 867-878, 1999.

(A theoretical discussion of the hydrostatic/barometric model of a corotating plasmasphere. Evidence of a continuous plasmaspheric wind during prolonged magnetically quiet periods.)

Liemohn, M.W., G.W. Kahazanov, P.D. Craven, and J.U.Kozira, Non linear kinetic modeling of early stage plasmaspheric refilling, J. Geophys. Res., 104, 10295-10306, 1999.

(Numerical simulation of the plasma refilling process by solving the kinetic equations that govern the plasma displacement along field lines. The role of a self-consistant electric field and of the anisotropy of the hot plasma population on the refilling rate is stressed.)

Lindsay, G.M., C.T. Russell, and J.G. Luhman, Predictability of Dst index based upon solar wind conditions monitored inside 1 AU, J. Geophys. Res., 104, 10335-10344, 1999.

(Comparison between observed Dst and Dst computed from measured solar wind parameters by using ISEE data and the Burton et al.(J.G.R., 80, 4204, 1975) formula. Suggestion for using a solar wind monitor situated at 0.7 AU, Earth synchronised and "powered" by a solar sail.)

Lockwood, J. A., List of Forbush decreases 1954-1990, *Solar Geophys. Data, 549*, 154-163, 1990.

(A compilation of Forbush decrease events selected on the basis of appropriate criteria)

== M ==

Märcz, F., On connections between ionospheric absorption and atmospheric electricity by investigating data of several parameters, *Acta Geodaet. Geophys. Mont. Acad. Sci. Hung., 10*, 449-458, 1975.

(Results on changes in different atmospheric electric parameters determined at mid-latitude connected with the increase of ionospheric absorption of radio waves after geomagnetic storms)

Märcz, F., Links between atmospheric electricity and ionospheric absorption due to extraterrestrial influences, *J. Geophys. Res., 81*, 4566-4570, 1976.

(Original publication of evidences for an increased atmospheric electric potential gradient measured on the ground at two mid-latitude stations associated with anomalously high ionospheric absorption of radio waves also observed at mid-latitude)

Märcz, F., Solar electron fluxes, increased geomagnetic activity and ionospheric absorption following selected flares, *J. Geophys., 45*, 91-100, 1978.

(A study on changes in geomagnetic activity and ionospheric absorption at times of solar flares selected on the basis of several important characteristics)

Märcz F., Atmospheric electric potential gradient following selected flare events, *Publs. Inst. Geophys. Pol. Acad. Sci., D-26 (198)*, 85-95, 1987.

(Results showing a delayed increase in the ground based atmospheric electric potential gradient after selected flares mostly connected with absorption after-effects)

Märcz, F., Atmospheric electricity and the 11-year solar cycle associated with QBO, *Ann. Geophysicae, 8*, 525-530, 1990.

(Evidences for correlation between solar activity and atmospheric electricity on a long time scale when taking into account the phase of the QBO)

Märcz, F., Short-term changes in atmospheric electricity associated with Forbush decreases, *J. Atm. Solar-Terr. Phys., 59*, 975-982, 1997.

(Analyses detecting a decrease of the atmospheric electric potential gradient observed at Nagycenk/Hungary associated with Forbush decrease events selected from different lists)

Märcz, F., Short term changes in atmospheric electricity associated with Forbush decreases, *J. Atmos. Solar-Terr. Phys., 59*, 975-982, 1997.

(Analysis shows expected reduction of near surface vertical electric field with Forbush decreases)

Märcz, F. and P. Bencze, Variations of the atmospheric electric potential gradient at Nagycenk Observatory. Acta Geodaet. Geoph. Mont. Hung., 16, 415-422, 1981.

(Daily, annual and long term variations of the atmospheric electric potential gradient recorded in the Nagycenk observatory are described)

Märcz, F. and P. Bencze, Surplus of negative charge flow in point-discharge current as shown by variations on different time scales at Nagycenk station, *J. Atm. Solar-Terr. Phys., 60*, 1435 - 1443, 1998.

(Based on diurnal, annual and long term variations in the point-discharge current a negative charge flow to the ground has been demonstrated for a mid-latitude station, as well as simultaneous results obtained at different stations are compared)

Mansurov, S. M., L. G. Mansurova, G. S.,Mansurov, V. V.Mikhenvich, and A. M.Visotsky, North-south asymmetry of geomagnetic and tropospheric events, *J. Atmos. Terr. Phys., 36*, 1957-1962, 1974.

(Original analysis shows polar surface pressures respond to changes in interplanetary magnetic field)

Mareev, E. A., S. Israelsson, E. Knudsen, A. V. Kalinin, M. M. Novozhenov, Studies of an artificially generated electrode effect at ground level, *Ann. Geophys., V.14, N10*, 1095-1101, 1996.

(Artificially generated electrode effect at ground level have been measured by using big metallic net. Theoretical calculations are included)

Miles, J. C. H. and R. A. Algar, Measurement of radon decay product concentration under power lines. *Radiat. Prot. Dosim., 74*, 193-194, 1997.

(The first strong criticism to Henshaw and his followers)

Misumi, Y., The tropospheric response to the passage of solar sector boundaries, *J. Meteorol. Soc. Jpn., 61*, 686-694, 1983.

(Arctic mid-troposphere temperatures show reduction at sector boundary crossings for Agung volcanic sulfuric acid years)

Mühleisen, R., The global circuit and its parameters, in Electrical Processes in Atmospheres, Eds. Dolezalek, H. and R. Reiter, Steinkopff-Darmstadt, 467-476, 1977.

(Study of the main parameters of the global atmospheric electric circuit, and discussion on Wilson's hypothesis)

== N ==

NAS, *Solar Variability, Weather and Climate*, Geophys. Res. Board, Nat. Acad. Press, Washington, D. C., 1982.

(Review by experts on all aspects of what was known on solar activity-weather effects to 1981)

NAS, *The Earth's Electrical Environment*, Geophys. Res. Board, Nat. Acad. Press, Washington, D. C., 1986.

(Review by experts on what was known on global circuit and atmospheric electricity to 1985)

NAS, *Solar Influences on Global Change*, Geophys. Res. Board, Nat. Acad. Press, Washington, D. C., 1994.

(Review of solar irradiance variations, UV effects on ozone, and atmospheric correlations on decadal timescales)

Ney, E. R., Cosmic radiation and the weather, *Nature, 183*, 451-452, 1959.

(First indication that cosmic rays might have an effect on weather and climate, since the parameter of the lower atmosphere with the largest modulation due to solar activity is the abundance of ions produced by cosmic rays.)

Nickolaenko, A.P., Modern aspects of Schumann resonance studies, *J. Atmos. Sol. Terr. Phys. 59*, 805-816, 1997.

(Schumann resonances provide valuable informations on the properties of the lower ionosphere together with the characteristics of global lightning activity.)

Nickolaenko, A.P., G. Sátori, B. Zieger, L.M. Rabinowicz, and I.G. Kudintseva, Parameters of global thunderstorm activity deduced from the long-term Schumann resonances records, *J. Atmos. Sol. Terr. Phys. 60*, 387-399, 1998.

(Among others, the semiannual areal variation of global thunderstorm activity has been deduced from SR observations at Nagycenk.)

== O ==

== P ==

Pesnell, W.D., R.A. Goldberg, C.H. Jackman, D.L. Chenette, and E.E. Gaines, A search of UARS data for ozone depletions caused by highly relativistic electron precipitation events of May 1992, J. Geophys. Res., 104, 165-175, 1999.

(Optical and microwave measurements at the limb are used for infering the ozone content at stratospheric altitudes. Measurements are made at times of relativistic electron precipitation events detected on board the same spacecraft.)

Porstendörfer, J., Properties and behavior of radon and thoron and their decay products in the air. *J. Aerosol Sci., 25*, 219-263, 1994.

(A tutorial review of the physics of air natural radioactivity)

Pruppacher, H. R. and J. D.Klett, *Microphysics of Clouds and Precipitation*, 2nd rev. ed., Kluwer, Dordrecht, 1997.

(Comprehensive review of all aspects of cloud microphysics, including electrical effects)

Pudovkin M. I., S. V. Babushkina, Atmospheric transparency variations associated with geomagnetic disturbances, *J. Atm. Terr. Phys., 54*, 1135-1138, 1992

(During the Forbush decreases, the atmosphere's transparency at latitudes 60-65 N increases by 5-10%.)

Pudovkin M.I., Dementeeva A.L. The variations of the temperature altitudinal profile in the lower atmosphere during Solar Proton Events, *Geomagn. Aeronom.*, *37*(3), 84-91, 1997 (in Russian).

(Variations of the temperature altitudinal profile in the troposphere and lower stratosphere at high latitudes during Solar Proton Events are calculated for a 1-D atmospheric model.)

Pudovkin M. I., L. Egorova, S. V. Veretenenko, Temperature variations in the lower atmosphere during Forbush-decreases of cosmic rays, *Geomagn. Aeronom., 39, 5*, 128-130, 1999 (in Russian).

(Variations of the air temperature altitudinal profile in the Northern Finland during Forbush decreases is obtained by the superposed epoch method.)

Pudovkin M. I., A. L. Morozova, Time evolution of the temperature altitudinal profile in the lower atmosphere during solar proton events, *J. Atm. Sol.-Terr. Phys., 59*, 2159-2166, 1997

(Time variations of the temperature height profile in the lower atmosphere in the subauroral zone during Solar Proton Events are calculated. The characteristic time of the temperature variations is estimated.)

Pudovkin M.I. and Morozova A.L. Time variations of atmospheric pressure and circulation associated with temperature changes during Solar Proton Events. *J. Atm. Sol.-Terr. Phys.*, *60*, 1729-1737, 1998.

(The variations of the air temperature and pressure altitudinal profiles and of the lower atmosphere zonal circulation are calculated for the 2-D atmospheric model. The calculated variations are shown to be in a reasonable agreement with experimental data.)

Pudovkin M. I., S. V. Veretenenko, Cloudiness decreases associated with Forbush-decrease of galactic cosmic rays, *J. Atm. Terr. Phys., 57*, 1349-1355, 1995

(Effects of Forbush decreases of the Galactic Cosmic Rays on the cloudiness state in different latitudinal belt.)

Pudovkin M. I., S. V. Veretenenko, R. Pellinen, and E. Kyro, Cosmic ray variation effects in the temperature of the high-latitudinal atmosphere, *Adv. Space Res., 17*, 165--168, 1995

(Variations of the temperature altitudinal profile in the Northern Finland (obs. Sodankylä) during Solar Proton Events are obtained by the superposed epoch method.)

== Q ==

== R ==

Rangno, A. L. and P. V. Hobbs, Ice particle concentrations and precipitation development in small polar maritime cumuliform clouds, *Q. J. Roy. Meteorol. Soc.*, *117*, 207-241, 1991.

(Follow-up paper on aircraft data on clouds, suggesting contact nucleation by unknown process)

Reischl, G. P., J. M. Mäkelä, R. Karch, and J. Necid, Bipolar charging of ultrfine particles in the size range below 10 nm, *J. Aerosol Sci.*, *27*, 1996.

(Reliable experimental data about electric charges of smallest airborne particles with a comprehensive review of theory and former measurements)

Reiter, R., Solar flares and their impact on potential gradient and air-earth current characteristics at high mountain stations, *Pageoph*, *72*, 259-267, 1969.

(Results showing changes in the atmospheric electric potential gradient and air-earth current measured at high moutains around the occurrences of solar flares)

Roble, R. G. and P. B. Hays, A quasi-static model of global atmospheric electricity, II. Electrical coupling between the upper and the lower atmosphere, *J. Geophys. Res.*, *84*, 7247-7256, 1979.

(Original model of global electric circuit, focussing on upper atmosphere and solar modulation)

Roble, R. G. and I. Tzur, The global atmospheric-electrical circuit, *The Earth's Electrical Environment*, National Academy Press, Washington, D.C., 206-231, 1986.

(Review of the global circuit and external influences on it)

Rutledge, S. A. and P. V. Hobbs, The mesoscale and microscale structure and organization of clouds and precipitation in midlatitude cyclones, VIII: A model for the feeder-seeder process in warm frontal rainbands, *J. Atmos. Sci*, *40*, 1185-1206, 1983.

(Shows how ice production in winter cyclones controls precipitation)

Rycroft, M. J. and M. Cho, Modelling electric and magnetic fields due to thunderclouds and lightning from cloud-tops to the ionosphere, *J.Atmospheric and Solar-Terrestrial Physics, 60*, 889-893, 1998.

(Theoretical analysis of sprites and elves caused by positive cloud-to- ground lightning discharge)

== S ==

Sagalyn, R. C. and H. K. Burke, Atmospheric Electricity, in *Handbook of Geophysics and the Space Environment*, ed. A. S. Jursa, Air Force Geophysics Lab., Bedford, MA., 1985.

(Review of atmospheric electricity; shows space charge concentration in conductivity gradients)

Sapkota, B. K. and N. C. Varshneya, On the global atmospheric electrical circuit, *J. Atmos. Terr. Phys.*, *52*, 1-20, 1990.

(Model of global circuit with effects of atmospheric aerosols and Forbush decreases of cosmic rays)

Sátori G., Combined ionospheric effect due to Forbush-decreases and magnetospheric high energy particles, *J. Atmos. Terr. Phys. 53*, 325-332, 1991.

(Combined ionospheric effect is shown by variations of atmospheric radio noise and LF absorption.)

Sátori G., Monitoring Schumann resonances - II. Daily and seasonal frequency variations, *J. Atmos. Terr. Phys. 58*, 1483-1488, 1996.

(Daily and seasonal SR frequency variations measured at Nagycenk, Hungary are discussed.)
(**(A)** The diurnal variation of the peak frequencies of the first three modes (one electric component at Nagycenk) are different for different seasons, but they are similar in shape for a given season from year to year (1993/1994), though they differ in absolute values. **(B)** The diurnal variation (as plotted in local time) of the peak frequencies of the first two modes (one electric component received at three stations: Ipswich (Massachussets), Chambon-la-Foret (France), and Nagycenk (Hungary)) are similar [which means that the peak frequency is not much dependant on q, the angular distance between the lightning position and the observing site, but is more dependant of the local ionospheric parameters]. They are different for the third mode.)

Sátori G., J. Szendroi and J. Vero, Monitoring Schumann resonances - I. Methodology, *J. Atmos. Terr. Phys. 58*, 1475-1481, 1996.

(Method of Shumann resonance measurements is presented for Nagycenk Observatory, Hungary.)

Sátori G. and B. Zieger, Spectral characteristics of Schumann resonances observed in Central Europe, *J. Geophys. Res. 101* 29663-29669, 1996.

(Semiannual variation of SR amplitudes with equinoxial maxima has been attributed to the semiannual temperature variation in the tropical lands.)

Sátori, G. and B. Zieger, Anomalous behaviour of Schumann resonances during the transition between 1995 and 1996, *J. Geophys Res. 103* 14147-14155, 1998.

(Surface temperature dependent tropospheric processes were indicated by the anomalous behaviour of Schumann resonances at Nagycenk.)

Sátori, G., and B. Zieger, Anomalous behavior of Schumann resonances during the transition between 1995 and 1996, J. Geophys. Res., 103, 14147-14155, 1998.

(The ratio of intensities of a given mode (one electric component at the Nagycenk Observatory, Hungary), for the same month of two successive years, has been used to infer a longitudinal displacement of the source region from the East Pacific to the West Pacific (at a speed of 60o in 10 days!)

Sátori, G., and B. Zieger, El Nino related meridional oscillations of global lightning activity, *Geophys. Res. Lett.*, *26*, 1365-1368, 1999.

(Northward/southward migration of worldwide lightning activity has been shown on cool/warm periods of the ENSO time scale based on Schumann resonance observations at Nagycenk.)
(**(A)** The change, over five years (1994/1998), in the peak frequencies of the first three modes (one electric component at Nagycenk) has been used to infer a displacement of the lightning area between El Nino and El Nina periods [inconsistent with Sátori (JATP, 58, 1483, 1996) item B]. **(B)**The amplitude of the semi-annual variation of the intensities of the first three modes (which is a consequence of the semi-annual variation of the lightning activity in tropical regions) has also been used to infer such a displacement. The role of the “nodal” position of the source region has been stressed.)

Schlegel, K., and M. Füllekrug, Schumann Resonance Parameter Changes During High Energy Particle Precipitation, *J. Geophys. Res.*, *104*, 104, 10111-10118, 1999.

(Extraterrestrial modulation of global lightning activity levels by high energy particles.)
(The peak frequency of the first mode (one magnetic component at Stanford, California) increases at times of strong Solar Proton Events (SPE) and at times of strong Solar Electrons Events (SEE).[This result is opposite to what has been observed by Gendrin and Stefant (C.R. Acad. Sci. Paris, 255, 2273, 1962) after the 1962 high altitude thermonuclear explosion]. There is a simultaneous decrease in the damping coefficient and an increase of the intensity.)

Schneider, T., M. Bohgard, and A. Gudmundsson, A semiempirical model for particle deposition onto facial skin and eyes. Role of air currents and electric fields. *J. Aerosol Sci.*, *25*, 583-593, 1994.

(A good demonstration of the role of electric field as a control of health efficiency of airborne substances)

Sentman, D.S., Schumann resonances, in "Handbook of Atmospheric Dynamics", vol. 1, H. Volland ed., CRC Press, Florida, 1995, pp. 267-295.

(A review on the subject. Introduction of an ionospheric model with two regions, these two regions being characterised not so much by their conductivity but by the scale-height of this conductivity.)

Shue, J.-H., P. Song, C.T. Russell, J.T.Steinberg, J.K. Chao, G. Zastenker, O.L.Vaisberg, S. Kokubun, H.J. Singer, T.R. Dentman, and H. Kawano, Magnetopopause location under extreme solar wind conditions, J. Geophys. Res., 103, 17691-17700, 1998.

(Comparison between a theoretical model of the magnetopause and observations. The model (Shue et al., J.G.R., 102, 9497, 1997) is infered from measurements of the dynamic pressure and the magnetic field of the solar wind. The observational data are the positions of 4 spacecraft with respect of the magnetopause boundary.)

Stringfellow, M.F., Lightning incidence in Britain and the solar cycle, *Nature*, *249*, 332-333, 1974.

(Evidence for lightning activity modulation by the solar cycle.)

Stuiver, M., P. M. Grootes and T. F. Braziunas, The GISP2 $\delta^{18}O$ climate record of the past 16,500 years and the role of the sun, ocean, and volcanoes, *Quarternary Res.*, *44*, 341-354, 1995.

(Greenland ice cores show strong climate effects correlated with cosmic ray produced radioisotopes)

Švestka, Z., L. Fritzova-Švestková, J. T. Nolte, H. W. Dodson-Prince, and E. R. Hedeman, Low energy particle events associated with sector boundaries, *Sol. Phys.*, *50*, 491-500, 1976.

(Solar protons and electrons vary significantly at solar wind sector boudaries)

Svensmark, H. and E. Friis-Christensen, Variation of cosmic ray flux and global cloud coverage - a missing link in solar climate relations, *J. Atmos. Solar Terr. Phys.*, *59*, 1225-1232, 1997.

(Correlations of low and mid-latitude oceanic cloud cover with decadal cosmic ray flux changes)
(Relationship between solar cosmic ray flux and cloud coverage over the oceans as measured by remote sensing spacecraft.)

== T ==

Tammet, H., Aerosol electrical density: interpretation and principles of measurement, *Report Series in Aerosol Sci., Helsinki*, *19*, 128-133, 1991.

(An analysis of air electric measurements as indicators of the air particulate and radioactive pollution)

Tammet, H., S. Israelsson, E. Knudsen and T. Tapio, Effective area of a horzontal long wire antenna collecting the atmospheric electric vertical current, *J. Geophys. Res.*, *101*, 29671-29677, 1996.

(Theoretical considerations concerning the effective area of a horzontal long wire antenna)

Tammet, H. and S., Israelsson Atmospheric electricity as a factor of dry deposition of particulate pollution. *Proc. 11th Int. Conf. Atmos. Electr.* , NASA, MSFC, 622-625, 1999.

(A semiempirical model that demonstrates the role of atmospheric elecric field as a control of environmental factors of health)

Tammet, H., and V. Kimmel, Electrostatic deposition of radon daughter clusters on the trees, *J. Aerosol Sci.*, *29*, S473-S474, 1998.

(A semiempirical model that demonstrates the role of atmospheric elecric field as a factor of redistribution of environmental radioactivity on plants)

Tripathi, S.N., and R.G. Harrison, Dry deposition of electrically charged aerosols, *J. Aerosol Sci.*, *29*, S809-S809, 1998.

(An introduction to a theoretical model that will be published soon)

Tinsley, B. A., Solar wind mechanism suggested for weather and climate change, *Eos, Trans. Am. Geophys. Un.*, *75*, 369-374, 1994.

(Suggestion that current flow Jz in global circuit produces ice nucleation in some clouds)

Tinsley, B. A., Correlations of atmospheric dynamics with solar wind induced air-earth current density into cloud tops, *J. Geophys. Res.*, *101*, 29,701-29,714, 1996.

(Review of atmospheric electricity correlations with solar wind events, and tropospheric dynamics correlations with them both)

Tinsley B. A., G. M. Brown, and P. H. Scherrer, Solar variability influences on weather and climate: possible connection through cosmic ray fluxes and storm intensification, *J. Geophys. Res.*, *94*, 14783-14792, 1989

(Variations of the vertical temperature profile and of the vorticity area index associated with the Forbush decreases in Galactic Cosmic Ray intensity.)

Tinsley B. A., G. W. Deen, Apparent tropospheric response to MeV-GeV particle flux variations: a connection via electrofreezing of supercooled water in high-level clouds? *J. Geophys. Res.*, *96*, 22283-22296, 1991

(Proposal of a possibility that ice nucleation should be responsible for the amplification process regarding particle fluxes)
(Variations of the vertical temperature profile and of the vorticity area index associated with the Forbush decreases in Galactic Cosmic Ray intensity. The release of the water vapour latent heat as the source of energy of low

atmosphere disturbances.)
(Suggestion that ice nucleation in clouds was primary amplification process for particle flux inputs)

Tinsley B. A., R. A. Heelis, Correlation of atmospheric dynamics with solar activity: evidence for a connection via the solar wind, atmospheric electricity, and cloud microphysics, *J. Geophys. Res.*, *98*, 10375-10384, 1993

(There is proposed a mechanism which links the variations of the energetic particle fluxes to the low atmosphere disturbances. The proposed mechanism connects the rate of contact ice nucleation in the clouds with atmospheric electricity.)
(Decadal cycles not due to aliasing; polar surface pressures follow Jz and ionospheric potential)

Tinsley, B. A., J. T. Hoeksema, and D. N. Baker, Stratospheric volcanic aerosols and changes in air-earth current density at solar wind magnetic sector boundaries as conditions for the Wilcox tropospheric vorticity effect, *J. Geophys. Res*., *99*, 16,805-16,813, 1994.

(Wilcox effect shown to return with El Chicon eruption and stratospheric volcanic sulfuric acid)

Tinsley, B. A., W. Liu, R. P. Rohrbaugh, and M. Kirkland, South pole electric field responses to overhead ionospheric convection, *J. Geophys. Res.*, *103*, 26137-26146, 1998.

(An attempt to derive the effect of the ionospheric convection electric potential from the vertical atmospheric electric field data obtained at the South Pole and to compare with modelled values.)
(Measured Ez at South Pole correlates well with overhead ionospheric convection potential)
(Measured Ez at South Pole correlates well with overhead ionospheric convection potential)

Tinsley, B. A., R. P. Rohrbaugh, M. Hei, and K. V. Beard, Effects of image charges on the scavenging of aerosol particles by cloud droplets, and on droplet charging and possible ice nucleation processes, *J. Atmos. Sci.*, in press, 1999.

(Overlooked effect of image charges can give a contact ice nucleation rate proportional to Jz)

Tzur, I., R. G. Roble, H. C. Zhuang, and G. C. Reid, The response of the earth's global electric circuit to a solar proton event, *Weather and Climate Responses to Solar Variations*, ed. B. M. McCormac, Colo. Assoc. Univ. Press, Boulder, 427-435, 1983.

(Model of global circuit shows stronger response to Forbush cosmic ray decreases than to solar protons)

== U ==

== V ==

Veretenenko S. V., M. I. Pudovkin, Effects of the galactic cosmic ray variations on the cloudiness state, *J. Tech. Phys.* (Warszawa), *36*, 363-373, 1995

(Effects of Forbush decreases of the Galactic Cosmic Rays on the cloudiness state in different latitudinal belt.)

Veretenenko S. V., M. I. Pudovkin, Total cloudiness variations during solar cosmic ray bursts, *Geomagn. Aeron.*, *36*, 153-156, 1996 (in Russian).

(At latitudes 60-70 N, the cloud coverage is shown to increase during Solar Proton Events.)

Veretenenko S. V., M. I. Pudovkin, Effects of the galactic cosmic ray variations on the solar radiation input in the lower atmosphere, *J. Atm. Sol.-Terr. Phys.*, *59*, 1739-1746, 1997

(The total radiation input in the winter months at latitudes 55-65 N anticorrelates with the galactic cosmic ray intensity during the 11-year solar cycle.)

Veretenko, S.V., and M.I. Pudovkin, Variations of solar radiation input to the lower atmosphere associated with different helio/geophysical factors, J. Atmos. Solar-Terrestr. Phys., 61, 521-529, 1999.

(Relationships between solar irradiance at different latitudes in the northern hemisphere, the galactic cosmic ray flux, the AE index and other helio/geophysical parameters.)
(Variations of the solar radiation input up to 4-6% at latitudes 55-68 in the 11-year cycle are associated with cyclic variations of galactic cosmic ray intensity, flare index and geomagnetic activity level.)

== W ==

Weigel, R.S., W. Horton, T. Tajima, and T. Dentman, Forecasting auroral electrojet activity from solar wind input with neural networks, Geophys. Res. Letters, 26, 1353-1356, 1999.

(Prediction of the auroral activity (as represented by the AL index) by using a gated neural network and filtered solar wind data.)

Wilkening, M.H., Influence of the electric fields of thunderstorms on radon-222 daughter ion concentrations. In *Electrical Processes in Atmospheres*, 54-59, Steinkopff, Darmstadt,1977.

(First impressive demonstration of the effect of natural atmospheric electric field on the environmental ardioactivity)

Willett, J., Atmospheric-electrical implications of 222Rn daughter deposition on vegetated ground. *J. Geophys. Res. D*, *90*, 5901-5908, 1985.

(A theoretical model that shows how the effect of electrostatic deposition controls the vertical profile of the atmospheric electric field close to the ground surface.)

Williams, E. R., The Schumann resonance: A global tropical thermometer, *Science 256*, 1184-1187, 1992.

(SR amplitudes can indicate small temperature variations as shown on the ENSO time scale.)

Williams, E. R., Global circuit response to seasonal variations in global surface air temperature, *Mon. Weather Rev. 122*1917-1929, 1994.

(Different global circuit parameters can be responsive to seasonal variations in global surface air temperature.)

Wu, J.-G., H. Lundstedt, P. Winthof, Neural network models predicting the magnetospheric response to the 1997 January halo-CME event, Geophys. Res. Letters, 25, 3031-3034, 1998.

(An Elman neural network is trained to reproduce Dst variations following the arrival of a Coronal Mass Ejection (CME) detected in the solar wind at the L1 libration point. Comparison between different combinations of the solar wind parameters (n, v, B, Bz,...) is made. Correlations between predicted and observed Dst values can be as high as 0.9. See also references included.)

== X ==

== Y ==

== Z ==

Zieger, B. and G. Sátori, Periodic variations of solar and tropospheric origins in Schumann resonances, *proceeding of the 11th International Conference on Atmospheric Electricity, Alabama, USA*, , 701-704, 1999.

(27 days and 13.5 days periods found in SR parameters at Nagycenk are of solar origins and the others show troposperic relations.)

Zimmerman, J. E., P. J. Smith and D. R. Smith, The role of latent heat release in the evolution of a weak extratropical cyclone, *Mon. Wea. Rev., 117*, 1039-1057, 1989.

(Numerical modeling shows effects of precipitation efficiency on storm intensity and storm track)

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