

Climate 2018



5th World Conference on

CLIMATE CHANGE AND GLOBAL WARMING

May 23-24, 2018 | New York, USA

Keynote Forum

Day 1

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Rex J Fleming

Global Aerospace, LLC, USA

An updated review on carbon dioxide and climate change

This manuscript will review the essence of the role of CO₂ in the Earth's atmosphere. The logic of CO₂ involvement in changing the climate will be investigated from every perspective: reviewing the historical data record, examining in further detail the 20th century data record, and evaluating the radiation role of CO₂ in the atmosphere – calculating and integrating the Schwarzschild radiation equation with a full complement of CO₂ absorption coefficients. A review of the new theory of climate change – due to the Sun's magnetic field interacting with cosmic rays is provided. The application of this new theory is applied to climate-change events within the latter part of the Earth's interglacial period. The application of the new theory to the Earth's Ice Ages is summarized along with a brief discussion of the role of cosmic rays in creating significant lower layer clouds which increase the albedo of the Earth. The results of this review point to the extreme value of CO₂ to all life forms, but no role of CO₂ in any significant change of the Earth's climate.

Biography

Rex J Fleming has completed his PhD in 1970 from the University of Michigan. He spent the next 44 years in atmospheric research and program management in the National Oceanic and Atmospheric Administration (NOAA), and at the University Corporation for Atmospheric Research (UCAR). He has served on NOAA's Council for Long-term Climate Monitoring. He has published more than 25 papers in reputed journals. He has served as: Chairman, Probability and Statistics Committee, American Meteorological Society, AMS (1976-1977); Secretary, Atmospheric Science Section of the American Geophysical Union (1984-1986); and Member, AMS Board on Women and Minorities (1986-1991). He has received the Department of Commerce Gold Medal Award (1980) for outstanding achievement in directing the USA role in the Global Weather Experiment. He is an Elected Fellow of the American Association for the Advancement of Science (AAAS). He continues to perform research within his own consulting company on nonlinear systems.

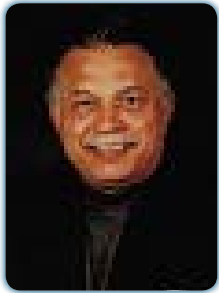
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Hector M Guevara

NuEnergy Technologies Corp, USA

Thermoelectronic conversion of solar energy and heat into electric power, using graphene membranes and the hydrogen output from our boundary layer turbine. This will create the desalinization/decontamination and production of potable water

Electric power may be generated in a highly efficient manner, as demonstrated at NuEnergy's Clearwater, FL laboratory, by TUV-PTL, as a Proof of Concept (POC). This POC was carried out from both, heat created by focused solar irradiation and/or the direct incidence of thermal radiation placed upon, or within proximity of NuEnergy's Thermal Electric Generator (TEG) Cells, which were produced using single layer membranes of graphene, and placed upon a copper substrate. As the conversion efficiency of the thermionic process tends to be degraded by electron space charges, the efficiencies of thermionic generators have previously amounted to only a fraction of those fundamentally possible. We show that this space-charge problem can be resolved by shaping the electric potential distribution of the converter, such that the static electron space-charge clouds are transformed into an output current. Although the technical development of practical generators will require further substantial efforts, we have concluded and shown that a highly efficient transformation of heat to electric power has been achieved using NuEnergy's Thermal Electric Generator, which is being integrated with NuEnergy's Power House Generator (PHG) & Clean Water System. For the sake of simplicity of this Abstract, I will just go on to note that the hydrogen output from the BOUNDARY LAYER TURBINE being used in our PHG is, once again, combined with Oxygen, thereby producing H₂O, which is then filtered and treated by the graphene filtering layers or membranes, through which this water flows, ultimately producing copious amounts of distilled potable Water.

Biography

Hector M Guevara is the Founder, Chairman of the Board, and President of various corporations, including NuEnergy Group, Inc., previously a Public Company, trading on the OTC, and now being held inactive (operations/trading stopped). He has devoted the past 35 years to the research and development of renewable energy systems. His companies designed and or produced many of the most notable solar, wind, and hydroelectric systems deployed throughout the world. The results of his research and development have been assigned to his new Florida Corporation; NuEnergy Technologies Corp. He is a patent and co-patent holder in various sustainable energy and propulsion technologies. He has also been the recipient of various grants from Federal Govt. Agencies, e.g., NASA/SATOP, DOE (SBIR), United Nation's UNICEF, and others.

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Nils-Axel Mörner

Paleogeophys & Geodynam, Sweden

New York city: Is the threat of sea level flooding trustworthy?

Hazard predictions must be anchored in well-established observational facts to be meaningful and trustworthy. The tide-gauge station in NYC (The Battery) gives a long-term mean rise of 2.84 ± 0.09 mm/yr, which does not imply too serious problems for centuries to come. Recently, however, it has been claimed that there is a potential threat of a 0.6m rise in 2050, 2.6m rise in 2100, 10.5m rise in 2200 and 17.7m rise in 2300. This is a model-based view, which is based on a totally hypothetical “enhanced Antarctic Ice Sheet (AIS) melting”. We have investigated the global eustatic sea level changes and been able to show that sea level is not in a drastically rising mode. Whilst the regional eustatic factor in the North Atlantic seems to be about $+1.0 \pm 0.1$ mm/yr, key sites from all over the world are indicative of present stability (i.e. ± 0.0 mm/yr), at least for the last 40-70 years. Also, the satellite altimetry records must be revised to values around $+0.55 \pm 0.1$ mm/yr. Detailed sea level studies in the Maldives, Bangladesh, Goa and Fiji. For e.g., indicate that the global sea level changes during the last 500 years have been dominated by “rotational eustasy” (not glacial eustasy, as usually assumed), which is driven by solar– planetary interaction with the Earth– Moon system. In the model of the author uses the IPCC climate model RCP85 with an extra and totally hypothetical enhanced Antarctic Ice Sheet melting. This hypothesis is convincingly demolished by the observed present increase of the Antarctic Ice Sheet. We conclude that available facts strongly support a modest rise in local sea level, and that the model-based assessment totally fails in predicting future changes in a meaningful and realistic way. The megacity of New York has enough of problems and threats (terrorism, earthquakes, solar flare black-out, pandemic events, etc.), to be bothered by largely exaggerated flooding prospects based on models and hypothetical assumptions ignoring facts observed and measured in nature.

Biography

Nils-Axel Mörner has completed his PhD in Quaternary Geology at Stockholm University in 1969. He was Head of the Institute of Paleogeophysics and Geodynamics (P&G) at Stockholm University from 1991 up to his retirement in 2005. He has written hundreds of research papers and several books. He has presented more than 500 papers at major international conferences. He has undertaken field studies in 59 different countries. The P&G Institute became an international center for global sea level change, paleoclimate, paleoseismics, neotectonics, paleomagnetism, Earth rotation, planetary –solar-terrestrial interaction, etc. His books includes: “*Earth Rheology, Isostasy and Eustasy*” (Wiley, 1984), “*Climate Change on a Yearly to Millennial Basis*” (Reidel, 1984), “*Paleoseismicity of Sweden: a novel paradigm*” (P&G-print, 2003), “*The Greatest Lie Ever Told*” (P&G -print, 2007), “*The Tsunami Threat: Research & Technology*” (InTech, 2011), “*Geochronology: Methods and Case Studies*” (InTech, 2014) and “*Planetary Influence on the Sun and the Earth, and a Modern Book-Burning*” (Nova, 2015).

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Carlos Eduardo Pellegrino Cerri

University of Sao Paulo, Brazil

Soil carbon sequestration and greenhouse gas emission reduction from agricultural systems in Brazil

The interactions of land use, management and environment create a varied picture of soil organic carbon (SOC) dynamics across the globe. Globally, the amount of carbon in soils, commonly represented by the mass of carbon, is estimated to be about 1500PgC (1PgC=10¹⁵g carbon) in the top 1m of soil, which is three times the amount present in the vegetation and twice the amount found in the atmosphere. The amount of SOC has strong physical and biological controlling factors. These include climate; soil chemical, physical, and biological properties; and vegetation composition. Brazil is the third agribusiness leader worldwide, following European Union and the United States (WTO 2009). This presentation will include both an integrative view of global patterns on the distribution and trends in SOC as well as research in South America, especially in Brazil, focusing the impact of land use change and management practices on SOC. Land use change, mainly for previous agricultural practices, has often decreased in SOC stocks due to enhanced mineralization of soil organic matter (mainly to CO₂). A significant fraction of the ~32% increase in atmospheric CO₂ over the last 150 years stems from the breakdown of soil organic matter after forests and grasslands were cleared for farming. This process increases greenhouse gas (GHG) concentrations in the atmosphere, exacerbating global warming. Conversely, adoption of “best management practices”, such as conservation tillage, biochar application, can partly reverse the process, they are aimed at increasing the input of SOC and/or decreasing the rates at which SOM decomposes. This mechanism has been called “soil carbon sequestration” and can be defined as the net balance of all GHG (CO₂, CH₄ and N₂O), computing all emission sources and sinks at the soil-plant-atmosphere interface. It must be noted that CO₂ fluxes are evaluated through C stock changes in the different compartments and CH₄ and N₂O fluxes directly measured or estimated with the best available estimates. Finally, this presentation will also present the potential effects on soil carbon sequestration and greenhouse gas emission reduction due to agricultural systems in Brazil.

Biography

Carlos Eduardo Pellegrino Cerri is an Associate Professor at the Soil Science Department in the University of Sao Paulo, where he teaches three courses for Undergraduate students and four disciplines for Master and PhD students. His main lines of research are related to soil organic matter dynamics in tropical regions, mathematical modeling applied to soil science, soil properties spatial variability and global climate change. He has published more than 140 scientific articles, 1 book and 35 book chapters. He is the Academic Member of the Sociedade Brasileira de Ciência do Solo, International Humic Substances Society, Soil Science Society of America and American Society of Agronomy and Crop Science Society of America. He is also an Affiliate Member of the Brazilian Academy of Sciences.

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Tim Kaelin

Impact Analytics, USA

The energy net – A two-phased approach using free enterprise solutions to solve climate change

Statement of the Problem: Global climate change in recent times has been characterized as an excess of carbon dioxide which cause the greenhouse effect to change the Earth's climate, with the potential to radically inhibit the ability of humans survive. The primary source has been identified as the burning of fossil fuels, e.g., oil, shale and natural gas. While several strategies have been proposed to attack this problem, none to this date have had the enthusiastic endorsement of the primary generators of carbon dioxide. It has become a political football.

Methodology & Theoretical Orientation: It is proposed that the psychology in the past for solving global climate change has been misguided. The current "blame, punish and sacrifice" agenda, when examined through the lens of mass influence science, has no possibility of success, and was, in fact, stillborn. The most powerful (non-military) engine of change has always been free enterprise. We approach this using Jacque Ellul's symbology theory of public opinion.

Findings: A two-phased approach is proposed, first a "farmers market" consisting of 2500 square miles of currently unused land, is designed to push down the price of solar energy by about 80%. Second, the implementation of universal "net metering" in the US solidifies and increases the market and increases participation. This is a de facto deregulation of the energy industry. The paper examines the motivations of all stakeholders, domestic and foreign (including the current administration) and proves an alignment that will displace fossil fuels and thereby solve global climate change in the fastest possible time.

Biography

Tim Kaelin has his interest in Psychology and Mass Influence since his days as an Intelligence Officer in the 1980's and 90's. Currently, he is the CEO of a marketing and publishing company. He has completed his Master's degree in Electrical Engineering (1984) and International Business (1995) and is a serial entrepreneur.

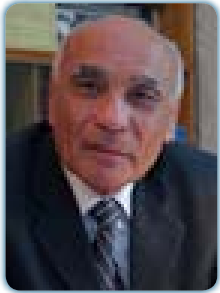
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Habibullo I Abdussamatov

St. Petersburg, Russia

The sun controls the climate

The climate system depends on an extremely complex set of physical processes taking place in the ocean-land-atmosphere system, which in turn is influenced by various, mainly the quasi-bicentennial variation of the total solar irradiance (TSI). Only variation of TSI to 0.5% leads to small increments of the planetary temperature and is the initial triggering mechanism of subsequent multiple feedback effects. The feedback effects leading to significant changes in the Bond albedo, content of greenhouse gases in the atmosphere and width of the window its transparency. The climatic influence of subsequent feedback effects depends on the duration of the period cooling (warming) and its influence can increase the direct influence of the quasi-bicentennial variation of TSI up to three times. Since ~1990, the Sun has been in the declining phase of the quasi-bicentennial variation TSI. Decrease in the portion of TSI absorbed by the Earth since 1990 has remained uncompensated by the Earth's longwave radiation at the previous high level due to oceans' thermal inertia. The Earth has and will continue to have, negative average annual energy budget and a negative thermal condition. The quasi-centennial epoch of the new Little Ice Age started after the maximum phase of solar cycle 24. The start of Solar Grand Minimum is anticipated in 2043 ± 11 . Beginning of a phase of a deep cooling of the new 19th Little Ice Age for the last 7,500 years is anticipated in 2060 ± 11 . The gradual weakening of the Gulf Stream, which is driven by the heat accumulated by oceans water in the tropics due to of cyclic variations of the TSI, leads to more strongest cooling in the zone of its action. The quasi-bicentennial cyclic variations of the TSI together with successive very important influences of secondary feedback effects controls of corresponding alternations of the climate.

Biography

Habibullo I Abdussamatov was the Faculty of Physics and Mathematics from Samarkand State University (1962), Faculty of Mathematics and Mechanics in Leningrad State University (1965-1967) and postgraduate course in Pulkovo Observatory (1966-1969). He has been working in Pulkovo Observatory since 1964 as Researcher Trainee (1964-1966), postgraduate (1966-1969), Junior Researcher (1969-1982), Senior Researcher (1982-1999), Leading Researcher (1999-2004), Head of the Space Research Sector (2004-2006), Head of the Space Research Laboratory (2006-2010). Currently, he is the Head of the Space Research Sector of the Sun at Pulkovo Observatory (since 2010) and the Head of the Lunar Optical Observatory project. He is an expert in the area of solar physics and of the solar-terrestrial physics as well as the climate. He is independent scientist on climate change issues. He is the author of some 180 scientific publications, including four scientific monographs, and seven scientific inventions.

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Armen B Avagyan

Research & Industry Centre of Photosynthesizing Organisms, Armenia

Climate change, necessities of change in global environmental policy and microalgae application

During action of the Kyoto Protocol, the GHG emissions are growing of about 52 billion tons CO₂ per year or up 58% from 1990. The UNEP fixed that even if all countries deliver on the Paris Climate Agreement, the world will warm by 3.0 to 3.2°C. The UN's top Climate change officials, Addis Ababa Action Agenda and the Marrakech Partnership for Global Climate Action declare as imperative action multi-stakeholder partnerships and the attraction of the private sector investment for fast track development of climate change mitigation. However, they did not offer effective and equitable policy component for global market partnership based on the payments to the private companies for mitigation of climate change impact. Such payments fund must be developed from the incomes of pollution taxes, etc. and will serve economical effective increasing of investments in the development of the Global Life Conserve Industry. This will allow also mitigate market penetration influence (as falling oil prices on today's biofuel market). The technological approach must base also on the algae CCS technology. The microalgal production of 417,659 tones can absorb up to 0.764 MtCO₂eq (in addition, reduction of NO_x and VOCs) and produce 0.559 MtO₂eq with a decreasing of Canadian producer's carbon taxes up to US\$ 764–1528 billion per year. This quantity of microalgae can used as feed additive (1%) and will meet the total demand of Canada on 213%, USA on 25%, or Europe on 20% per year. Microalgae-derived biofuel can reduce GHG emission for Canada on 71-106 MtCO₂ per/year. The development of the microalgae Live Conserve Industry is principal step from non-efficient protection of the environment to its cultivation in a large scale with mitigation of GHG emission and waste as well as generating of O₂ and value-added products by the use of opens an important shift towards a new design and building of a biological system.

Biography

Armen B Avagyan has completed his Doctoral degree from Moscow State University. He has worked as Senior Researcher in Armenian Institute of Agriculture and Technological Institute of Amino Acids of USSR. He is the Director of Armenian Institute of Biotechnology, Yerevan Vitamin plant and the Deputy Director of Nairit Chloroprene Rubber plant. He is the sole Founder of Research and Industry Centre of Photosynthesizing Organisms. He is the Expert of EU Horizon 2020, ERA, NET and International Cooperation programs and Council of Chemistry and Petrochemistry of CIS countries. He is the Academic Member of the Greece ATINER Academia, Member of American Chemical Society and Society of Chemical Industry (USA). He has received "The Albert Einstein Award for Excellence" (ABI, USA) and Marquis Who's Who 2017 "Albert Nelson Marquis Lifetime Achievement Award" (USA).

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Manal M Zaki

Cairo University, Egypt

A review of heat stroke and its complications in rabbit's productivity and performance

Still, there is a wide gap between meat demand and production in Egypt. Moreover, the cost of feed stuff is very high due to the land-locked situation which leads to an increase in the cost of livestock production. In this context; rabbits provide a new avenue for meat production and could play a major role in enhancing the supply of animal protein. In Egypt, rabbits breeding farms is expanding; this is mainly attributable to the rabbit's high rate of reproduction, genetic selection potentials, rapid growth rate, early maturity, efficient feed utilization and high value of meat. However, the most obvious limitation to rabbit production in Egypt as an example for south Mediterranean region is hot waves during the summer time, especially during the last two decades. Another limitation is the susceptibility of this species to acclimate with environmental stress. Heat stress mainly occurs when animals are exposed to high ambient temperatures, high humidity, low wind speed, and high direct and indirect solar radiation. The thermo-neutral zone (TNZ) temperature for rabbits is around 18–21°C. Therefore, in south Mediterranean region, the high temperature or heat stress, hinder the success of rabbit farming, as it leads to a significant reduction in the daily weight gain, daily feed intake and feed efficiency. Similarly, the milk yield of does maximized at 15°C ambient temperature was reduced by 7.7g milk/1°C rise in the temperature. Within 25-28°C of ambient temperature, rabbits decrease their feed consumption and require more digestible energy. At 30°C, the average feed consumption was reported to be decreased by 30% and growth was affected as well. Furthermore, disturbances in feed intake, feed utilization, water metabolism, blood parameters, enzymatic reactions, and hormonal secretions. In addition, protein, energy and mineral imbalances had been also reported to be disrupted in heat-stressed rabbits. The possible way to improve rabbit's productivity is improving heat new breeds that genetically able to be acclimatized with heat stress. Nutritional requirement and/or hygienic conditions are also recommended as helpful solutions. From another perspective, the effects of heat stress on rabbit's immune response has been extensively discussed in the last two decades showing how the thymus weight decreased and circulating T lymphocyte counts were declined. Other studies, also reported that heat stress directly affects the immune system cells, decreasing the number of viable cells and the number of receptors on the immune cells surface reducing the proliferative capacity of lymphocyte and the neutrophil function. Also, inhibiting the differentiation of B lymphocytes into antibody-secreting cells as well as decreasing immunoglobulin and cytokines production and increasing in heat-shock proteins synthesis by lymphocytes. Finally, it could be concluded that rabbit may be grown in hot climates, but with low high anticipated low productive and reproductive performance. Therefore, we recommend that applying rabbit breeding programs as a suitable solution for producing suitable breeds to be grown in hot climates.

Biography

Manal M Zaki is a Professor of Animal Hygiene and Management at the Faculty of Veterinary Medicine, Cairo University, Egypt. She is currently the Advisory and Manager of Veterinary Quality Control and Diagnosis Laboratory in SPF project, Agricultural Research Center, Ministry of Agriculture, Egypt and the Technical Adviser and the Executive Director of the united company Covalent for livestock development.

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