

Paul A. LaViolette
Vitae

Kalliga 21-23
Athens, 114-73
tel: (210) 64-22-900
email: gravitics1@aol.com

U.S. mailing address:
4607 Exeter St.
Annandale, VA22003
tel: (703) 354-4592

Education

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| Ph.D. | Systems Science/Astronomy (an interdisciplinary program; see doctoral work) | Portland State University |
| MBA | Organizational Admin. | University of Chicago |
| BA | Physics | Johns Hopkins University |

Alternative Energy/Physics/Astronomy/Climatology Research

The Starburst Foundation, Portland, OR & Niskayuna, NY; 1984 – present (starburstfound.org)

President and director of the Starburst Foundation, a nonprofit scientific research institute. Have carried out scientific research in physics, astronomy, cosmology, climatology, geology and solar energy. Most of this research focused on: a) Galactic superwaves and their effects on the Earth, and b) on the subquantum kinetics physics and its astronomical predictions. Findings are described below. Made science-related trips to Greece, Switzerland, France, Germany, and Holland. Have authored over 40 research proposals. Have raised government and private funds for research.

Alternative energy research:

2007 - present. Am collaborating with a company in Greece to test the performance of a novel alternate energy device they have developed and to investigate means of improving its output. This is an electrically powered device designed to replace an oil or gas furnace and to provide hot water for building heating. Preliminary tests indicate that it should significantly reduce consumer home heating bills (possibly by a factor of 3). If tests bear this out will be investigating ways of marketing it in the U.S. Also will be testing an add on device that the company claims reduces auto gas consumption by 12% to 20%. This technology may also be applied to improve the fuel efficiency of trucks and boats.

Am also assisting a group of U.S. inventors who have developed a means of generating heat by accelerating the rate of radioactive decay of radioactive waste or low grade radioactive ores. This has application to both home heating and nuclear waste remediation.

Solar energy research: 2004 - 2005. Was principle investigator on a project to build and test a new type of solar water still. Research carried out at California Water Institute, California State University, Fresno campus; funded by the California Energy Innovation Small Grants Program.

Advanced aerospace propulsion — NASA consulting. Consulted with NASA in 1992 and 1993 regarding their Aero-Space Plane Program to advise on a wing electrification propulsion technology that would reduce air frictional heating of the Space Shuttle and Space Plane wing surface. They unfortunately did not implement my suggestions which could have prevented the Columbia Space Shuttle disaster that occurred 13 years later and which was caused by wing heating and failure during reentry. Submitted a white paper to the Columbia Accident Investigation Board detailing this (starburstfound.org/downloads/aerospace/Columbia.html), but received no further contact. Also in 1990 participated in NASA's Space Exploration Outreach Project (SEOP) suggesting similar electro-gravitic propulsion ideas.

Have also done research on advanced aerospace field propulsion technology that has been developed or is under development in highly classified military programs. This includes methods of propelling aircraft using high voltage electric fields, high power microwave beams, or rotating magnetic fields. See the book *Secrets of Antigravity Propulsion* (listed below). All these technologies would completely revolutionize the airline industry if declassified and made commercially available. These technologies also have application to commercial power production. Am known for having reverse engineered the propulsion system of the B2 bomber, various magazines have covered these findings, also disclosed in the above mentioned book.

Physics/Astronomy/Climatology Research Findings while with Starburst Foundation

Radio astronomy. Conducted observations with the VLA (Very Large Array) radio interferometry telescope at Socorro, NM, 1988. Observed the southwestern tip of CTB 80, an unusual radio-emitting source in Cygnus. Synthesized an image of a radio hot spot that was emitting polarized emission. Experience in reading antennae raw data output, in transferring data from the mainframe to the data processing terminal, and in using image processing software to process the mapping of the observations.

Microphysics. Developed a new approach to particle-field theory called "subquantum kinetics" that models quanta and fields as derivative phenomena emerging from a set of nonlinear, nonequilibrium reaction-kinetic equations (LaV, 1985a-c, 1990b, 1992a, 1994, 1995, 2003, 2005a, 2008). Twelve a priori predictions of this physics so far have been verified. Also has application to aerospace propulsion and energy production.

Cosmology. Using recent cosmological data compared the big bang expanding universe hypothesis to a nonexpanding universe, tired-light cosmology to see which fit data better (LaV, 1986a, 2003). Results published in *Ap.J.* and were reported in *Astronomy* magazine.

Galactic astronomy. Discoverer of the planetary-stellar mass-luminosity relation. Demonstrated that stellar and planetary mass-luminosity data supports a key photon blueshifting prediction of the subquantum kinetics cosmology (LaV, 1991b, 1992b, 1994, 1995). Published predictions on galaxy evolution were later confirmed by Hubble Space Telescope findings on the morphology of galaxies in high-redshift galactic clusters.

Brown dwarf mass-luminosity prediction. Accurately predicted that the mass-luminosity coordinates for brown dwarfs should fall along the lower main sequence stellar mass-luminosity relation (LaV, 1985, 1992, 1994, and 1995). This was later confirmed when data became available on the M-L coordinates of brown dwarfs (LaV, 1996).

Pioneer effect prediction. Accurately predicted the maser signal blueshifting anomaly 18 years before the announcement of its discovery in the Pioneer spacecraft data (LaV, 1985, 2005a).

High-energy astrophysics. Correctly predicted that volleys of cosmic rays can travel through the Galaxy along rectilinear trajectories at near light speed and that they, periodically pass through the local interstellar environment. Later confirmed by observations of cosmic ray pulses coming from Cygnus X-3 and Hercules X-1.

Ulysses spacecraft prediction. Correctly predicted in 1983 and 1987 that interstellar dust has recently entered the solar system from the Galactic center direction (LaV, 1983a, 1987a). Later confirmed by the Ulysses spacecraft observations and New Zealand radar observations (LaV, 1993).

Climatology: Ice age cosmic dust incursion. Discovered that 15,850 year old acidity peaks in Antarctic ice recur with a solar cycle period, evidence that climate was affected by invading cosmic dust (LaV, 2005b).

Prehistoric global warming. Have shown evidence that the warming at the end of the last ice age occurred simultaneously in both hemispheres indicating that a global warming had taken place. This explains why the ice sheets were melting so rapidly at that time. I propose the cause involved over activity by the ancient Sun due to a cosmic dust incursion.

Planetesimal impacts. Estimated the mass of the 1908 Tunguska comet from elemental concentrations in Antarctic ice (LaV, 2005c).

Electromagnetic hazards. Conducted an outreach project in 1989 that informed governments and nongovernmental organizations about the EMP hazards associated with the possible arrival of an intense gamma ray pulse.

Foreign relations (glaciology) Spearheaded the current US-Soviet ice core exchange program, the first of its kind. Resulted in closer ties between U.S. and Russian ice core programs (Starburst).

Civil Rights Protection (1999 - 2000): Initiated a work place discrimination suit that resulted in expanding the scope of Title VII of the Civil Rights Act of 1964 (*LaViolette v. Daley*). The resulting decision allows the EEOC to rule over cases that involve work place discrimination against a person on the basis of his/her scientific beliefs in cases where such beliefs are interconnected with the individual's spiritual or religious beliefs. The case generated considerable publicity and has been discussed in workers rights publications and in the law school classroom. To counter disinformation that has circulated on the internet about my case and to clarify the nature of my own beliefs, I will be publishing a paper about my case in a leading worker's rights journal.

Protesting Academic Suppression of Innovative Ideas (2004 - present): Organized a group of physicists to create a website (archivefreedom.org) protesting the arxiv.org electronic preprint archive run by Cornell University which has a history of blacklisting certain scientists and academics (including Nobel Laureate Brian Josephson) and blocking them from posting their papers. Currently work to maintain the archivefreedom website. Have succeeded in getting National Science Foundation to suspend funding to the Cornell program.

International Solar Consulting (1975 - 77): Project consultant on solar energy for the *Fourth Report to Club of Rome*. Advised the Greek National Power Authority on the feasibility of photovoltaic power production for Greece. Advised the Greek government on a proposal to set up a solar energy R&D institute. Listed as a UN solar energy expert. U.S. and Greek media publicity is posted at: <http://starburstfound.org/downloads/solar/Oregonjournal.jpg>, [../Gazette.jpg](http://starburstfound.org/downloads/solar/Gazette.jpg), [../Elftheroskosmos.jpg](http://starburstfound.org/downloads/solar/Elftheroskosmos.jpg), [../Elftherotypia.jpg](http://starburstfound.org/downloads/solar/Elftherotypia.jpg), [../Tanea.jpg](http://starburstfound.org/downloads/solar/Tanea.jpg).

Doctoral work (astronomy/climatology/geology) (1976 - 83)

Evaluated a variety of astronomical and geological evidence which suggest that intense cosmic ray volleys emitted from the Galactic core periodically pass through the Sun's vicinity and affect the Earth's climate by injecting submicron cosmic dust particles into the Solar System (LaV, 1983a, 1987a, 1990a). Fourteen a priori predictions of this theory have so far been verified.

Also conducted innovative research to determine whether ice-age polar ice might contain high concentrations of cosmic dust. Geochemically analyzed dust samples (1 - 500 mg) filtered from ice-age polar ice using the neutron activation analysis technique (15 different elements analyzed). Was the first to discover high concentrations of cosmic dust and gold in ice age polar ice; the results have significant implications for understanding the cause of abrupt climatic change. Carried out a total of four nuclear irradiations (LaV, 1983a-c, 1985b,c, 1987b, 1988).

Continued this work at the Starburst Foundation – conducted electron microscopy, energy dispersive X-ray, and mass spec. analysis of dust particles in tin-bearing polar ice dust sample (possibly of extraterrestrial origin), collaborated with researchers at OSU, CalTech, & Curtin Univ. First ever discovery of an isotopic anomaly in the element of tin.

Other Experience

U.S. Patent Office, Arlington, VA, 1998-99. Served as a physicist/patent examiner.

College administration. Fall 1989 served as V P of Academic Affairs for a four-year college in Greece (~4000 students, 200 faculty). Coordinated faculty and staff suggestions aimed at reorganizing the college's operations. Explored EEC funding sources for the college research program.

Independent consulting, Los Angeles, CA, 1985; advised Hughes Aircraft Corp. on ways of stimulating employee creativity. The theory of creative thought formation, which I co-developed, has been taught to other major corporations. One CEO at Hughes told me that they saved over \$40 million by applying these creativity stimulating principles to their work force.

Educational Psychology 1977-86 Developed a theory that penetrates the mystery of how the brain and mind function to produce creative thoughts, accounting for the aha experience and other cognitive phenomena. Examined its implications for education (LaV, 1979, 1980, 1982, 1986b). This theory was incorporated into university education courses and has been cited in several books, articles, and master's theses and covered in two special issues of the *Brain/Mind Bulletin*. In 1982 was invited to speak on this at an education colloquium sponsored by Berkeley School of Education and Institute of Noetic Sciences. Also applied to industry; see above Hughes consulting.

Resource Planning Assoc., Cambridge, MA, 1974–75. Staff consultant. Conducted a comparative study of several federal product regulatory programs to advise the EPA on procedures for implementing a program to regulate the manufacture of recyclable beverage containers. Also

assisted in formulating a DOE report to Congress which determined the energy savings associated with increased levels of recycling.

Solar-Aquatics Corp., Boston, MA, 1974–77. Served as the director of research and engineering. Invented, developed, patented, and marketed an improved breathing apparatus (LaV, 1977a).

Harvard School of Public Health (Dept. of Environmental Health Sci.), Boston, MA, 1970 – 72, Served as a research assistant. Carried out an occupational safety research study to determine the effectiveness of dust masks. Designed and tested personnel air dust sampling equipment., and measured mine worker exposures. Also invented and developed a miniature air-pulsation dampener for use on personnel mass respirable air sampling pumps (LaV, 1972). Currently is in use by industry. In addition, I researched the pneumatic characteristics of respirator components to aid in the design of safer rebreather apparatus for worker protection. Also participated in a Harvard project that sampled and measured SO₂, NO_x, CO, and respirable particulate in various Boston street locations using a portable air sampler.

Myth symbolism (archaeoastronomy): Have researched creation myths and lores from ancient Egypt, Mesopotamia, Greece, South America, and the Far East. Am the first to show that they use metaphor to purposefully express a highly sophisticated cosmological science. These findings open up a whole new understanding of these ancient lores as significant as the decipherment of the Rosetta Stone. The findings are presented in my books *Genesis of the Cosmos* and *Earth Under Fire*.

Lecturing/Teaching (physics , astronomy, climatology, systems theory) (1983 - 2008)

Have lectured on physics, astronomy, and other topics to public and professional audiences at universities, colloquia, and conferences both in the U.S. and Europe. Some places include:

Athens, Greece:

Democritos Nuclear Center (1977): On economics of photovoltaic power production by utilities.

Presented a similar lecture at the Evgenidion Planetarium, and had ERT TV interview.

Democritos Nuclear Center (1994): On cosmology and problems with the big bang theory.

Athens University (1996): On galactic core explosions and the climatic effects of cosmic ray volleys.

United States:

Berkeley School of Education, State University of New York–Binghamton, Union College, Portland State University, Oregon State University, Antioch University, Galaxy & Solar System Conference, Lunar & Planetary Science Conference, Intersociety Energy Conversion Engineering Conference, Intl. Cold Fusion Conference, Intl. Tesla Society, Intl. Society for Systems Science, Meteoritical Society, American Geophysical Union meeting, Greenwich Astronomical Society, Workshop on Nonlinear Chemical Systems, and American Astronomical Society.

Publications

Have authored 6 books on science/technology topics, one of which has been required reading at Colgate University for the past 8 years. Also have edited a book on systems philosophy/ anthropology by von Bertalanffy. Have published 18 refereed journal articles and 16 non-refereed journal or book articles and conference papers.

Professional Memberships

Hellenic Physical Society (honorary member). Past memberships: American Astronomical Society, American Physical Society, Meteoritical Society, American Geophysical Union, International Society Systems Science

Patents

LaViolette, P. A. "A self-contained closed circuit breathing apparatus," U.S. Patent No. 3,837,337 (1974); Canadian Patent No. 976,833 (1975).

http://www.delphion.com/details?pn=US03837337__

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Refereed Publications

- LaViolette, P. A. "Clarifications about LaViolette v. Daley and Title VII protection of scientific belief," (2008); submitted paper.
- . "The electric charge and magnetization distribution of the nucleon: Evidence of a subatomic Turing wave pattern." *International Journal of General Systems* **37**(6) (Dec. 2008): 649 - 676.
- . "The Pioneer maser signal anomaly: Possible confirmation of spontaneous photon blueshifting." *Physics Essays* **18**(2) (2005a): 150-163.
- . "Solar cycle variations in ice acidity at the end of the last ice age: Possible marker of a climatically significant interstellar dust incursion." *Planetary and Space Science* **53**(4) (2005b): 385 - 393; arxiv.org/abs/physics/0502019.
- . "The matter of creation." *Physics Essays* **7**(1) (1994): 1-8.
- . "Anticipation of the Ulysses interstellar dust findings." *Eos* **74**(44) (1993): 510-11.
- . "The Planetary-stellar mass-luminosity relation: Possible evidence of energy nonconservation?" *Physics Essays* **5**(4) (1992): 536-544.
- . "Galactic core explosions and the evolution of life." *Anthropos* **12**, 1990a, pp. 239 - 255.
- . "Regarding the Validity of Polar Trace Metal Data: A Reply." *Monthly Notices of the Royal Astronomical Society* **233** (1988): 221-224.
- . "Cosmic ray volleys from the Galactic center and their recent impact on the Earth environment." *Earth, Moon, and Planets* **37** (1987a): 241-286.
- . "The cometary break-up hypothesis reexamined." *Monthly Notices Royal Astronomical Society* **224** (1987b): 945-951.
- . "Is the universe really expanding?" *The Astrophysical Journal* **301** (1986): 544-553.
- . *International Journal of General Systems*, Vol. **11**(4) (1985c). Special Issue on Systems Thinking in Physics featuring: 68 pp.; three papers:
- "An introduction to subquantum kinetics, Part I -- An overview of the methodology," pp. 281 - 293.
- "An introduction to subquantum kinetics, Part II -- An open system description of particles and fields," pp. 295 - 328.
- "An introduction to subquantum kinetics, Part III -- The cosmology of subquantum kinetics," pp. 329 - 345.
- . "Evidence of High Cosmic Dust Concentrations in Late Pleistocene Polar Ice." *Meteoritics* **20** (1985b): 545-558.
- . "Thoughts About Thoughts About Thoughts: The Emotional-Perceptive Cycle Theory." *Man-Environment Systems* **9** (1979):15.
- . "The predator-prey relationship and its appearance in stock market trend fluctuations." *General Systems* **19** (1974):181-194.
- LaViolette, P. A., and Reist, P. "An improved pulsation dampener for use with mass respirable sampling devices," *American Industrial Hygiene Association Journal* (May 1972): 279-282.

Books

- LaViolette, P. A. *Secrets of Antigravity Propulsion: Tesla, UFOs, and Classified Aerospace Technology*. Rochester, VT: Bear and Co., 2008.
- LaViolette, P. A. *Subquantum Kinetics: A Systems Approach to Physics and Cosmology*, second edition. Alexandria, VA: Starlane Publications, 2003; first edition 1994a.
- LaViolette, P. A. *Decoding the Message of the Pulsars: Intelligent Communication from the Galaxy*. Rochester, VT: Bear and Co., 2006; new edition of *The Talk of the Galaxy*, 2000.

- LaViolette, P. A. *Earth Under Fire*. Rochester, VT: Bear and Co., 2005; first edition published 1997.
- LaViolette, P. A. *Genesis of the Cosmos: The ancient science of continuous creation*. Rochester, VT: Bear & Co., 2004; new edition of *Beyond the Big Bang*, 1995. (Also in Greek, Hungarian, Czech)
- Bertalanffy, L. von (P. LaViolette, ed.) *A Systems View of Man*, Westview Press, Boulder, CO, 1981.

Conference Papers and Nonrefereed Publications

- LaViolette, P. A. "Evidence for a global warming at the termination I boundary and its possible cosmic dust cause." 2005c, preprint; arxiv.org/abs/physics/0503158.
- . "A galactic superwave hazard alert." *Nexus* **8**(2) 2001: 47 - 52.
- . "Brown dwarf discovery confirms theory of spontaneous energy generation." *Infinite Energy* **1**(5 & 6) (1996a): 31. Reprinted in *New Energy News* **3**(9) (1996): 17-18.
- . "A Tesla wave physics." Proceedings of the 1990 Intl. Tesla Symp., Colorado Springs, CO. Intl. Tesla Soc., Denver Section IEEE, 1991, pp. 5.1 – 5.19.
- . "Detecting Galactic superwaves." Proceedings of the 1990 International Tesla Symposium, Colorado Springs, CO. Intl. Tesla Soc., Denver Section IEEE, 1991, pp. 5.21 – 5.27.
- . "An open system approach to energy wave propagation." Proceedings of the 34th annual meeting of the International Society for Systems Science, Portland, Oregon, 1990b, pp. 1119 - 1126.
- . "Galactic superwaves and their effect on the Earth and Solar System." (abs.) Presented at the Galaxy and Solar System Conference, Tucson, Jan. 1985a.
- . *Galactic Explosions, Cosmic Dust Invasions, and Climatic Change*. PhD dissertation, Portland State Univ., (1983a) Portland, Oregon, pp. 763 (Univ. Micro. No. 83-24,329); updated 2005 and published as *Galactic Superwaves and Their Impact on the Earth Environment*.
- . "The terminal Pleistocene cosmic event: Evidence for recent incursion of nebular material into the Solar System." (abs.) *Eos* **64**, p. 286; Spring AGU meeting, Baltimore, May 1983b.
- . "Elevated concentrations of cosmic dust in Wisconsin stage polar ice." (abs.) *Meteoritics* **18**, p. 336; 46th meeting of the Meteoritical Society, Mainz, September 1983c.
- . "The Thermodynamics of the Aha Experience." Proceedings of the Annual Conference of the Society for General Systems Research, San Francisco, Jan. 1980; Reprinted in: (1982) W. Gray, et al. (eds.) *General Systems Theory and the Psychological Sciences (Vol. I)*. Intersystems Press, CA.
- . "Teaching with Feeling in Mind." *On the Beam* **6** (1986b).
- Laszlo, E., LaViolette, P. A., et al. *Goals for Mankind: A report to the Club of Rome on the New Horizons of Global Community*. New York: Dutton, 1977b.
- LaViolette, P. A. & Murray, R.. "Assessing the solar transition." In I. Laszlo and J. Bierman (Eds.) *Goals in a Global Community Vol. 1*, (Technical Papers to the 4th Report to the Club of Rome). Pergamon Press, New York, 1977c, pp. 221-278.
- LaViolette, P. A. "The dual bag rebreather – New hope for a safe, light fire service breathing apparatus," *Fire Independent* (March 1977a): 5-7, 18.
- . "Freezing the fire service out of performance." *Fire Independent* (May-June, 1976): 3-5.