

SCIENTIFIC JOURNAL

BELGRADE LAKES INSTITUTE FOR ADVANCED RESEARCH - SCIENTIFIC JOURNAL***

Volume 14 Number 2A – 1 February 2014 (Final Draft 140131 2:45 P.M.)

Glenn A. Baxter, P.E., Editor



Glenn A. Baxter, P.E., Physicist, Licensed Professional Engineer

PHYSICS UNIVERSITY www.k1man.com/physicsuniversity

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EDITORIAL

Dr. Peter Kohut has a new paper out now which has an interesting slant on physics. See www.k1man.com/Kohut140127A.pdf Dr. William Charles Lucas and Dr. Han Leunen present Saturday morning FUZE video teleconferences this month. Engineer David Tombe and Dr. Hasmukh K. Tank also join us in this issue. Dr. Tank says there is no wave – particle duality in the double slit experiments, which Dr. Richard Feynman was fond of saying represents the

heart, body, and soul of quantum mechanics. Karl Virgil Thompson weighs in on this also, and we revisit his related paper. www.k1man.com/Thompson140116A.pdf Also joining us this issue is Leo Vuyk – www.k1man.com/Vuyk140127A.pdf

PHYSICS EDITORIAL By Glenn A. Baxter, P.E. 22 January 2014 Hidden Assumptions

The listing of assumptions exercise this week by the Monday morning Physics Conference Call Group is interesting, as everyone appears to be surprised at themselves when they think about the assumptions found buried in their world view. See www.k1man.com/NeoClassicalPhysics.pdf Some 90% of our human thinking, we are told by psychologists, is governed by the sub conscious mind, and this would seem to say that much or all of our scientific thinking is governed by the many assumptions/conclusions buried there. Small wonder that so many of our theories end up so fuzzy.

When a book is published, someone goes through each paragraph and compiles a subject index for that book. I propose doing the same thing for each scientific paper, talk, book, or article and compiling an assumption index as well as subject index.

The “big” assumptions should be summarized and attached to the abstract. For example: “This PHYSICS EDITORIAL assumes that: 1) Special Relativity is wrong per www.k1man.com/c29.pdf 2) The Big Bang theory is wrong 3) Star, galaxy, etc. red shift is not only due to velocity 4) Space = aether and aether is affected (compressed) by gravity 5) Gravity also affects the velocity and wavelength of light, but not the frequency 6) Maxwell equations do not properly explain radiation or unipolar induction 7) Light, radio, X, Gamma, Delta, electric, magnetic, and gravity disturbances can travel through ‘empty’ space which has the properties of permeability and permittivity 8) Light travels equal scalar distances in equal times 9) Energy from fission comes from Coulomb energy and not from the conversion of mass to energy 10) Mass produced gravity is similar but not equivalent to acceleration produced artificial gravity 11) Time has only one property in that it moves only forward. 12) Information can be put into a box without changing its mass. Glenn weighs the same as nlnGe. 13) The earth spins on its own axis and also revolves around the sun 14) UFOs are real www.k1man.com/ufo 15) $E = MC^2$ and $\lambda = h/p$ Are Not Identities, per www.k1man.com/c4 16) $E = kMC^2$ per www.k1man.com/c7 As A Special Case For Electron – Positron Annihilation 17) $E = hf$

Writing down your world view assumptions/conclusions lets you and your readers evaluate exactly where you stand, as your world view evolves.

QUOTE OF THE YEAR:

“...I will obviously stop communication if you don’t want to indulge in search for truth, but merely debate...” – Ivor Catt 19 January 2014

I was delighted to see Ivor state publicly, and in writing, such a worthy, obvious, and yet rare scientific goal. A “mainstream” scientist would be compelled by his professional peers to add:

“... in search for truth, as long as it is consistent with all of the widely accepted scientific paradigms that would be found at any major university or peer reviewed scientific journal...”

Ivor has thus identified the gargantuan problems with 21st century physics. “Dissident” scientists are just as bad, or even worse. In the case of “dissidents,” there is no strict mainstream “party line” to be followed, and things are therefore more likely to get out of hand. Much like what happened to Christianity after the start of the Protestant Revolution.

Ivor said “search for truth.” Like “Life, Liberty, and the Pursuit of Happiness,” the search never ends, and “truth” is never found. That is OK.

LOTS OF PAPERS

Many scientific papers are published each day, as evidenced in the very popular depositories such as www.vixra.org and www.arxiv.org Too much for any individual person to keep up with. Throw in the filters!

Both mainstream and dissident scientists throw around assumptions, either obvious, or buried in their math which is often difficult to follow, either because of more sloppy assumptions or because the author does not understand it himself/herself. The acid test is “If you cannot explain it to a college freshman, then you probably do not understand it yourself.”

Another popular outlet is the Saturday morning FUZE video teleconferences. Many new scientific theories are launched every week in this manner. The challenge is for a given theory to gain some traction, as electrical engineer Harry Ricker explains. The problem is that this is very similar to “noise,” an electrical engineering term.

Almost all physics can be found to have serious problems when you look closely at the fundamentals and fundamental assumptions. It is called the “Ricker Effect,” and it is very real.

So, if you want your paper or theory to gain traction, work on your fundamentals and your assumptions. Explain your math so a college freshman can clearly follow and understand it. Then you have to die. These things take time.

FUZE VIDEO TELECONFERENCES



Dr. Charles William Lucas

[Mach's Principle and the Anomalous Acceleration on Pioneer 10 and 11](#)

Saturday, February 1, 2014 NASA has measured an anomalous acceleration of $8.74133 \cdot 10^{-10}$ m/s² on the Pioneer 10 and 11 space craft that is unexplainable in terms of politically correct science. This presentation will show that the same electrodynamic approach to gravity and inertia that explained the unexpectedly high constant velocity of the outer arms of spiral galaxies also explains the anomalous acceleration measured on Pioneer 10 and 11 space craft when Mach's Principle is applied. Available at www.k1man.com/Lucas140201.mp3



Dr. Hans van Leunen

[The Hilbert Book Model Project](#)

Saturday, February 8, 2014 The Hilbert Book Model is the name of a personal project of the author. The model is deduced from a foundation that is based on quantum logic and that is subsequently extended with trustworthy mathematical methods. What is known from conventional physics is used as a guideline, but the model is not based on the methodology of contemporary physics. In this way the model can reach deeper into the basement of physics. The ambition of the model is rather modest. It limits its scope to the lowest levels of the physical hierarchy. Thus fields and elementary particles are treated in fair detail, but composites are treated marginally and only some aspects of cosmology are touched. Still the model dives into the origins of gravitation and inertia and explains the diversity of the elementary particles. It explains what photons are and introduces a lower level of physical objects and a new kind of ultra-high frequency waves that carry information about their emitters. It explains entanglement and the Pauli principle. Above all the HBM introduces a new way of looking at space and time. Where contemporary physics applies the spacetime model, the HBM treats space and progression as a paginated space progression model. Available after 8 February 2014 at www.k1man.com/Leunen140208.mp3

SUBMITTED PAPERS

Dr. Hasmukh K. Tank [SOME INSIGHT INTO THE OUTCOME OF DOUBLE SLIT EXPERIMENTS](#) www.k1man.com/Tank140127A.pdf Also www.k1man.com/Tank140111A.pdf

From: Karl Thompson <karl.virgil.thompson@gmail.com>
To: Glenn A. Baxter, P.E. <glennbaxterpe@aol.com>

Sent: Mon, Jan 27, 2014 9:16 am
Subject: No wave - particle duality?

Glenn ---- This is a very good short presentation. Too bad he doesn't go further! I want to give you another reference along these lines and that is an introduction to a small book on Vigier describing the Bohm - Vigier model. I carry a copy in my briefcase to aid in discussing with my contacts my article. The book is : Jean - Pierre Vigier and the Stochastic Interpretation of Quantum Mechanics published by Apeiron --4405, 4rue ST-Dominique --Montreal, Quebec H2W 2B2 Canada--- www.alibris.com in 2000. This is a "MUST READ" for anyone who wishes to describe a basic model for the universe composed only of waves.. The ideas and model therein are basically what I believe to be truth and have been shunted aside by the particle physicists of the establishment.

I recommend it highly to students of Alternative Physics! If you have any discussions of this model I might even be persuaded to take part in them. It leads to a cohesive theory of Gravity and is the true path to unification. The establishment avoids and suppresses this line of approach with a fierce rejection because it would make most of them obsolete where modern and particle physics is concerned. Tell Jeff I applaud him and he can communicate directly with me at any time on this subject.

Karl Virgil Thompson A MODEL FOR A GRAVITY WAVE AT THE QUANTUM LEVEL
www.k1man.com/Thompson140116A.pdf

Dr. Peter Kohut THE PHYSICAL UNIVERSE AS A QUANTUM INFORMATION STRUCTURE
www.k1man.com/Kohut140127A.pdf See also www.k1man.com/Kohut.pdf

THE CENTRIFUGAL FORCE AND THE CORIOLIS FORCE - By Frederick David Tombe
www.k1man.com/Tombe140125A.pdf sirius184@hotmail.com

The Future of Science.

For science to have a future, a certain multi-level ethical infrastructure is necessary. At the lowest level, this involves the whole community. In 1993 Michael Pepper was selected by the Master of Trinity College, Cambridge, my college, and instructed to write to me an answer to "[The Catt Question](#)", an elementary question about the fundamentals of electromagnetic theory. He wrote [this](#) . Since then he has been incommunicado.

Sir Michael Pepper was later “knighted for services to physics”, and became editor of the [top Royal Society journal](#) .

Nobel Prize winner [Brian Josephson](#) , also a Fellow of Trinity, was marginalised when he tried to bring the [paranormal](#) into science. He complained in “New Scientist” about being censored. Now working on the fringe of the science community, he wrote 100 emails about “The Catt Question”. His answer, the same as

[Dr. Neil McEwan's](#) , to this elementary question was diametrically opposed to Pepper’s. Following my suggestion that he talk to Pepper, he reported to me by email that Pepper had changed his mind about the view he gave to me in his 1993 letter, and now agreed with Josephson.

Now we examine the attitude of the man in the street, my neighbour three or four (or ten) doors away. He believes that having been “knighted for services to physics”, Pepper has no duty whatsoever to serve physics in future. His duty is limited to bathing in the glory. Thus, having allegedly said to Josephson that what he wrote in 1993 is wrong, he has no duty to write to Catt.

The next stage in the infrastructure which has caused the end of science is the media. I am convinced that no member of the media – Editor of New Scientist, Science Editor of The Daily Telegraph, TV journalist, will touch this subject. Even without getting a hint of "[Catt the Nutter](#)" , he will know that the above is nonsense, nothing to do with him. This in spite of my belief that the above is newsworthy and would increase circulation or viewing figures.

I believe that, further, no media man will touch another newsworthy item. This is that no [professor](#) or text book writer in the world will put a comment in writing on [Wakefield](#) , published experimental results which seem to undermine the classical electromagnetic theory they teach.

The decline of science is not due to decadence or laziness in professors or text book writers, which could only exacerbate a [fundamental problem](#) . They can behave this way because they know they have the public's and the media's full support in so behaving.

Ivor Catt 29 January 2014

We submit this Scientific Journal each month to www.viXra.org.

LETTERS

ON EXPONENTIAL DECAY AND THE RIEMANN HYPOTHESIS

www.k1man.com/Cook140125A.pdf and FUZE presentation audio at www.k1man.com/Cook140125.mp3

Description

In uncertainty relations it can be said that one variable or parameter is a Fourier transform of another. As a result, one of the mathematical tools applied in the RH proof, Exponential Decay and the Riemann Hypothesis, results in defined certainty between the parameters in isolated regions near infinity of the function using the author's Riemann Statistical Oscillation (RSO). By representing increments of chronological time or linear distance in terms of moments, thus using a Laplace transform instead of a Fourier, the author shows how the RSO may be applied to vacuum fluctuations in the same way. The method in this presentation will be shown to have applications also to the original Mandelstam and Tamm result of 1945 that proved an uncertainty relation between energy and time, in that the conservation of energy appears to be violated in very short durations and/or very high frequencies. The author presents a method to analyze these conservation of energy violation moments with high accuracy.

From: Jeffrey Cook <jnoelcook@yahoo.com>
Sent: Wed, Jan 29, 2014 4:54 pm
Subject: Re: NPA talk January 25, 2014

Ian,

Thanks for your interest! My apologies for not getting back quicker. I was busy up to the point of the video conference and I've been busier ever since. In any case...

To answer your question, whether or not I derived a result via the Buckingham pi theorem that does not provide requisite constants of proportionality in my paper, yes. I did so, but in doing so, the equations may in the end not represent meaningful physical processes (in the paper), such is the case of using the Buckingham pi theorem. But my paper was on number theory, and what I derived may not return back to meaningful physical results. The dimensions did not matter for what my intentions were in the paper, and I desired to remove them. **However**, for the power point presentation I did want to show how one would go about deriving meaningful physical relationships using the same functions in the paper. The relationship between angular momentum and h results when one applies the functions from my paper to the vacuum fluctuation uncertainty relation. I did have the idea based on experimentation, as the angular momentum became constant in my experimentation. By drawing comparison of any standing wave that experiences exponential decay (in that it has a half-life), in my experimentation I induced a predictable sustained system (the precessing, rotating, nutating, orbiting magnet system), a constant angular momentum (h analogy) arises. It becomes the hard limit for the amount of angular momentum the motive magnet can possess based on the energy and frequency. It becomes restricted by the angle I limit it to. I see this as supportive of the hypothesis, but I have not thought of any way to do this with light itself. But someone could.. The mathematics in the paper doesn't deal with Planck's constant really..just touches on it. But the paper itself does deal with some of the mathematics. I agree that by following all the dimensions through, it could have probable ramifications on the natural units we use. But I would doubt that one operation (+, -, etc.) would have more fundamental importance over another. Always open to here how it could be though.

And yes, all scientific theory should be based on the empirical, and it tires me the lack of this that is still accepted today.

Thanks,

Jeff

From: cowani <cowani@eircom.net>
To: jnoelcook <jnoelcook@yahoo.com>
Sent: Tue, Jan 28, 2014 7:14 am
Subject: NPA talk January 25, 2014

Dear Jeff,

I enjoyed your NPA talk last Saturday. Just for the record, I confirm that I

raised a flag at question time, but didn't persist at the end as we had really run out of time. Just in case you noticed and were wondering, I was going to ask about dimensional analysis via the Buckingham Pi Theorem not providing requisite constants of proportionality (e.g. in the angular momentum limit of h [as you had suggested], or [perhaps - reduced] $h/2\pi$ as per the Uncertainty Principle): and whether your mathematics dealt with this or was it experimental to pick up. This, of course, has probable ramifications on the choice of 'natural units' we use. I was also going to add the point that given a sufficiently wide definition of numbers, of +, -, x, and /, only one of these operations might be considered fundamental: if, e.g., we take addition to be so, then subtraction was addition of negatives, multiplication repetitive addition, and division repetitive addition of negatives (and also multiplication by reciprocals) - points no doubt not new to you! You may wish to comment, but no response is required if you essentially accept the points.

I, I think like yourself, see myself very much as a theoretician - or one at least with a bent for theory - yet one who considers (again possibly like you) that all theoretical attempts to understand the world must be grounded and indeed commence empirically.

Best regards,
[Dr.] Ian Cowan.

See also www.klman.com/Cook.pdf

From: Ivor Catt <icatt@btinternet.com>
To: Glenn A. Baxter, P.E. <glennbaxterpe@aol.com>
Sent: Wed, Jan 29, 2014 11:47 am
Subject: future of science

<http://www.ivorcatt.co.uk/x41t.htm>

This is more of the analysis that NPA members should be active in. It's very difficult doing it on my own. There is no rigid law which says that the religion of "Modern Physics" which grew out of and replaced science will be able to block scientific advance. The blocking mechanism evolved (and is not a conspiracy), and is probably not fool proof. The situation needs to be analyzed in a proper, scientific way, and a solution, a breakthrough mode, looked for.

Ivor Catt

From: Ivor Catt <icatt@btinternet.com>
To: Glenn A. Baxter, P.E. <glennbaxterpe@aol.com>
Sent: Wed, Jan 29, 2014 11:35 am
Subject: Re: The Future of Science

Dear Glenn,

You are scratching the surface. There is a massive amount of research by me in this field, which I do wish NPA members would take on board. Why do they not appreciate that a major part of their interest, as dissidents, should be the way that Establishment Science manages to behave as though dissidence did not exist, and to block all communication by them? "Modern Physics" should be classified as Religion, not Science. Why no sign among NPA members of interest in such ideas? The defense in depth of Establishment Science is complex, and I should not be the only one researching into its structure.

The break in the defense structure of Modern Physics which was exposed in Newcastle University resulted from a number of coincidences. See <http://www.async.org.uk/David.Kinniment/DJKinniment-He-Who-Hesitates-is-Lost.pdf> . "The Glitch" was suppressed, and, to some degree, probably still is. It causes computers to crash and leave no trace of why. <http://www.ivorcatt.co.uk/97sglit5.htm> . <http://www.ivorcatt.co.uk/x0605.htm> "The computer journals and conferences in Britain and the USA consistently evaded 'The Glitch', the way in which computers spontaneously go mad for no apparent reason."

In his book, above, Professor Kinniment built up Catt as the big man in the Glitch, bigger than Tom Kilburn, who was the top computer man in Britain. Kinniment was Alex Yakovlev's mentor. Yakovlev wrongly deduced that Catt was kosher, and set up a full one day conference on Catt's electromagnetic theory (not on Glitch), which was filmed and put onto the www by the University. <http://async.org.uk/IvorCatt+DavidWalton.html> . Yakovlev said during the lectures that he had never done a course on electromagnetic theory. Later, he brought the Catt venture to the real electromagnetism men in the University, who correctly told him that Catt was not kosher. This meant Yakovlev was in a corner, and his career was at risk for promoting heresy. <http://www.ivorcatt.co.uk/x21n.htm> . The real em men at the University will of course not put anything in writing on Catt. It would be unwise for them to commit to paper, because Catt might be the wave of the future, the new dogma. He had to backtrack. Unfortunately, Catt's co-author Dr. David Walton is scheduled to give a further lecture to the university in February. However, Yakovlev will manage to contain the situation, and hold on to his job, in spite of his having threatened the university's electromagnetism "experts" by bringing in Catt theory.

Yakovlev said his "experts" said all the Catt stuff was in the text books. He cited Professor Rosenstark. <http://www.ivorcatt.co.uk/x21n.htm> . This led to analysis of the Rosenstark book, and dialogue between Catt and Rosenstark, which continues.

And so on.

I suspect that virtually all NPA members don't understand that all of the above is central to what science dissidents should be interested in, and doing.

"Do you feel that you understand it?" – GAB

That is a ridiculous question. I predicted the results which are based on my theoretical framework. By now, you should know that.

You appear to revere Harry Ricker. He has crossed swords with me because he fanatically supports the heresy which captured "Modern Physics", "The truth that there are no truths."

<http://www.ivorcatt.co.uk/x231.pdf> . This is more important to him than whether any of Catt's work is valuable. Since Catt is on the side of Galileo and against the other side, Cardinal Belarmino and Ricker, Ricker now rubbishes Catt. <http://www.ivorcatt.co.uk/x3cd.htm> . Those who adhere to this unscientific heresy (that there are no truths) do so fanatically. It is more important to them than scientific advance.

Ivor Catt

From: David Tombe <sirius184@hotmail.com>

Sent: Wed, Jan 29, 2014 9:49 am

Subject: RE: The Future of Science

Hi Glen,

The Wakefield experiment is undoubtedly explained on the basis of a wave front that travels the full length of the original charged zone and back again. This is what Ivor says, however the devil is in the detail. I don't think that Ivor has got the details correct. Mainstream on the other hand don't appear to ever have contemplated this issue.

Best Regards

David

From: [Glenn A. Baxter, P.E.](#)

Sent: Wednesday, January 29, 2014 12:47 PM

To: icatt@btinternet.com ; jlunen1941@kpnma.ln ; Lawrence@maldwnphysics.org ; **Subject:** Re: The Future of Science

To: Ivor Catt

From: Glenn A. Baxter, P.E.

Date: 29 January 2014

Ivor,

Does the electrical engineering department at the university you spoke at recently think they can explain the Wakefield experiment? I would like to study any such explanation. Do you feel that you understand it? If so, I would like to compare the two explanations.

I would love to see what other university electrical engineering departments could do with it.

Glenn

From: Ivor Catt <icatt@btinternet.com>
To: icatt <icatt@btinternet.com>
Sent: Wed, Jan 29, 2014 6:00 am
Subject: The Future of Science

<http://www.ivorcatt.co.uk/x41t.htm>

To: Ivor Catt

From: Glenn A. Baxter, P.E.

Date: 30 January 2014

Ivor,

I wanted to respond briefly to you before I dig back into your extensive writings. Unipolar induction and Wakefield are two examples of phenomena which are apparently not explained by world wide university electrical engineering or physics departments. I believe that Wakefield runs into serious problems with the concept of characteristic impedance, which appears to me to be more of an operational definition for transmission lines, but also rears its misleading head in free space and also your confusing model which might well be better than mainstream, but resides in the Catt materials as more of questions and vague ideas rather than answers. Good for you, however. Not a single person in the world that I know of understands my disproof of Special Relativity, as simple as it is.

www.k1man.com/c29.pdf It is mostly professional arrogance. That is exactly what you are up against.

Perhaps those kids at the university you are working with will make a breakthrough with your prodding. I think the professors there are intrigued with your stuff, as I am, and figure that there is minimum risk by throwing their kids in the lions den with you where they cannot themselves get clawed to death.

Until you can explain something to a college freshman and have him/her understand it, you do not really understand it yourself. That is where I think you are. OK! But 90% of your frustration is professional arrogance. The other 10% are smart enough guys like David Tombe, who cling to their own narrower world views.

If you wrap a wire conducting current around many different materials, as Faraday did; that will rotate light. That is because the magnetism generated affects the material itself. Stressing glass will also rotate light.

But if you wrap the same current carrying wire around an evacuated glass cylinder, I don't think that the magnetism being generated will rotate light. Nor do I think an electrostatic field will rotate light. Nor do I think gravity directly affects light. Light, radio signals, X, Delta, and gamma radiation are all different animals than what "goes through" wires, in my view. They can somehow travel through a

space vacuum. How permeability and permittivity actually get involved is unclear to me. That is the characteristic impedance thing. The 377 Ohm thing.

I think it is screwing up your model as well. You are probably right; there is a connection. Your capacitor model might just be a very good clue as to what is really going on. I believe you are "scratching the surface," as you have characterized what I am doing. Good! Let's get to work!

Glenn

From: Bill Lucas <bill.lucas001@gmail.com>
To: Glenn A. Baxter, P.E. <glennbaxterpe@aol.com>
Sent: Mon, Jan 27, 2014 9:27 am
Subject: Re: Glenn Baxter

Glenn,

This is the first time I have seen this work. It is not organized in terms of axioms or any particular philosophy of science. It has no apparent logical rigor. It does not appear to be a quantitative type theory. It appears to be a qualitative theory based upon some not too well defined imaginative ideas. It appears to be quite complex compared to alternative scientific approaches.

On Mon, Jan 27, 2014 at 9:01 AM, Glenn A. Baxter, P.E. <glennbaxterpe@aol.com> wrote:

To: Dr. Bill Lucas

From: Glenn A. Baxter, P.E

Date: 27 January 2014

Bill,

What do you make of the attached paper? [CALABI YAU SHAPED FERMION SPIN STATES](http://www.k1man.com/Vuyk140127A.pdf) click on www.k1man.com/Vuyk140127A.pdf

Glenn

FOURTH ANNUAL PHYSICS COLLOQUIUM IN PORTLAND, MAINE - 16 August 2014

The 16 August 2014 Physics Colloquium will be held at a hotel in the immediate Portland, Maine airport area and will feature two speakers in the morning and two in the afternoon. The Colloquium fee is \$75, and the pdf proceedings on CD is \$15. We are now extending invitations for speakers.

The Proceedings CD will be to all those interested before the colloquium so they can be studied ahead of time, which will greatly improve the effectiveness and efficiency of the colloquium itself. Attendees are cordially invited to dinner in Portland on Friday evening, August 15, 2014 at 7:00 p.m. to informally meet and to also discuss physics. Please register for the colloquium (\$75) by sending an E-mail to

Institute@K1MAN.com All meals (and drinks) are separate at the hotel (off the menu) or wherever else you want. www.k1man.com

SOURCES

NPA, the Natural Philosophy Alliance, is a world wide forum for the critical analysis of mainstream science and the open exchange of related ideas. See www.k1man.com/vr Coming NPA video conferences: www.k1man.com/vc NPA members: www.k1man.com/members

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Scientific Papers: www.vixra.org www.arxiv.org www.k1man.com/v www.k1man.com/k

UNH Research: <http://www.physics.unh.edu/research>
<http://www.library.unh.edu/branches/physlib.html> General Science Journal <http://www.gsjournal.net/>

ACADEMIC COURSES: Calculus: www.k1man.com/Calculus Other courses: www.k1man.com/Khan
Atom: www.k1man.com/Atom Limit: www.k1man.com/Limit

Dr. Rodney Bartlett's Interesting Paper:

www.k1man.com/f300 - The non-Higgs, revised electroweak unification, revised gravitation, and explained dark energy/dark mater – By Dr. Rodney Bartlett

OTHER PAPERS

Papers by Glenn A. Baxter, P.E. www.k1man.com/v

Papers by D. Sasso www.k1man.com/k

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Paper by Dr. Karl V. Thompson's paper www.k1man.com/k9

Papers by Dr. Peter Kohut www.k1man.com/k10

Papers by Dr. John R. Calarco www.k1man.com/k11

BELGRADE LAKES INSTITUTE FOR ADVANCED RESEARCH -

SCIENTIFIC JOURNAL - PREVIOUS ISSUES: www.k1man.com/p

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The Belgrade Lakes Institute For Advanced Research was founded in 1999 to study original scientific work of great thinkers going back as far as possible (even thousands of years) to reexamine ideas in search of hints or inspiration which might apply to current scientific progress in physics. The late Dr. Richard Feynman**** is an Honorary Member of the Institute, and his lectures and publications serve as a corner stone for our work and model for our thinking and efforts. Other examples of great thinkers and scientists would include people such as Michael Faraday, Maxwell, Euler, Cantor, Lavoisier, Lise Meitner, Otto Hahn, Bohr, De Broglie, Planck, Avogadro, Boltzmann, Compton, Schrodinger, Dr. xSA Albert Einstein, Newton, Leibnitz, Pythagoras, Descartes, and many others. Membership in the Institute is by application and majority of votes timely cast by the general membership. For more information call the USA number 207 242 2143 or E-mail Institute@K1MAN.com Articles for the Scientific Journal are invited. Our mail address is Belgrade Lakes Institute For Advanced Research, 310 Woodland Camp Road, Box 440, Belgrade Lakes, Maine 04918 USA www.k1man.com/physics

BELGRADE LAKES INSTITUTE FOR ADVANCED RESEARCH FOUNDATION

BY - LAWS

1. The Belgrade Lakes Institute For Advanced Research Foundation, hereafter referred to as the Institute, is an incorporated non profit foundation that shall seek and maintain a 501(c)(3) IRS tax status.
2. The goal of the Institute is to promote scientific advancement by challenging and overturning certain currently and widely accepted scientific

paradigms by facilitating scientific investigation, and also raising money to sponsor scientific research and scientific experiments along these lines.

3. The Institute Board shall have at least 3, and no more than 11 members, elected by a majority of the existing Board. A Board member can only be removed by death, resignation, or unanimous vote of the Board.
4. These by-laws can be changed at any time by a majority of the Board.
5. Board meetings shall be periodic, and any Board member can call a Board meeting at any time.
6. The Board of Directors shall employ an Executive Director, who shall serve at the pleasure of the Board, and who shall carry out the day to day affairs of the Institute.
7. Should the Institute ever be dissolved, all its assets shall be donated to the Smithsonian in Washington, D.C.

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***Richard Feynman

Richard Feynman (1918–1988), American physicist and Nobel laureate. Feynman shared the 1965 Nobel Prize in physics for his role in the development of the theory of quantum electrodynamics, the study of the interaction of light with atoms and their electrons. He also made important contributions to the theory of quarks (particles that make up elementary particles such as protons and neutrons) and superfluidity (a state of matter in which a substance flows with no resistance). He created a method of mapping out interactions between elementary particles that became a standard way of representing particle interactions and is now known as Feynman diagrams. Feynman was a noted teacher, a notorious practical joker, and one of the most colorful characters in physics.

Feynman was born in New York City. As a child he was fascinated by mathematics and electronics and became known in his neighborhood as “the boy who fixes radios by thinking.” He graduated with a bachelor’s degree in physics from the Massachusetts Institute of Technology (MIT) in 1939 and obtained a Ph.D. degree in physics from Princeton University in 1942. His advisor was John Wheeler, and his thesis, “A Principle of Least Action in Quantum Mechanics,” was typical of his use of basic principles to solve fundamental problems.

During World War II (1939-1945) Feynman worked at what would become Los Alamos National Laboratory in central New Mexico, where the first nuclear weapons were being designed and tested. Feynman was in charge of a group responsible for problems involving large-scale computations

(carried out by hand or with rudimentary calculators) to predict the behavior of neutrons in atomic explosions.

After the war Feynman moved to Cornell University, where German-born American physicist Hans Bethe was building an impressive school of theoretical physicists. Feynman continued developing his own approach to quantum electrodynamics (QED) at Cornell and then at the California Institute of Technology (Caltech), where he moved in 1950.

Feynman shared the 1965 Nobel Prize in physics with American physicist Julian Schwinger and Japanese physicist Tomonaga Shin'ichirō for his work on QED. Each of the three had independently developed methods for calculating the interaction between electrons, positrons (particles with the same mass as electrons but opposite in charge) and photons (packets of light energy). The three approaches were fundamentally the same, and QED remains the most accurate physical theory known. In Feynman's *space-time* approach, he represented physical processes with collections of diagrams showing how particles moved from one point in space and time to another. Feynman had rules for calculating the probability associated with each diagram, and he added the probabilities of all the diagrams to give the probability of the physical process itself.

Feynman wrote only 37 research papers in his career (a remarkably small number for such a prolific researcher), but many consider the two discoveries he made at Caltech, superfluidity and the prediction of quarks, were also worthy of the Nobel Prize. Feynman developed the theory of superfluidity (the flow of a liquid without resistance) in liquid helium in the early 1950s. Feynman worked on the *weak interaction*, the *strong force*, and the composition of neutrons and protons later in the 1950s. The weak interaction is the force that causes slow nuclear reactions such as beta decay (the emission of electrons or positrons by radioactive substances). Feynman studied the weak interaction with American physicist Murray Gell-Mann. The strong force is the short-range force that holds the nucleus of an atom together. Feynman's studies of the weak interaction and the strong force led him to believe that the proton and neutron were composed of even smaller particles. Both particles are now known to be composed of quarks.

The written version of a series of undergraduate lectures given by Feynman at Caltech, *The Feynman Lectures on Physics* (three volumes with Robert Leighton and Matthew Sands, 1963), quickly became a standard reference in physics. At the front of the lectures Feynman is shown indulging in one of his favorite pastimes, playing the bongo drum. Painting was another hobby. In 1986 Feynman was appointed to the Rogers Commission, which investigated the Challenger disaster—the explosion aboard the space shuttle Challenger that killed seven astronauts in 1986. In front of television cameras, he demonstrated how the failure of a rubber O-ring seal, caused by the cold, was responsible for the disaster. Feynman wrote several popular collections of anecdotes about his life, including *"Surely You're Joking Mr. Feynman"* (with Ralph Leighton and Edward Hutchings, 1984) and *What do YOU Care What Other People Think?* (with Ralph Leighton, 1988).

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Glenn A. Baxter, P.E., at his home in Belgrade Lakes, Maine U.S.A.



Glenn A. Baxter, P.E., age 4, with his dad, Frank H. Baxter (Bachelor of Science Degree, Mechanical Engineering, 1914, Rhode Island State College), and President of Frank H. Baxter Associates, 370 Lexington Avenue, New York City. See www.k1man.com/fhb and also www.k1man.com/w10 and www.k1man.com/Loons