Experimental Evidence of Nonlocal Gravitational Effect & Nature of Gravity

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Presented at Physics Beyond Relativity Conference
Oct. 19, 2019

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Outline

- Why & when our experiments were conducted.
- Nature of quantum entanglement & gravity.
- Experimental designs & results with water: Changes of weight, temperature & pH.
- Reconciliation of nonlocal effect with relativity in prespacetime model of elementary particles.
- Quantum gravity in the Principle of Existence.
- Transition from quantum gravity to GR.
- Biological (Brain) Experiment (No Ingestion).
- Summary of findings, implication & application.

Why & When The Experiments Were Done

- Why? Primarily to test “Spin-Mediated Consciousness Theory” put forward by us in arXiv:quant-ph/0208068v1 (2002) - Medical Hypotheses 63(4): 633-646 (2004):
  - Nuclear/electron spin is the mind-pixel.
  - Consciousness is intrinsically connected to the nuclear/electronic spin processes in the brain
  - The unity of mind is achieved by entanglement of these mind-pixels.
- When? Biological experiments (no ingestion of substance) were conducted in 2005, water experiments in 2006, & follow-up biological experiment in 2012.

Bases of Spin-Mediated Consciousness

- Spin is the basic qubit for encoding information & nuclear spins have long relaxation times after excitations which matches and/or exceeds time scales of brain activities.
- Spin was shown to be responsible for all quantum effects in both Hestenes & Bohmian pictures of quantum mechanics.
- In relativistic QM, Spin is embedded in the structure of spacetime as reflected by Dirac equation.
- Neural membranes & proteins contain vast numbers of nuclear spins such as ^{1}H, ^{13}C, ^{31}P and ^{15}N which are the natural targets of interaction with electromagnetic fields.
- Nuclear/electronic spins form complex spin networks inside the brain which are modulated by the action potentials.

What Is & How to Generate Quantum Entanglement

- "Two or more quantum systems are said to be in an entangled ...state if their joint wave-function is not expressible as a product of individual wave functions but is instead a superposition of product states." e.g., Thomas Durt (2004), arXiv:quant-ph/0401121v1
- "Whenever two quantum systems interact with each other, it is impossible that all factorisable states remain factorisable during the interaction unless the full Hamiltonian does not couple these systems so to say unless they do not really interact…. [i]n quantum
- mechanics to interact means nearly always to entangle." [*ID*]

$$i\hbar\,\partial_t\,\Psi_{AB}(t) = H_{AB}(t)\Psi_{AB}(t)$$

- In water, there are both J-coupling/dipolar coupling of two proton spins (H, H) within a H_2O & dipolar coupling between proton (H) & proton (H) spins of two H_2Os , so the two respective proton spins get quantum-entangled with each other.

$$H_{AB} == J\boldsymbol{I}_A \cdot \boldsymbol{J}_B$$

$$H_{AB} == \frac{D}{|\boldsymbol{r}|^3}\left(\boldsymbol{I}_A \cdot \boldsymbol{I}_B - 3(\boldsymbol{I}_A \cdot \boldsymbol{r})(\boldsymbol{I}_B \cdot \boldsymbol{r})\right)$$

$$\psi_{AB}^{\mp} == \frac{1}{\sqrt{2}}(|\uparrow\rangle_A \otimes |\downarrow\rangle_B \mp |\downarrow\rangle_A \otimes |\uparrow\rangle_B)$$

Conceptual Barriers Related to (Applying) Quantum Entanglement

- No-Communication Theorem: e.g., "Quantum field theory cannot provide faster than light communication", Eberhard, Phillippe H.; Ross, Ronald R. (1989), Foundations of Physics Letters, 2 (2).

- Quantum Decoherence (Dilution of QE): The loss of quantum coherence within exiting entangled entities through interactions with their environment.

How to Overcome No-Communication Theorem

- One may assume that the statistical distribution can be modified and utilized to transmit information, e.g., Josephson, 1991; Stapp, 1982 & Walker, 1974 – See Refs. in Hu & Wu (2006), NeuroQuantology 4(1): pp. 5-16.
- One goes beyond probabilistic interpretation of QM (assumption) and accepts wave-function to be real entity and its quantum entanglement with other quantum entities to be able to produce observable physical effect –See Hu & Wu (2006), NeuroQuantology 4(1): pp. 5-16..
- One then does experiments to generate and measure bulk/macroscopic nonlocal physical effects (other than measure individual quantum observables such as spin polarization)

How to Overcome Quantum Decoherence

- Decoherence-free subspaces exist within the Hilbert space of a complex quantum system – See, e.g., Altepeter, J.P., et al. (2004), Phys. Rev. Lett. 92: 147901-1-4.
- In the case of nuclear spins, they only weakly interact with their environment, thus, have long relaxation time after excitation; there are both theoretical & experimental studies indicating large-scale quantum coherence of entangled quantum states in the nuclear spin ensembles – See refs in Hu & Wu (2006), NeuroQuantology 4(1): pp. 5-16.
- One does his/her own experiments to demonstrate that quantum coherence of entangled quantum states within certain quantum entities such nuclear spins ensembles persist (e.g., by measuring bulk/macroscopic nonlocal physical effects in water)

Nature of Quantum Entanglement
Beyond Mainstream Views

- Quantum entanglement means genuine interconnected-ness & inseparableness of once interacting quantum entities & can be directly sensed and utilized by the entangled quantum entities.
- It can persist in biological, chemical & other systems at room & higher temperatures despite of quantum decoherence.
- It can influence chemical & biochemical reactions, other physical processes & micro- & macroscopic properties of all forms of matters.

See Hu & Wu (2006), NeuroQuantology 4(1): pp. 5-16

Views on Origin & Nature of Gravity

- Gravity originates from non-spatial & non-temporal prespacetime & is the macroscopic manifestation of quantum entanglement.
- Thus, gravity is nonlocal and instantaneous, as Newton reluctantly assumed and Mach suggested - All matters in the universe are instantaneously interconnected.
- Potentially, gravity may be harnessed, tamed & developed into revolutionary technologies such as instantaneous communication.

See Hu & Wu (2007), NeuroQuantology 5(2): pp. 190-196

How to Test New Views on Quantum Entanglement & Gravity

Thought Experiments

- Try to quantum-entangle quantum entities, e.g., nuclear/electron spins in two physical systems; then if quantum entanglements are created & can persist & when one of them is manipulated, the physical properties of the other such as weight, temperature & pH may be effected through quantum entanglement mediated nonlocal processes.

- On the same token, try to quantum-entangle quantum entities, e.g., nuclear/electron spins, inside a biological system, e.g., the brain, with those in an external substance; then if quantum entanglements are created & can persist for certain during & the quantum entity associated with spin can directly sense & utilize said entanglement, test subject may feel the effect of the external substance.

Real Experiments

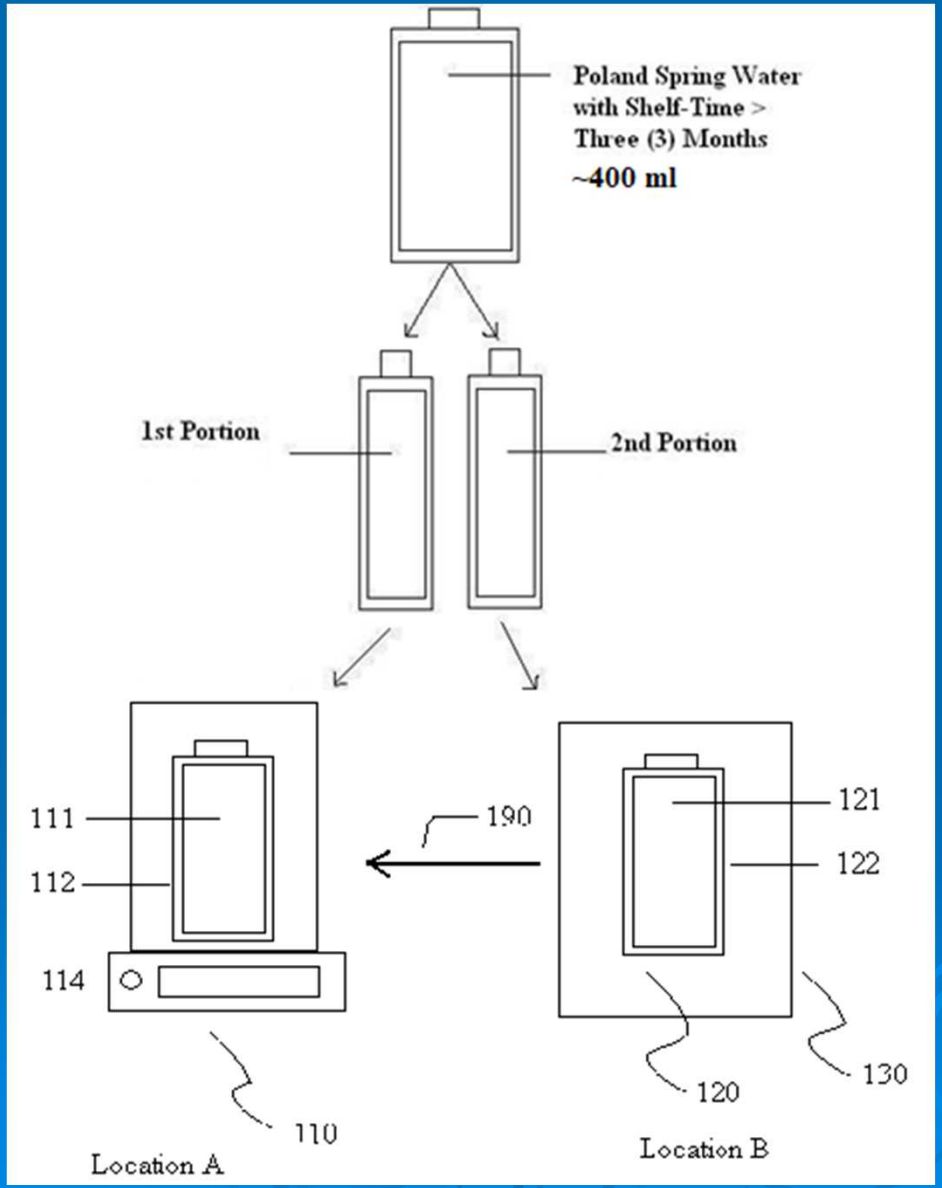
- Carry the Experiment to find out whether anything would happen.

Papers on Experimental Findings

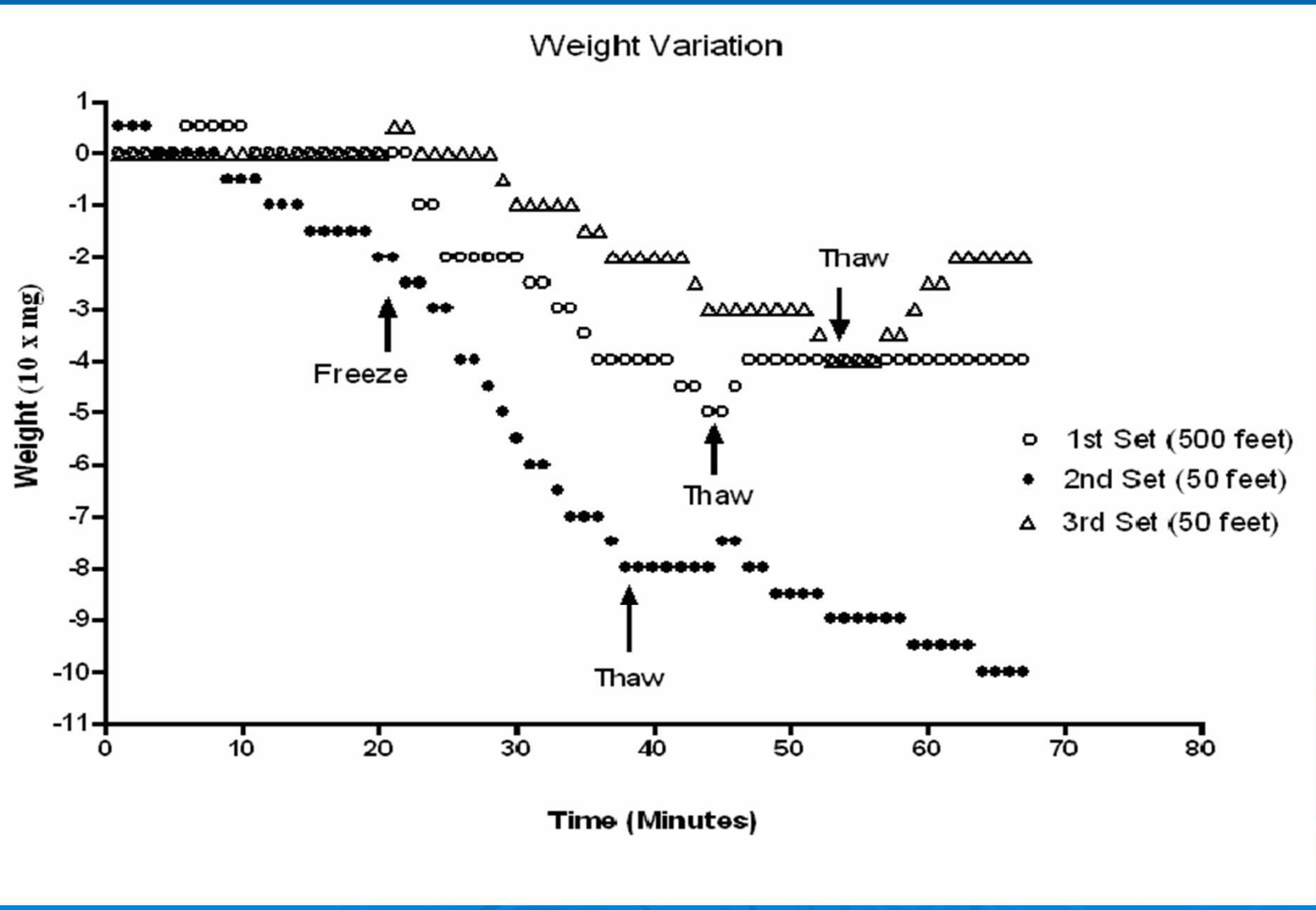
- 1. Hu, H. & Wu, M. (2006): Photon induced non-local effects of general anesthetics on the brain. NeuroQuantology 4(1): 17-31; also see Progress in Physics 2007, v2: 17-24.
- 2. Hu, H. & Wu, M. (2006): Evidence of non-local physical, chemical and biological effects support quantum brain. NeuroQuantology 4(4): 291-306; Also see Progress in Physics 2007, v2: 17-24.
- 3. Hu, H. & Wu, M. (2012), New Nonlocal Biological Effect. NeuroQuantology 10(3): 462-467.

High Precision Instruments & Setup

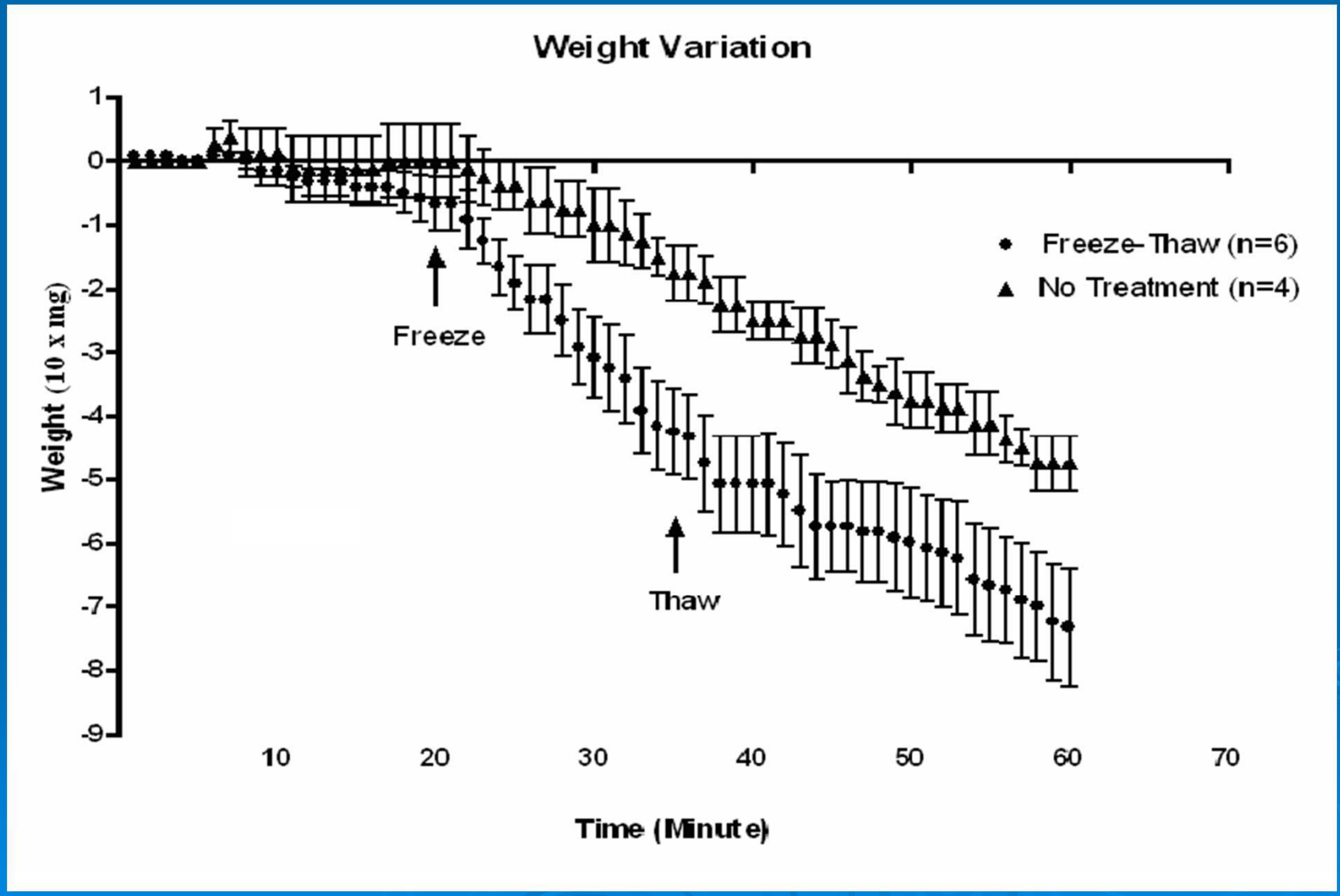
Weight Measurement during Remote Freeze-Thaw Treatment



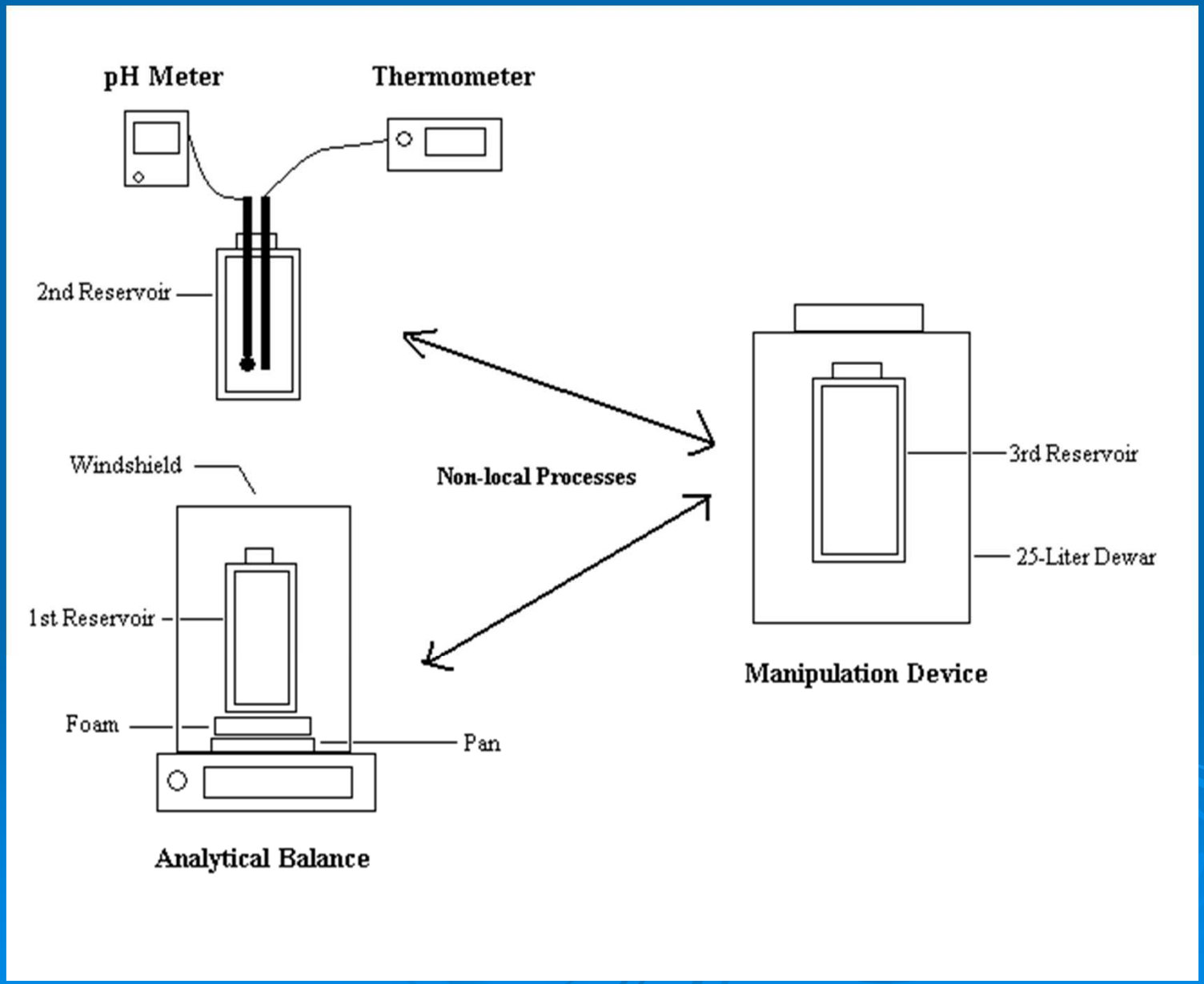
Weight Change during Remote Freeze-Thaw Treatment



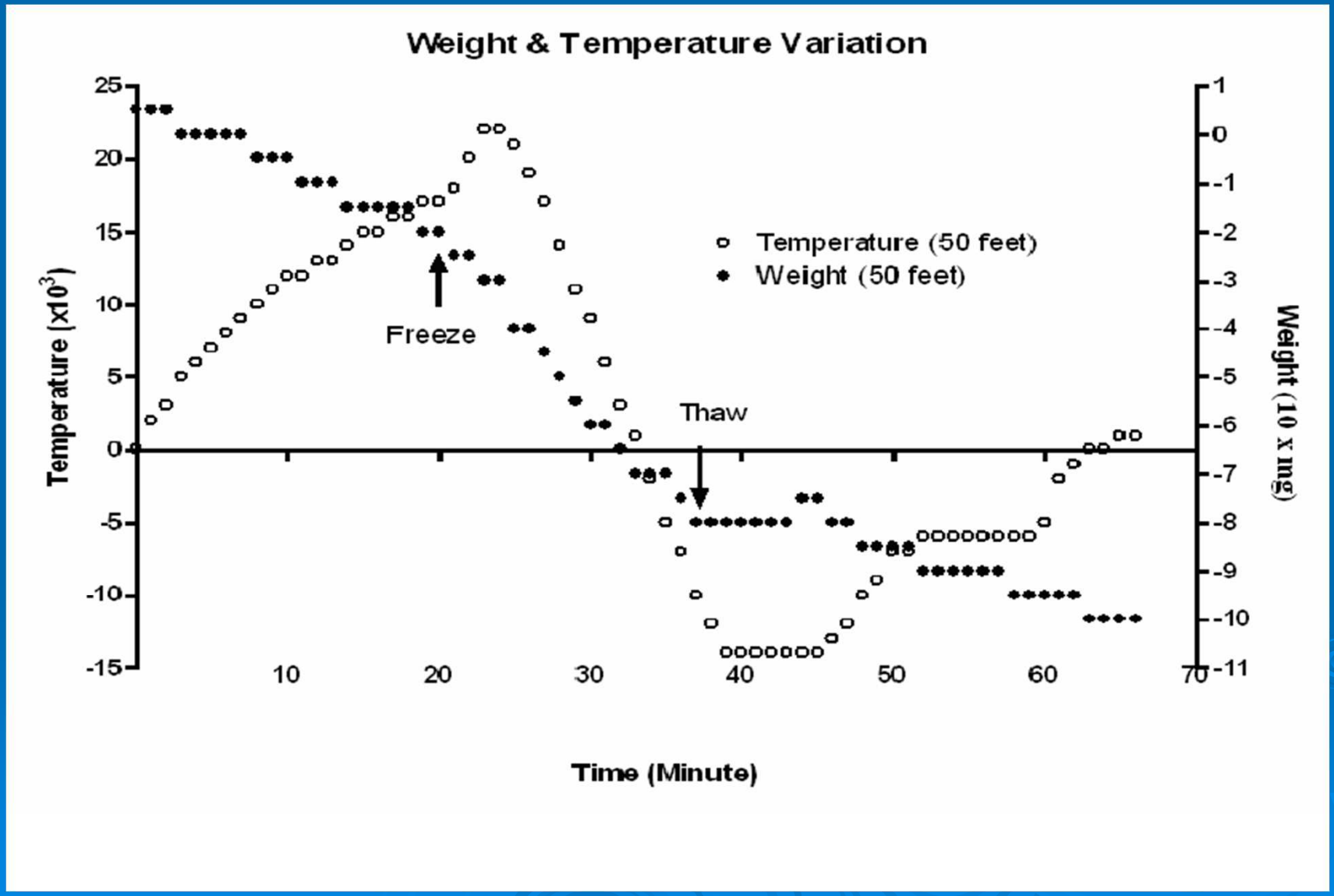
Weight Change during Remote Freeze-Thaw Treatment



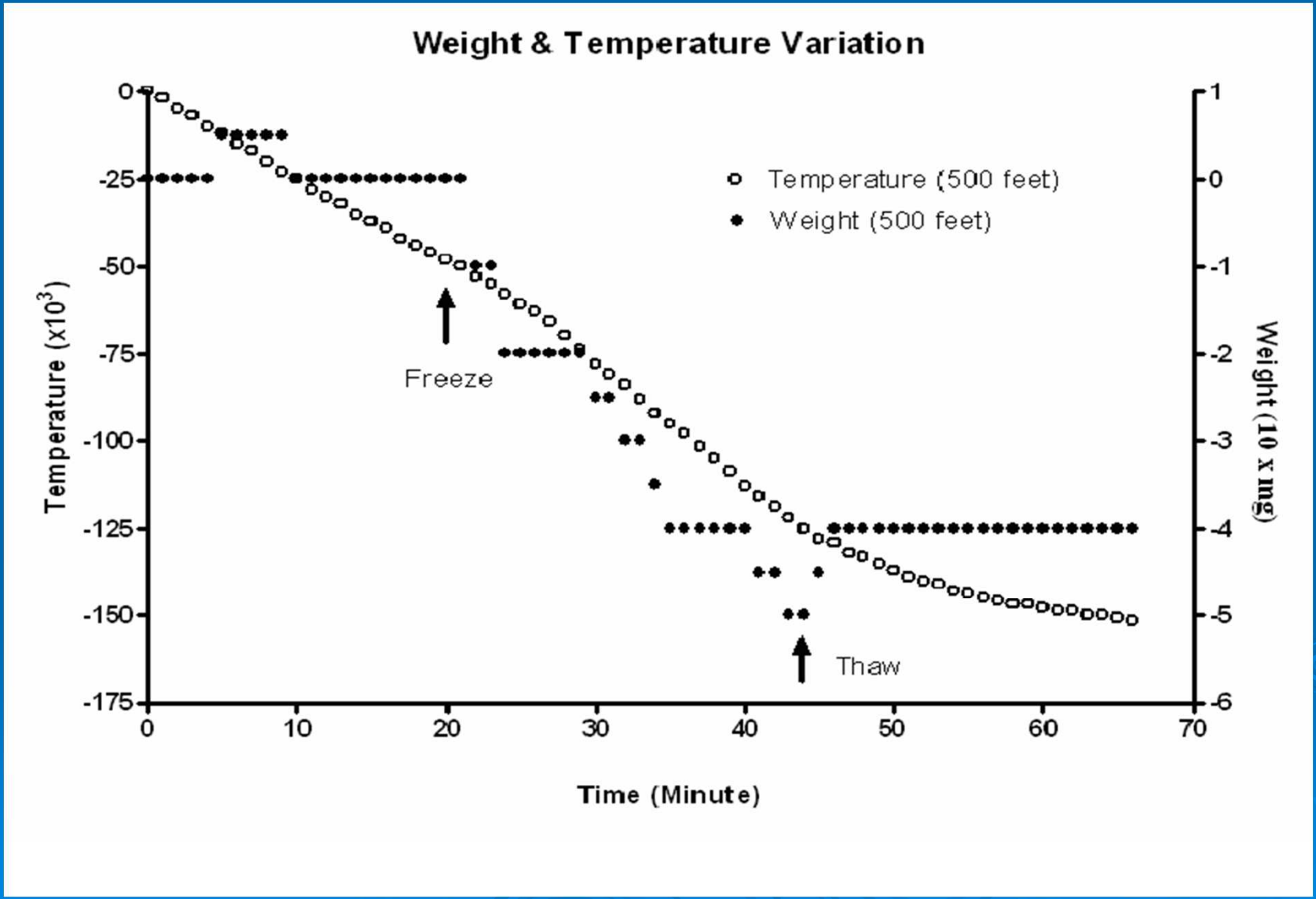
Simultaneous Temperature & Weight Measurement During Remote Freeze-Thaw Treatment



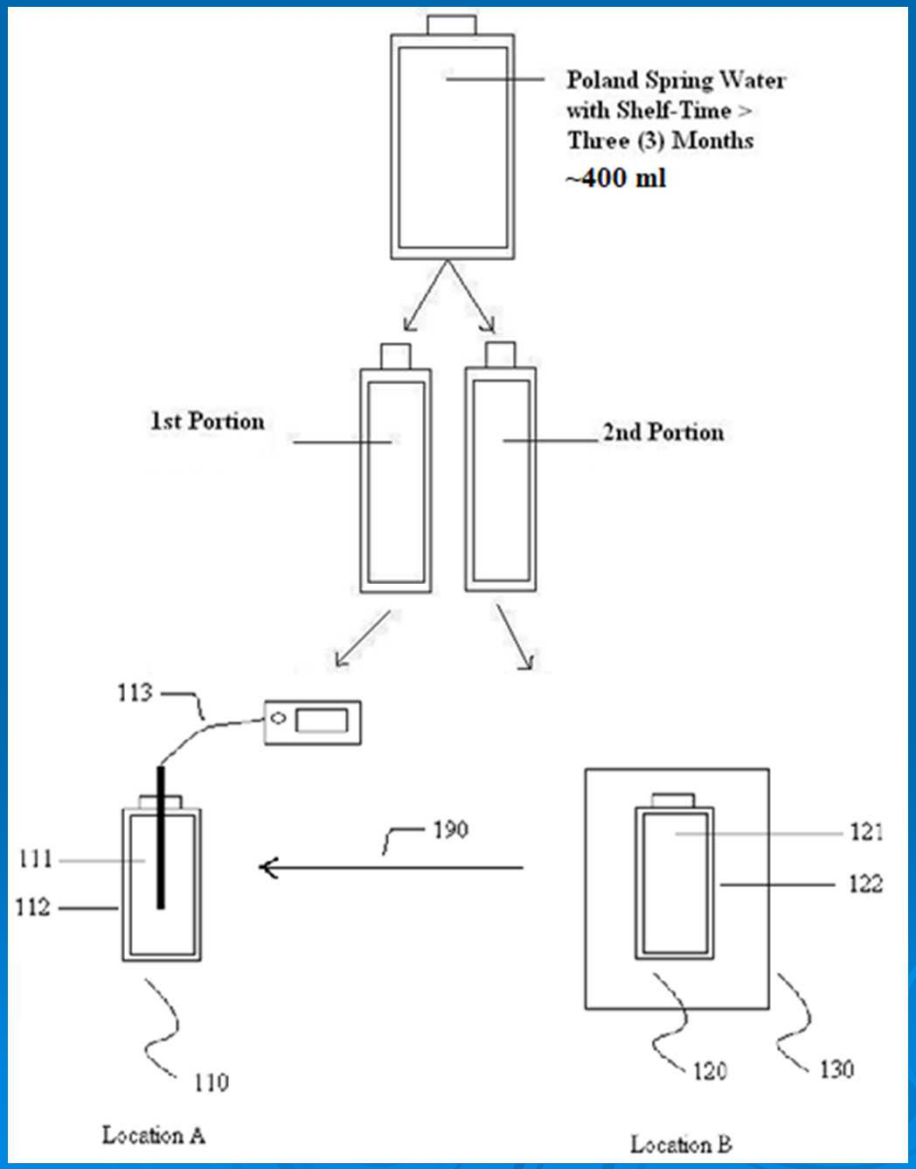
Weight & Temperature Change during Remote Freeze-Thaw Treatment



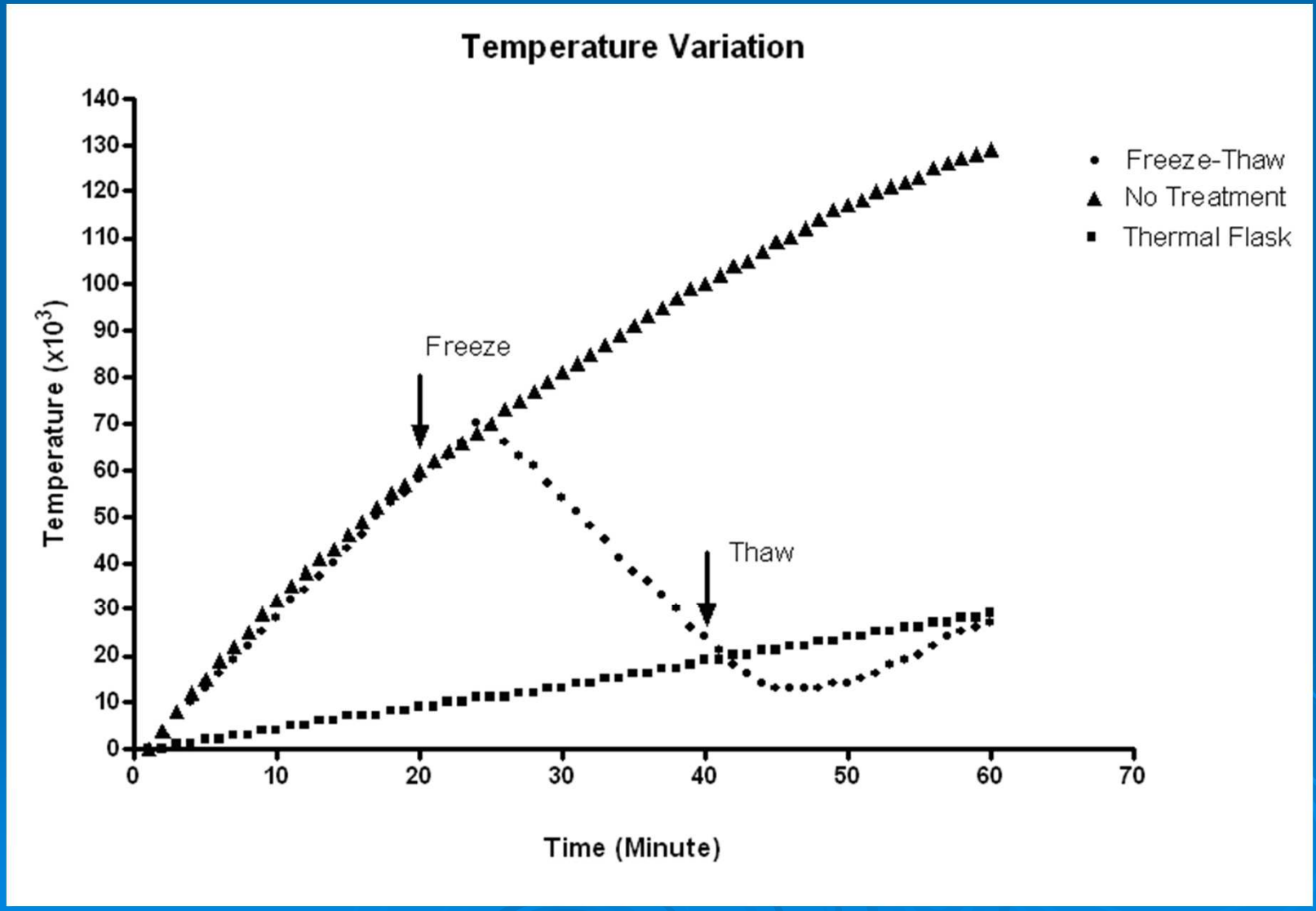
Weight & Temperature Change during Remote Freeze-Thaw Treatment



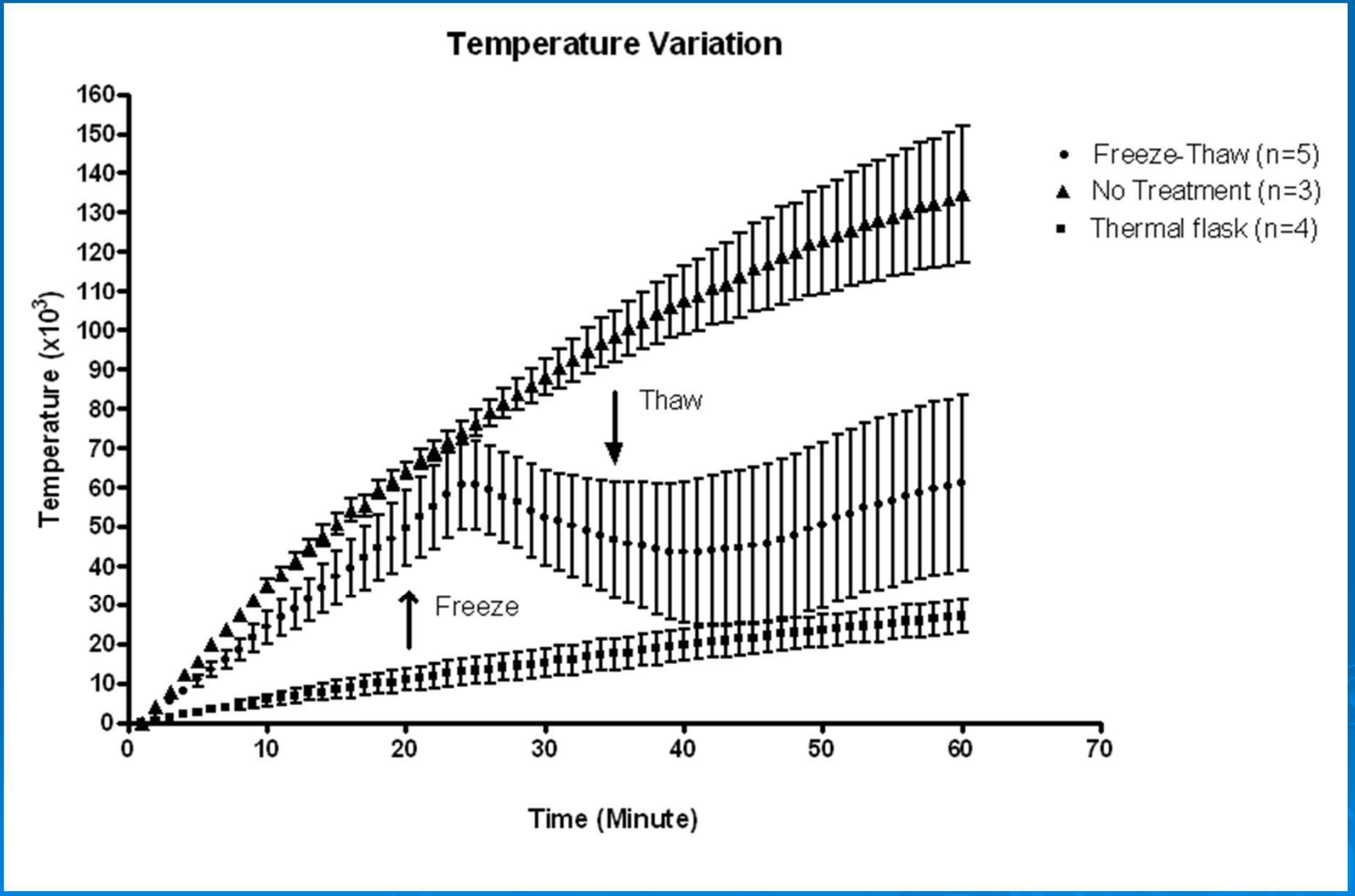
Temperature or pH Measurement During Remote Freeze-Thaw Treatment



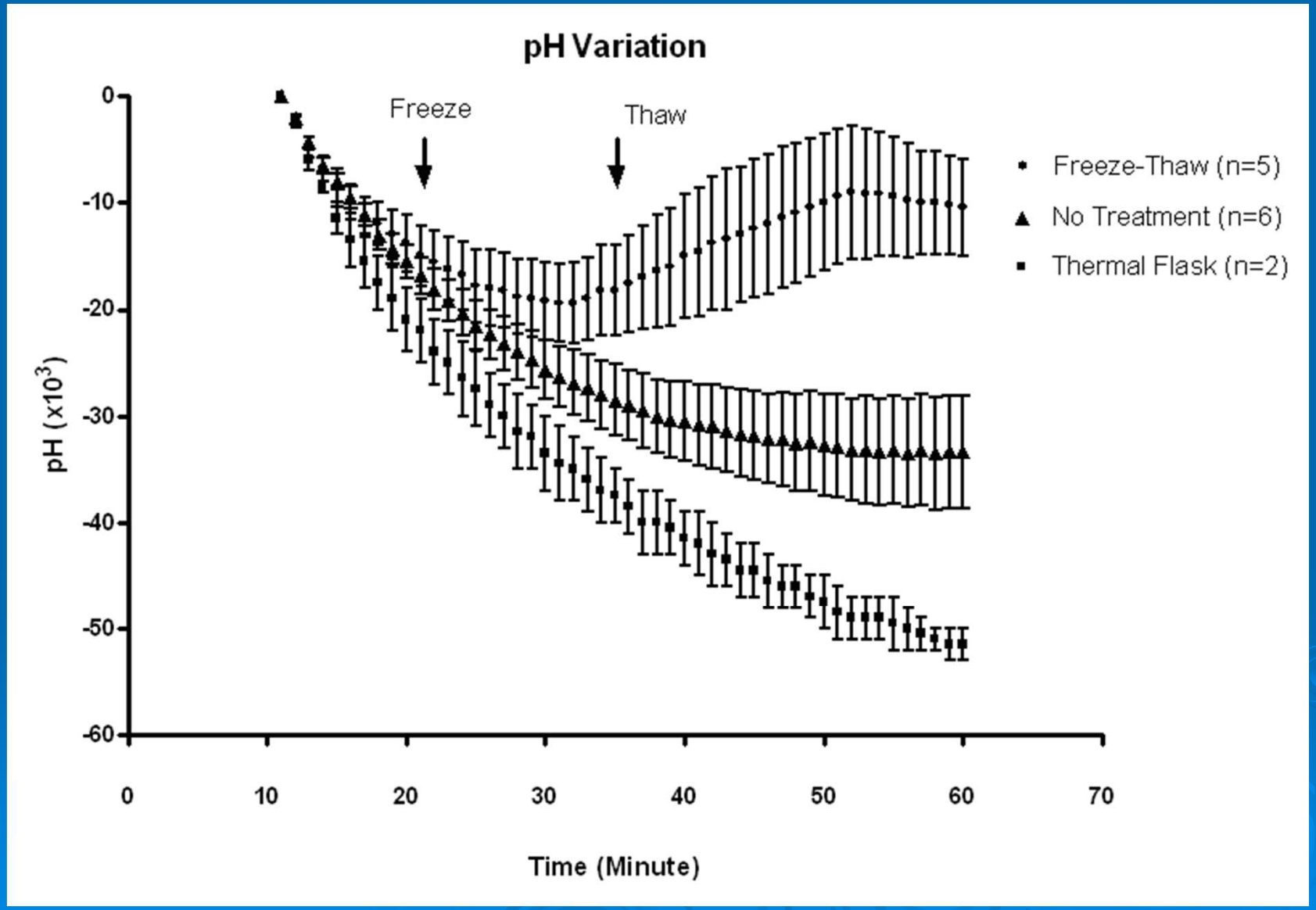
Temperature Change during Remote Freeze-Thaw



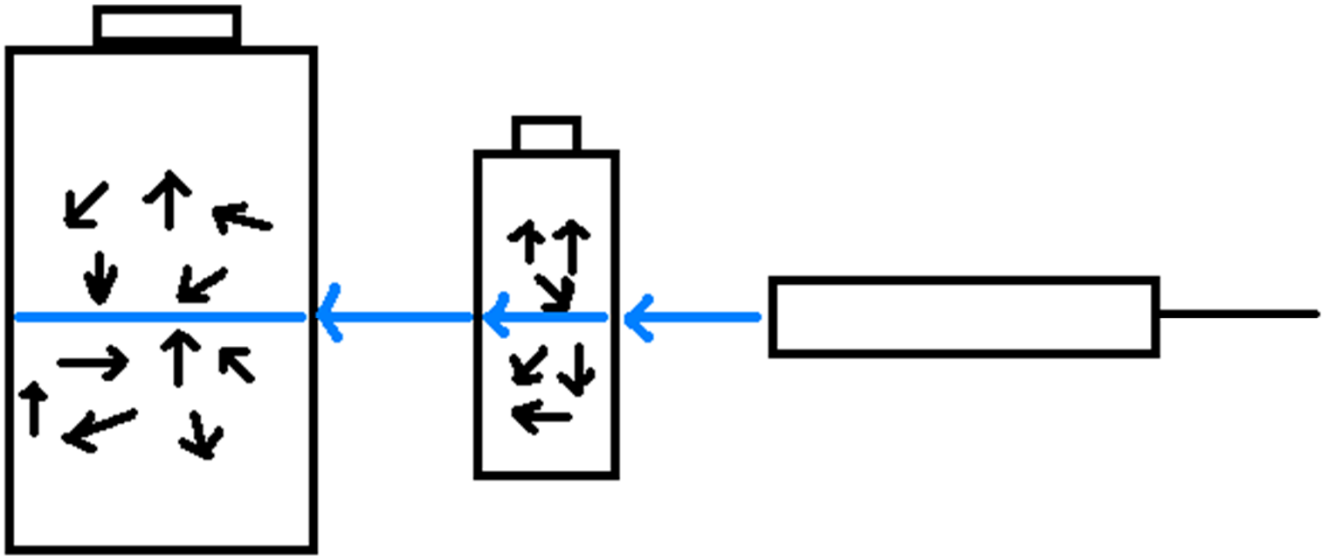
Temperature Change during Remote Freeze-Thaw



pH Change during Remote Freeze-Thaw Treatment

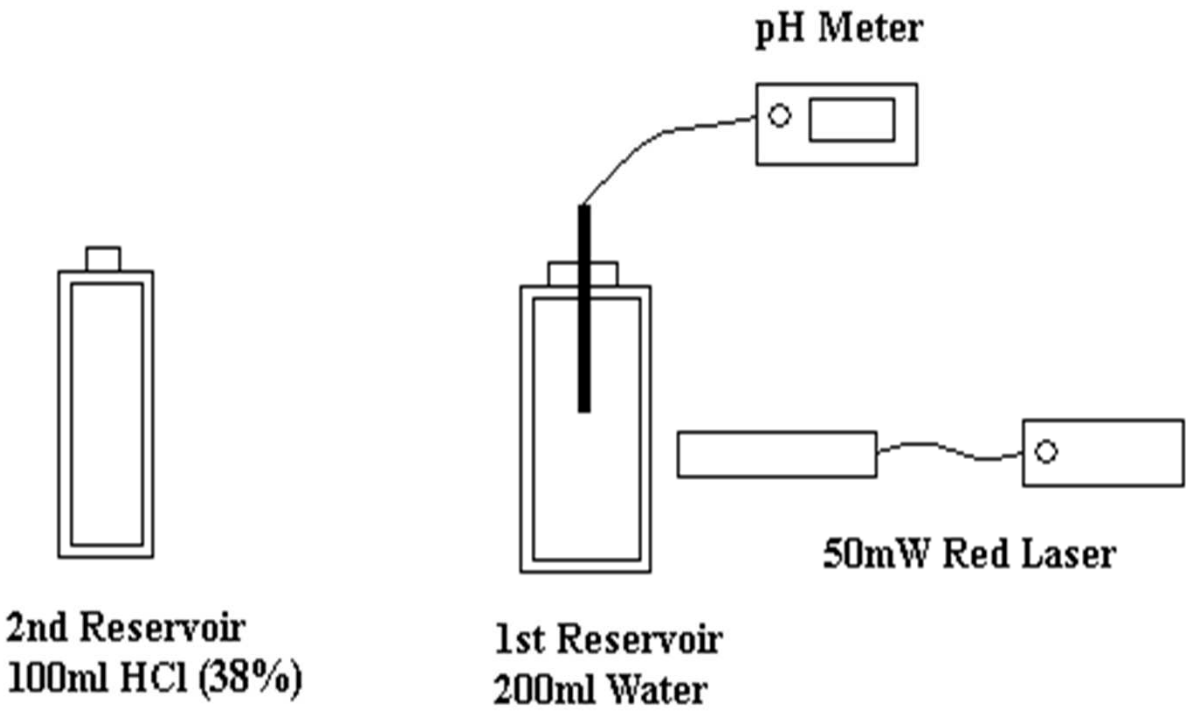


Entanglement of Two Spin Ensembles by Forward Light Scattering (Both Elastic and Inelastic)



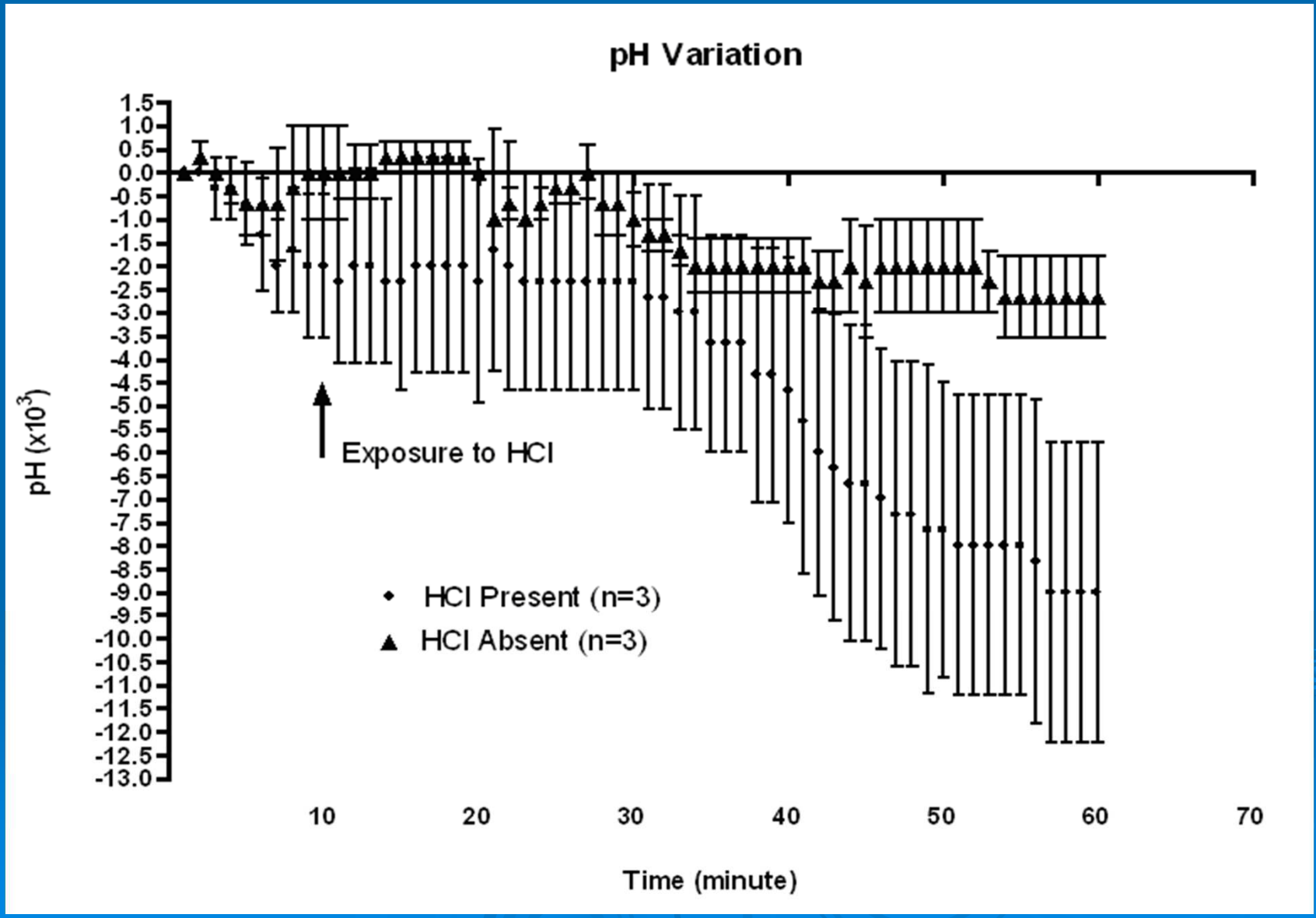
Ref. Julsgaard, B.et al. Experimentally long-lived entanglement of two macroscopic objects. Nature 413, 400–403 (2001)

pH Measurement during HCl-Water Interaction through Laser Beam

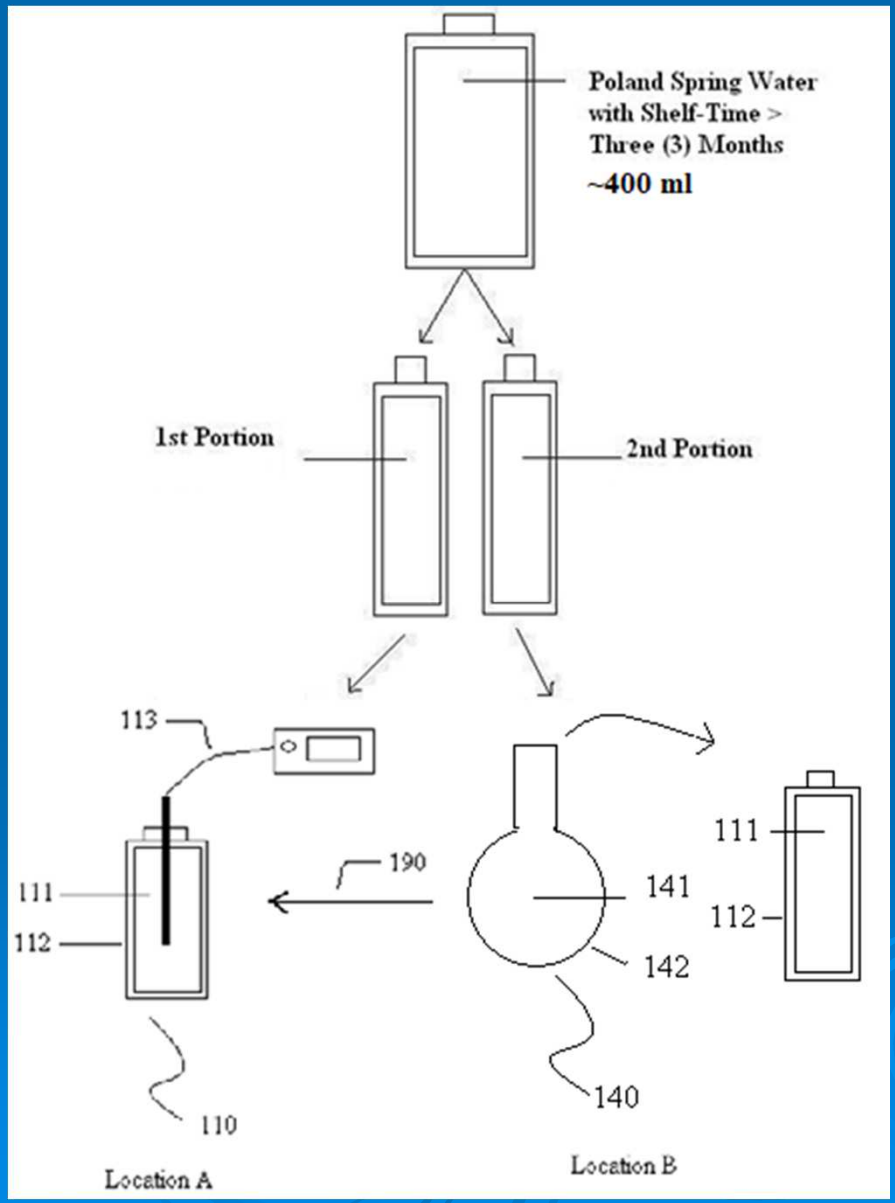


pH Measurement during HCl-Water Interaction through Laser Beam

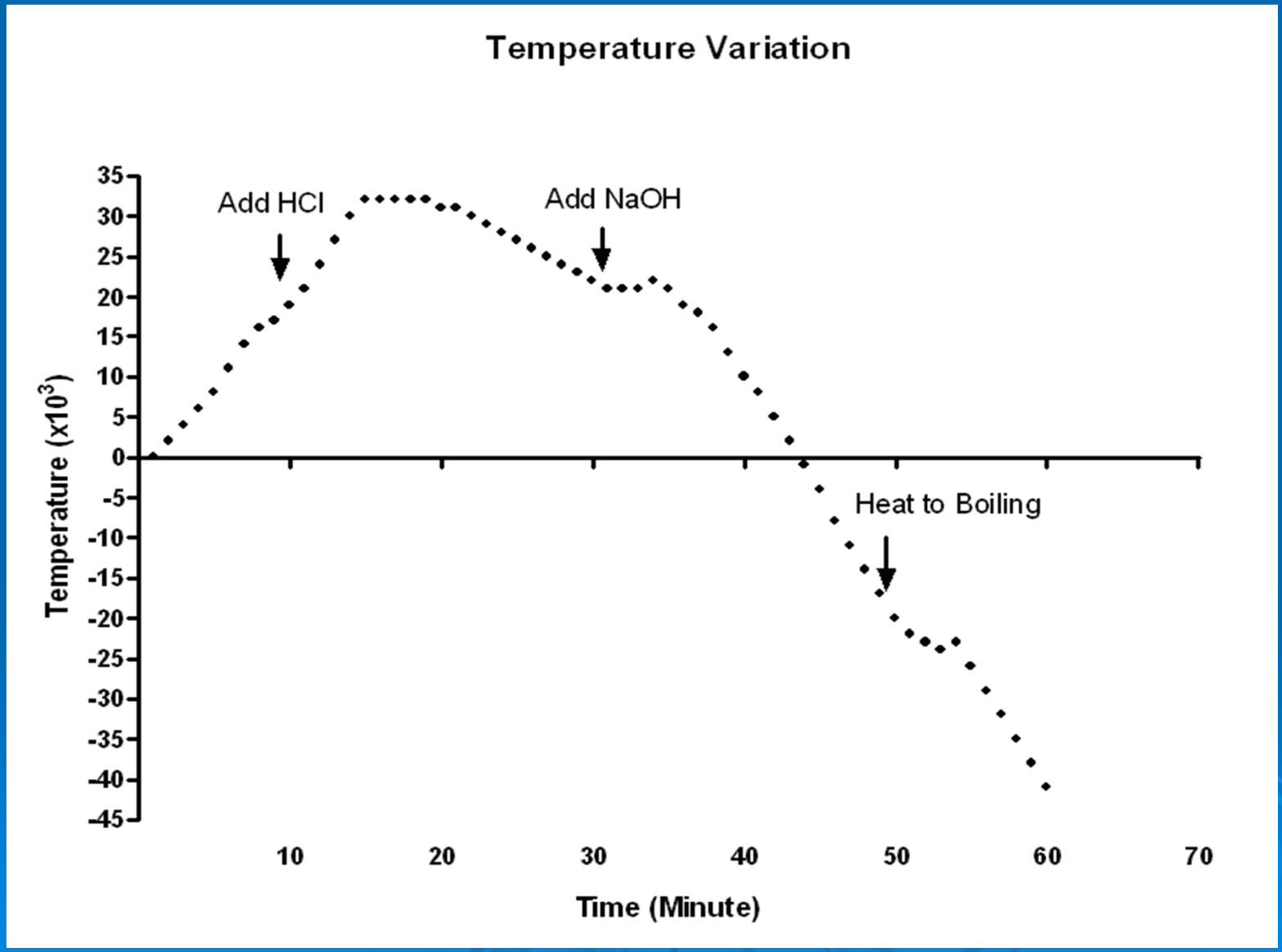
Results From pH Measurement Setup



Temperature Measurement during Remote Addition of Chemicals



Temperature Change during Addition of Chemicals



How to Reconcile Nonlocal Quantum Effect With Relativity

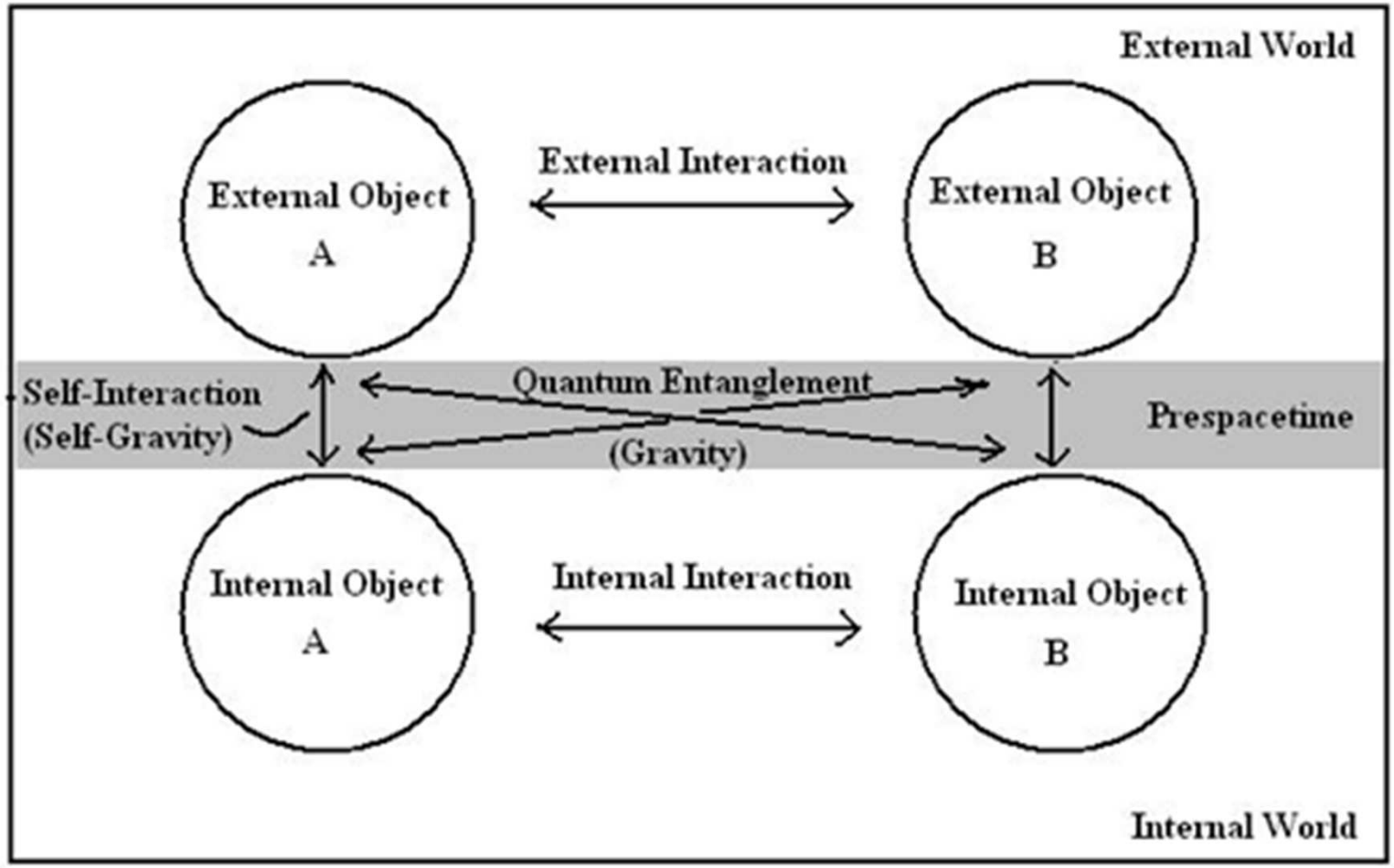
- Re-interpretation of Relativistic QM (e.g. Dirac Equation) in a new framework – The Principle of Existence:

- 1. Hu, H. & Wu, M. (2010), Prespacetime Model of Elementary Particles, Four Forces & Consciousness, Prespacetime Journal, 1(1): 77-146.

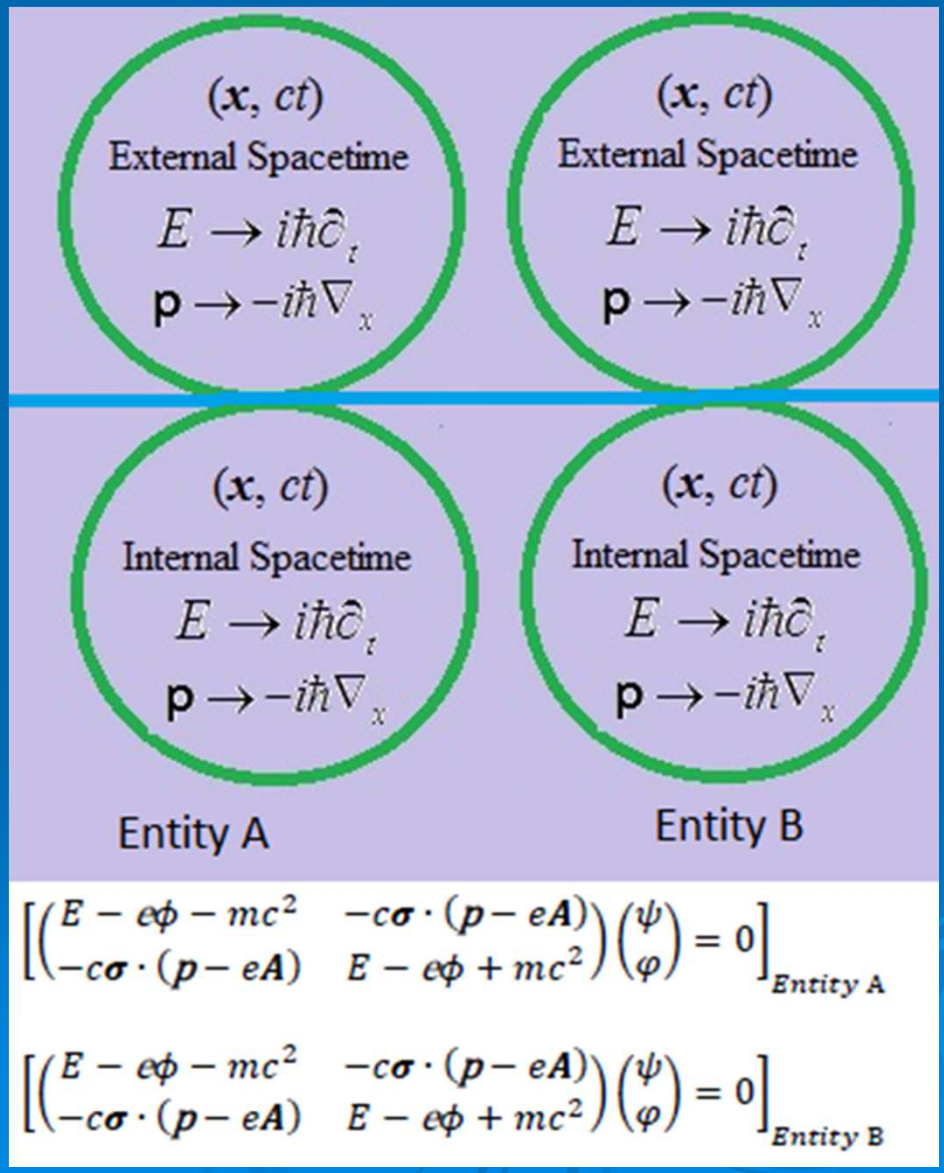
- 2. Hu, H. & Wu, M. (2010), Prespacetime Model II: Genesis of Self-Referential Matrix Law, & the Ontology & Mathematics of Ether, Prespacetime Journal, 1(10): 1477-1507.

- 3. Hu, H. & Wu, M. (2013), What Is Quantum Gravity? What Is Graviton? Prespacetime Journal 4(11): 1003-1026.

Interactions in the Dual-World



Interactions in the Dual-World



Genesis of a Fermion in the Principle of Existence

- A fermion & its governing law in Dirac form are created according to the principle of existence [6] as follows (c= ħ=1):

$$1 = e^{i0} = e^{i0}e^{i0} = e^{+iL-iL}e^{+iM-iM} = (\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM} =$$

$$\left(\frac{m}{E} + i\frac{|\mathbf{p}|}{E}\right)\left(\frac{m}{E} - i\frac{|\mathbf{p}|}{E}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \left(\frac{m^2+\mathbf{p}^2}{E^2}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \frac{E^2-m^2}{\mathbf{p}^2}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} =$$

$$\left(\frac{E-m}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{p}|}{E+m}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \rightarrow \frac{E-m}{-|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} = \frac{-|\mathbf{p}|}{E+m}e^{-ip^{\mu}x_{\mu}} \rightarrow$$

$$\frac{E-m}{-|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} - \frac{-|\mathbf{p}|}{E+m}e^{-ip^{\mu}x_{\mu}} = 0 \rightarrow \begin{pmatrix} E-m & -|\mathbf{p}| \\ -|\mathbf{p}| & E+m \end{pmatrix}\begin{pmatrix} a_{\varepsilon,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & E+m \end{pmatrix}\begin{pmatrix} A_{\varepsilon,+}e^{-ip^{\mu}x_{\mu}} \\ A_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} E-m & -\boldsymbol{\sigma}\cdot\mathbf{p} \\ -\boldsymbol{\sigma}\cdot\mathbf{p} & E+m \end{pmatrix}\begin{pmatrix} \psi_{\varepsilon,+} \\ \psi_{i,-} \end{pmatrix} = 0$$

Genesis of a Boson in the Principle of Existence

- A linear photon and its governing law are created according to the principle of existence [6] as follows ($c = \hbar = 1$):

$$1 = e^{i0} = e^{i0}e^{i0} = e^{+iL-iL}e^{+iM-iM} = (\cos L + i\sin L)(\cos L - i\sin L)e^{+iM-iM} =$$

$$\left(+i\frac{|\mathbf{p}|}{E}\right)\left(-i\frac{|\mathbf{p}|}{E}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \left(\frac{\mathbf{p}^2}{E^2}\right)e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} = \frac{E^2}{\mathbf{p}^2}e^{+ip^{\mu}x_{\mu}-ip^{\mu}x_{\mu}} =$$

$$\left(\frac{E}{-|\mathbf{p}|}\right)\left(\frac{-|\mathbf{p}|}{E}\right)^{-1}\left(e^{-ip^{\mu}x_{\mu}}\right)\left(e^{-ip^{\mu}x_{\mu}}\right)^{-1} \rightarrow \frac{E}{-|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} = \frac{-|\mathbf{p}|}{E}e^{-ip^{\mu}x_{\mu}} \rightarrow$$

$$\frac{E}{-|\mathbf{p}|}e^{-ip^{\mu}x_{\mu}} - \frac{-|\mathbf{p}|}{E}e^{-ip^{\mu}x_{\mu}} = 0 \rightarrow \begin{pmatrix} E & -|\mathbf{p}| \\ -|\mathbf{p}| & E \end{pmatrix}\begin{pmatrix} a_{e,+}e^{-ip^{\mu}x_{\mu}} \\ a_{i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{p} & E \end{pmatrix}\begin{pmatrix} \mathrm{E}_{0e,+}e^{-ip^{\mu}x_{\mu}} \\ i\mathrm{B}_{0i,-}e^{-ip^{\mu}x_{\mu}} \end{pmatrix} = \begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{p} & E \end{pmatrix}\begin{pmatrix} \mathbf{E} \\ i\mathbf{B} \end{pmatrix} = 0$$

$$\rightarrow \begin{pmatrix} i\partial_t & i\mathbf{s}\cdot\nabla \\ i\mathbf{s}\cdot\nabla & i\partial_t \end{pmatrix}\begin{pmatrix} \mathbf{E} \\ i\mathbf{B} \end{pmatrix} = 0 \rightarrow \begin{pmatrix} \partial_t\mathbf{E} = \nabla\times\mathbf{B} \\ \partial_t\mathbf{B} = -\nabla\times\mathbf{E} \end{pmatrix}$$

Self-Gravity in the Principle of Existence

- There is no self-gravity before there is any differentiation of ether in prespacetime. The state of existence is simply $e^{i0}=1$.

- Once the initial phase distinction (yin and yang) is created but before the governing law is born, self-gravity is embodied in the coupling of e^{-iM} and e^{+iM} in $e^{-iM}e^{+iM}=1$.

- After an elementary particle and its governing are created, self-gravity of the said elementary particle is embodied in its quantum equation such as the Dirac Equation.

Self-Gravity of Fermion & Boson

- For a fermion, self-gravity (or self-quantum-entanglement) is simply the interaction (relationship) between nonlocal objects (wave functions) $\Psi_{e,-}$ & $\Psi_{e,+}$ respectively as external & internal gravitons ($c = \hbar = 1$):

$$\begin{pmatrix} (E-m)\psi_{e,+} = \boldsymbol{\sigma}\cdot\mathbf{p}\psi_{i,-} \\ (E+m)\psi_{i,-} = \boldsymbol{\sigma}\cdot\mathbf{p}\psi_{e,+} \end{pmatrix} \text{ or } \begin{pmatrix} i\partial_t\psi_{e,+} - m\psi_{e,+} = -i\boldsymbol{\sigma}\cdot\nabla\psi_{i,-} \\ i\partial_t\psi_{i,-} + m\psi_{i,-} = -i\boldsymbol{\sigma}\cdot\nabla\psi_{e,+} \end{pmatrix}$$

- For a boson such as a linear photon, tt is the interaction (relationship) between nonlocal objects **E** and ***i*B** as external & internal gravitons respectively:

$$\begin{pmatrix} i\partial_t & i\mathbf{s}\cdot\nabla \\ i\mathbf{s}\cdot\nabla & i\partial_t \end{pmatrix}\begin{pmatrix} \mathbf{E} \\ i\mathbf{B} \end{pmatrix} = 0 \rightarrow \begin{pmatrix} \partial_t\mathbf{E} = \nabla\times\mathbf{B} \\ \partial_t\mathbf{B} = -\nabla\times\mathbf{E} \end{pmatrix}$$

Quantum Gravity in the Principle of Existence

- One is quantum self-gravity (self-entanglement) between the external object (external wave function) and internal object (internal wave function) of an elementary particle described above.

- The other is quantum gravity (quantum entanglement) between the external wave function of a 1st elementary particle & the internal wave function of a second elementary particle or the collective internal wave functions of a particle assemble.

- Thus, gravitational fields in the principle of existence are just the collective internal and external wave functions themselves.

Transition from Quantum Gravity to GR

- (1) Ricci scalar R & metric tensor $g_{\mu\nu}$ are originated from & determined by the collective internal & external wave functions of the matter present.

- In the absence of nonlocal effect of remote matter through quantum entanglement, R & $g_{\mu\nu}$ are only correlated to momentum-energy tensor of the local matter.

- In the presence of nonlocal effect of remote matter through quantum entanglement, R & $g_{\mu\nu}$ are also influenced by the nonlocal effect of the remote matter (currently interpreted as dark matter and/or dark energy?).

General Relativity of E.M. Field (Photon)

$(c=G=\mu_0=1)$

- Quantum self-gravity of photon is embodied in its quantum equation in which external wave-function **E** and internal wave-function $i\mathbf{B}$ are self-entangled through self-interaction:

$$\begin{pmatrix} E & -\mathbf{s}\cdot\mathbf{p} \\ -\mathbf{s}\cdot\mathbf{p} & E \end{pmatrix}\begin{pmatrix} \mathbf{E} \\ i\mathbf{B} \end{pmatrix}=0 \rightarrow \begin{pmatrix} i\partial_t & i\mathbf{s}\cdot\nabla \\ i\mathbf{s}\cdot\nabla & i\partial_t \end{pmatrix}\begin{pmatrix} \mathbf{E} \\ i\mathbf{B} \end{pmatrix}=0 \rightarrow \begin{pmatrix} \partial_t\mathbf{E}=\nabla\times\mathbf{B} \\ \partial_t\mathbf{B}=-\nabla\times\mathbf{E} \end{pmatrix}$$

which together with $\nabla\cdot\mathbf{E}=\mathbf{0}$ and $\nabla\cdot\mathbf{B}=\mathbf{0}$ are the Maxwell equations in the source-free vacuum. The latter in turn can be written in the co-variant form: $\partial_\beta F^{\alpha\beta}=0$ where

$$F^{\alpha\beta}=\begin{pmatrix} 0 & -E_x & -E_y & -E_z \\ E_x & 0 & -B_z & B_y \\ E_y & B_z & 0 & -B_x \\ E_z & -B_y & B_x & 0 \end{pmatrix}$$

- The principle of existence treats wave functions as real entities (Not just for calculating probability only). This is certainly true with electric field **E** & magnetic field on the imaginary axis $i\mathbf{B}$.

General Relativity of E.M. Field (Continued)

(c=G=μ_0=1)

- Using action principle, we will illustrate the well-known equations of motion for e.m. field (photons) under *the new understandings of gravity and self-gravity respectively*:

$$S = \frac{1}{16\pi}\int R\sqrt{-g}\,dx^4 - \frac{1}{4}\int F_{\alpha\beta}F^{\alpha\beta}\sqrt{-g}dx^4$$

Varying metric tensor $g^{\mu\nu}$, we have:

$$\delta S = \frac{1}{16\pi}\int \left(R_{\mu\nu} - \frac{1}{2}Rg^{\mu\nu}\right)(\delta g^{\mu\nu})\sqrt{-g}\,dx^4$$
$$-\frac{1}{2}\int \left(F_{\mu\beta}F_{\nu}^{\beta} - \frac{1}{4}F_{\alpha\beta}F^{\alpha\beta}g_{\mu\nu}\right)(\delta g^{\mu\nu})\sqrt{-g}dx^4$$

- Thus, one obtain the following well known GR equation for describing the gravitational field of e.m. field:

$$R_{\mu\nu} - \frac{1}{2}Rg^{\mu\nu} = 8\pi\left(F_{\mu\beta}F_{\nu}^{\beta} - \frac{1}{4}F_{\alpha\beta}F^{\alpha\beta}g_{\mu\nu}\right) = 8\pi T^{\mu\nu}$$

General Relativity of E.M. Field (Continued)

(c=G=μ_0=1)

Varying electromagnetic four-potential A^{α}, we have:

$$\delta S = -\frac{1}{4}\delta \int F_{\alpha\beta} F^{\alpha\beta} \sqrt{-g} dx^4 = \int \partial_{\beta}\left(F^{\alpha\beta}\sqrt{-g}\right)(\delta A^{\alpha}) dx^4 = \int \partial_{\beta}\left(F^{\alpha\beta}\right)(\delta A^{\alpha})\sqrt{-g} dx^4$$

Thus, we get the following well-known Maxwell equations of motion for electromagnetic field under the *new understanding* of self-gravity in the source-free vacuum: $\partial_{\beta} F^{\alpha\beta} = 0$

- Loinger & Marsico (http://arxiv.org/abs/1106.2210v1) showed that the GR equation for describing the gravitational field of e.m. field also implies Maxwell equations which describe self-gravity (self-interactions) of **E** and *i***B.**
- Therefore, in the case of e.m. field (photons), the unification of quantum self-gravity, quantum gravity & GR are realized under the new understandings of gravity & self-gravity in which R & $g_{\mu\nu}$ are originated from & determined by the collective internal & external wave functions **E** and *i***B** of the electromagnetic fields.

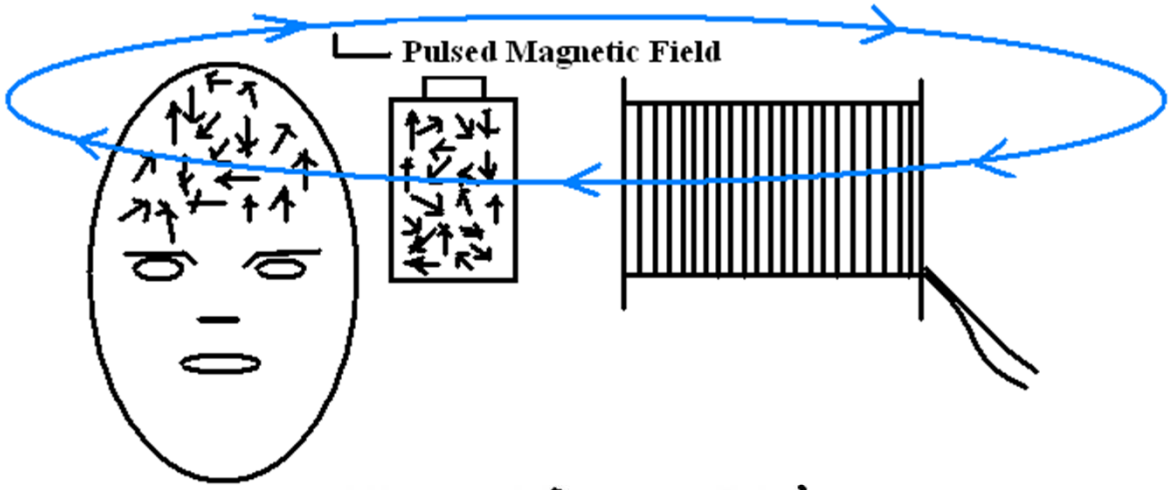
Biological Experiment (No Ingestion)

- Anesthetics:
- $CHCl_3$ (Chloroform, pure)
- $CDCl_3$ (Chloroform D, pure)
- CF3-CHCl-O-CHF2 (Isoflorance, pure)
- CH_3-O-CH_3 (Dimethyl Ether, pure)
- CH_3-CH_2-OH (Ethanol, pure)
- CBr3-CH2-OH (Tribromoethanol, 50:1 by weight)

- Medications (Unused pain medications of family member):
- Morphine Sulfate (Solution, 20mg/ml, 20ml sample size)
- Fentanyl (Patch, 10mg/patch, magnetic coil only)

- Nicotine (Patch, 21mg/patch, magnetic coil only)
- Coffee (Instant coffee powder, 10g/bag, magnetic coil only)

Entanglement of Two Spin Ensembles
In the Brain & Substance by Magnetic Pulse



$$|S\rangle = a|\uparrow_s\rangle + b|\downarrow_s\rangle$$

$$|B\rangle = c|\uparrow_b\rangle + d|\downarrow_b\rangle$$

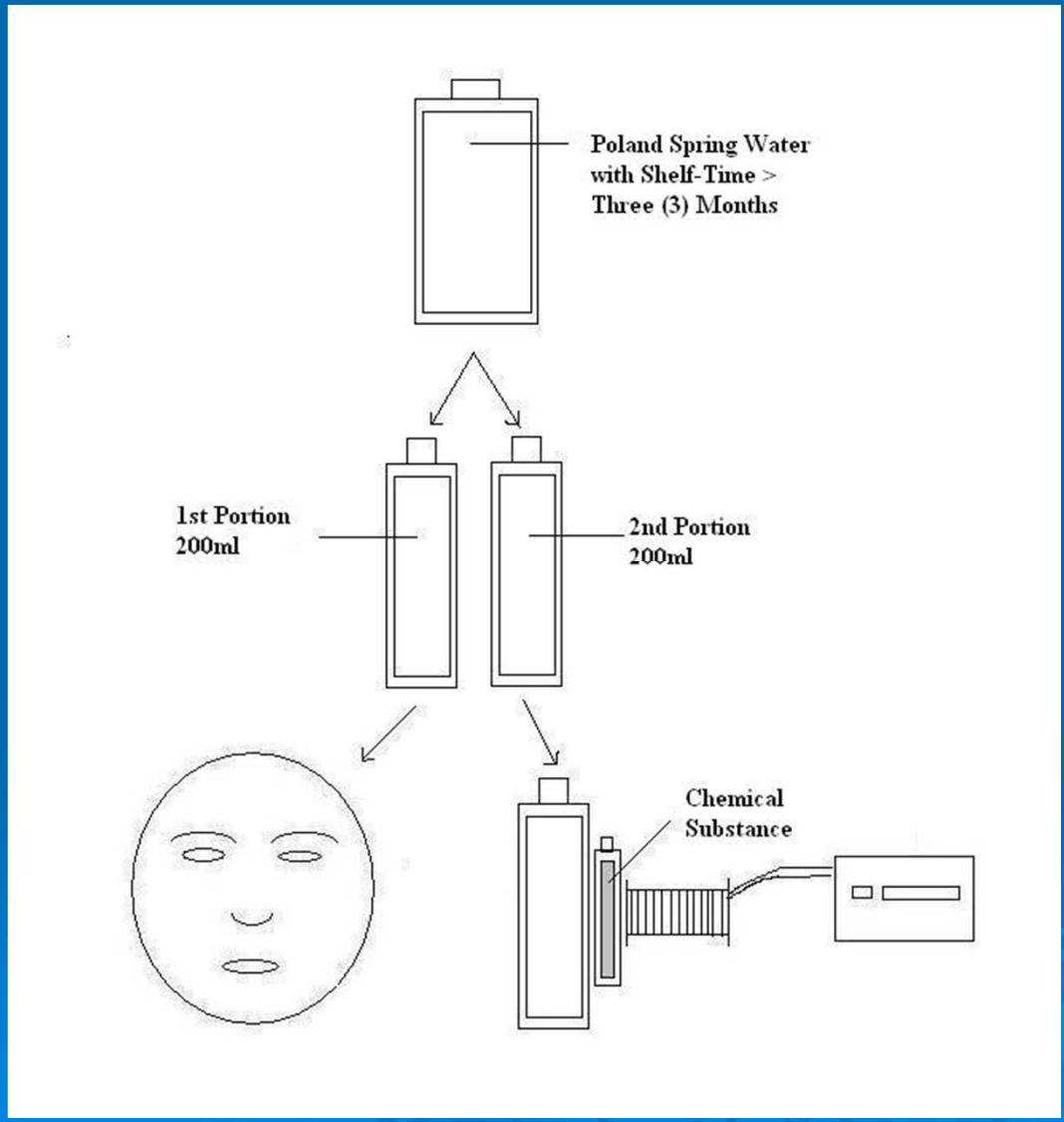
Magnetic Pulses = Non-local Bell Measurement

$$|BS\rangle = |\uparrow_b\rangle \otimes |\uparrow_s\rangle + |\downarrow_b\rangle \otimes |\downarrow_s\rangle$$

Entanglement of Two Spin Ensembles In the Brain & Substance by Magnetic Pulse(Photo)

Entanglement of Two Spin Ensembles In Water & Substance by Magnetic Pulse

Entanglement of Two Spin Ensembles In the Brain & Substance by Entangled Media



First-Person Experience

produced by drinking 200ml tab water exposed to magnetic pulses for 30min in the presence of 20ml chloroform

- Within 10-15 minutes after consumption, felt gradually increasing brain effect as expansion and woodenness inside head and indescribable sickening sensation.
- Accompanied by stiffness in neck muscle, discomfort in stomach and throat, nausea, sneezing, eye ball pressure and pain and feeling of overall fatigue.
- These effects first gradually increased and then peaked between 30 minute to 60 minutes and then gradually weakened.
- However, residual effect much like hangover from heavy drinking would remain for more than 24 hours.

Summary of Our Findings of 2005 & 2006

- The weight of water in a detecting reservoir quantum-entangled with water in a remote reservoir can change against the gravity of its local environment when the latter was remotely manipulated.

- Temperature & pH of water in a detecting reservoir quantum-entangled with water in a remote reservoir changes in the same direction as that in the remote water when the latter is manipulated under the condition that the water in the detecting reservoir is able to exchange energy with its local environment.

- Thus, we likely realized non-local signaling using changes in temperature, pH & weight. Perhaps the most shocking is our demonstration of Newton's instantaneous gravity and Mach's instantaneous connection conjecture and the relationship between gravity and quantum entanglement.
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- Applying magnetic pulses to the brain when an anesthetic was placed in between caused the brain to feel the effect of said anesthetic as if the test subject had actually inhaled or ingested the same. Drinking water exposed to magnetic pulses etc. when an anesthetic was placed in between also causes brain effects in various degrees.

Implications of Our Experimental Findings

- The properties of all matters can be affected non-locally through quantum entanglement mediated processes.
- Both classical and quantum information including biologically meaning information can be transmitted between locations of arbitrary distances through quantum entanglement.
- Instantaneous signalling is physically real but does not conflict with Einstein's relativity in the framework of the Principle of Existence.
- Consciousness such as awareness & other biological processes likely involve quantum information - Nuclear and/or electronic spins likely play important roles in these processes. Quantum information may drive bio-systems to a more ordered state against the disorderly effect of environmental heat.
- These findings provide important new insights into the essence and implications of quantum entanglement. They also suggest a unified framework for explaining many paranormal and/or anomalous effects such as telepathy, telekinesis and homeopathy.

Some Applications of Our Experimental Findings

These findings enable various quantum entanglement technologies be developed:

- Some can be used to deliver on site or from remote locations of arbitrary distances the therapeutic effects of many drugs to various biological systems such as human bodies without physically administrating the same to the said systems. Of course, any substances of nutritional and recreational values can be repeatedly administrated through these technologies.

- Some can be used to manipulate and/or affect remotely various physical, chemical and/or biological systems including human bodies.

- Some can be used for non-local signaling and communications between remote locations of arbitrary distances in various ways.

- Potentially, some can also be used to engineer the gravitational properties of physical matters. Others can be used to entangle two or more human minds for legitimate and beneficial purposes.

The Need of Independent Replication

- Independent replications are the key to confirm our results reported here. So far, there have been indirect verifications from Persinger's research group.
- These experiments are simple and even "primitive" (but the results and implications are profound).
- So, please do your experiments.