DEVELOPMENT OF pH AND TEMPERATURE OSCILLATIONS IN WATER CONTAINING $ZnCO_3$ CRYSTALLITES USING INTENTION IMPRINTED ELECTRONIC DEVICES

Walter E. Dibble, Ph.D. & William A. Tiller, Ph.D.

ABSTRACT

In this experimental study, two vessels, A and B, of pure water containing 0.4 wt. % sparingly soluble, small $ZnCO_3$ crystallites were positioned about 150 feet apart in separate buildings. An Intention Imprinted Electronic Device (IIED) was placed one foot from A. Both pH and temperature were monitored at B. Turning on the IIED at A led to the appearance of both short period (about one hour) and long period (about one day) pH-oscillations at location B plus a marked downward decline of the pH in the direction of the IIED intention. In one experiment, the pH declined a full pH unit in accord with the imprinted intention. In another experiment, shaking the vessel at B to redisperse the fine particles when the IIED was operating at A led to a fall in pH but plateauing somewhat short of the final pH target as well as the reappearance of the short period oscillations. For control solutions with no IIED present, no such pH behavior occurred.

KEYWORDS: Intention, pH, temperature, water

INTRODUCTION

In earlier papers, it has been shown that humans, with sufficient training, inner self-management and inner coherence, are able to imprint a specific intention into an electronic host and produce an IIED (Intention Imprinted Electronic Device).[1-4] Further, it has been found that such IIED's can currently retain their intention-charge for several months and can be sent to a laboratory ~2,000 miles away where specific target experiments using these IIED's can be successfully performed by others. It has been found that the IIED's exhibit statistically significant results for these target experiments in accord with the specific intention for that experiment when compared with a physically identical unimprinted device. To date, the target experiments have been:

1) raising or lowering the pH of water by as much as one pH unit,

2) increasing the [ATP]/[ADP] ratio and thus decreasing development time for fruit fly larvae, and

3) increasing the chemical activity for a specific liver enzyme.

It was found during the course of these studies that carefully isolating the unimprinted and imprinted devices from each other was essential in order that the intention-charge not be transferred from the imprinted device to the unimprinted device and thereby ruin our "control" for the particular target experiment. It appears that, even for the devices in the "off" condition, ambient electromagnetic waves can interact with the imprinted device in such a way as to become augmented with the intention charge. An augmented EM wave, when impinging upon the unimprinted device (in the "off" state) appears to be able to transfer the augmentation component (its intention-charge) to the unimprinted device converting it to a partially imprinted device.[4]

Such device-device communication is very important to our research and results from the study described here are used to further elucidate the general process by observing exchanges between two vessels of water solution located a certain distance apart. Continuous and simultaneous computer monitoring of pH in these two vessels was utilized for this intra-vessel communication experiment.

It should be noted here that, in a separate study, investigations were made of the pH/intention pickup by vessels of *pure water* (equilibrated with atmospheric CO_2) located at various distances from an IIED in the "on" state.[5] There, it was found that negligible pH change was observed in a vessel containing pure water when the vessel was located >3-4 feet from the device.

An idea suggested from previous work was that imprinted water (after treatment by an active IIED) might transfer an imprint-effect to crystals grown from that water and these crystals, in turn, might transfer the imprint-effect to fresh water.[1] To further test this idea, we utilized some of the Ca/Mg carbonate crystals from earlier water studies.[1] These crystals were carefully washed and then added to a vessel of fresh, untreated (by IIED) pure water. The crystals dissolved partially in this water and transferred the imprint-effect to this fresh water. However, even though a transfer effect had been observed, we could not determine if it was due to partitioning of the original imprint to these crystals as they grew from the imprinted solution, or if it resulted from entrainment of some of the original water at defect surfaces in these crystals formed as a consequence of their uncontrolled mode of growth. Further, because of unanticipated metastable phase formation from uncontrolled solution supersaturation and precipitation, even if real imprint partitioning had occurred, we did not know which crystalline phase was responsible.

To correct this deficiency, we set about to carefully grow specific crystals under well-defined conditions to test this imprint-partitioning hypothesis. The sparingly soluble material, $ZnCO_3$, was chosen as the first test material and, during the course of that investigation, phenomena arose that sent the experimentation down a different path than anticipated. Serendipitously, it was observed that quite long-range communication occurred between vessels of water when the water contained a suspension of small $ZnCO_3$ crystallites. Also, pH and temperature oscillations of a particular periodic and repetitive nature were observed. Thus, the crystal imprint partitioning study is unfinished but the study of these new phenomena has been diligently pursued. The primary purpose of this paper is to report on the initial experiments that revealed these new phenomena.

We report here on the development of pH and temperature oscillations in two vessels of water containing $ZnCO_3$ crystallites and on the apparent communication between these two vessels at a separation distance of 156 feet. The IIED is located near one vessel (designated the transmitter) while the other vessel has no nearby IIED (designated the receiver). In further experiments not reported on here, we consider a four-vessel system with one transmitter and three receivers at remote locations from each other and from the transmitter (separation distances from 150 feet to 900 feet).[6] As part of this further study,[6] we mention in passing:

1) a strong observed correlation between pH-oscillations and temperature-oscillations in the vessel,

2) a conditioning effect of the physical location with time of exposure to these augmented-EM waves, and

3) successful communication to the receiver vessel even when the transmitter vessel is inside an electrically-grounded Faraday cage.

EXPERIMENTAL METHODS

We measured pH using research quality pH-meters and fast-response, high performance, combination glass electrodes.[1] The measurement equipment included automatic temperature compensation. The temperature probe had a resolution of 0.1°C. Calibration involved the use of buffer standards to determine the slope of the linear relationship between pH and meter electrical output. The measurement accuracy for a correctly calibrated meter was ± 0.02 pH units. Data was collected using the output from a pH meter linked via RS-232 cable to a desktop computer. The sample interval ranged between 1 and 3 minutes.

EXPERIMENT I

This experiment was carried out at two locations. At the location designated as the receiving station (location B), one gram of a fine-grained, commercial $ZnCO_3$ powder with a surface area of 21.4 m^2/gm was added to 250 ml pure water (ASTM type 1) in a polypropylene bottle.[7] A pH electrode and temperature probe were both placed in the open bottle and pH and temperature were continuously monitored for periods of up to 2 weeks (see Reference 1 for experimental set-up). Initially, the solid was completely suspended by shaking. With the passage of time, settling occurred to produce a layer of $ZnCO_3$ sediment in the bottom with clear water above.

In a location designated the sending station (location A), 156 feet away from B, a solution of Na_2CO_3 was added dropwise via a slow flow pump to a solution of $Zn(NO_3)_2$ in an Erlenmeyer flask at 90°C (Figure 1). The IIED imprinted to lower the pH (see Appendix A) was placed 1 foot from the flask and turned on about the time the pump was activated delivering the Na_2CO_3 solution. The procedures used to prepare the IIED are provided in Appendix A. Nucleation of $ZnCO_3$ began within hours and growth was completed in 7 days. Approximately 1 gram of solid was collected from the flask after the end of the experiment. At the end of 7 days the IIED was turned off.

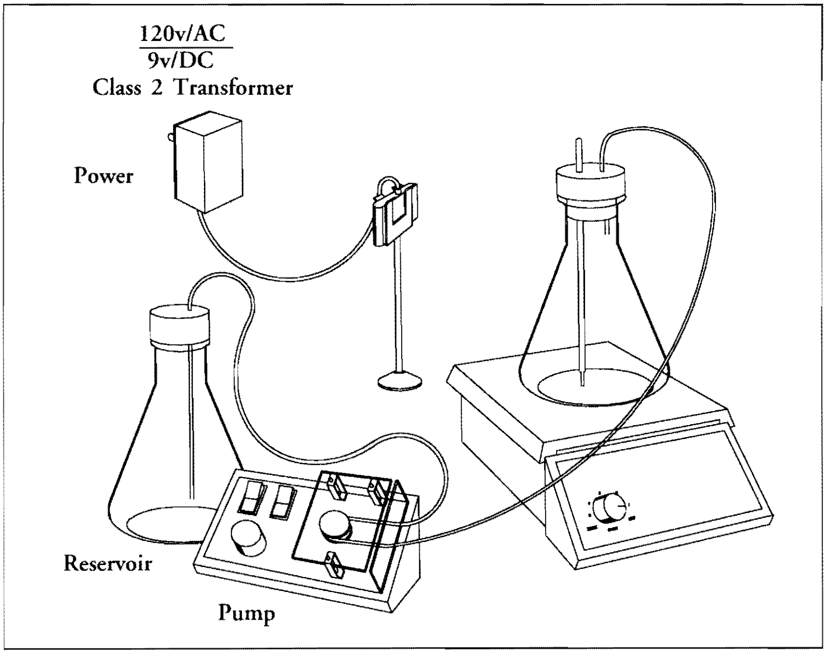

Figure 1. Experimental set-up at location A for Experiment I. The powered IIED is shown 1 foot from the heated flask where $ZnCO_3$ crystallites were growing. The set-up for Experiment II included only the powered IIED.

At the receiving station (location B), pH measurements began two days after the IIED was powered and the growth of $ZnCO_3$ commenced at location A. Further pH measurements were made after the IIED device was turned off and stored in the manner described in Appendix A. Eventually after 13 days, the pH electrode was taken out of the vessel and placed immediately in a pH-buffer solution. Measurements of pH of the buffer solution directly after the long-term measurements described above indicated that the instrumental drift was $\leq$ 0.02 pH units.

EXPERIMENT II

Immediately after the end of Experiment I, a new experiment was begun after re-calibrating the pH electrode. At receiving station B, the pH electrode was placed in the same vessel and solution containing $ZnCO_3$ crystallites and measurements commenced as before. The pH-lowering IIED was placed in the same location as before (transmitting station A, 156 feet from B) and turned on about 30 hours into this new experiment. *However, in this experiment, a vessel containing $ZnCO_3$ crystallites was not present at station A.* The pH and temperature were monitored for three days at station B at which time the $ZnCO_3$ crystallites were re-suspended by shaking. The IIED was turned off at station A and stored after 9 days. Measurements continued at location B for another 18 days.

CONTROL EXPERIMENTS

$ZnCO_3$ dissolution experiments were performed as controls in two locations other than those designated above (one 9 miles from the other). In these experiments, as above, one gram of $ZnCO_3$ particles was added to 250 ml pure water (ASTM type 1) in a polypropylene bottle.[7] Separate pH electrodes were calibrated and, along with temperature probes, were placed in these solutions. Both pH and temperature were continuously monitored. No IIED's were present during these measurements. The bottles were shaken at various times during the experiments to re-suspend the fine grained solid particles.

EXPERIMENTAL RESULTS

EXPERIMENT I

Designating vessel A as the transmitter for Experiment I (the powered IIED was ~1 foot away) and vessel B, 156 feet away, as the receiver. pH and temperature were only monitored at B. Figure 2 shows that, except for an initial exponential rise in the first 4-5 hours, the pH trend at location B was a general decrease over time but with the presence of both highly periodic short-period ($\leq$ 2 hours) and long-period ($\geq$ 20 hours) oscillations. During the first 120

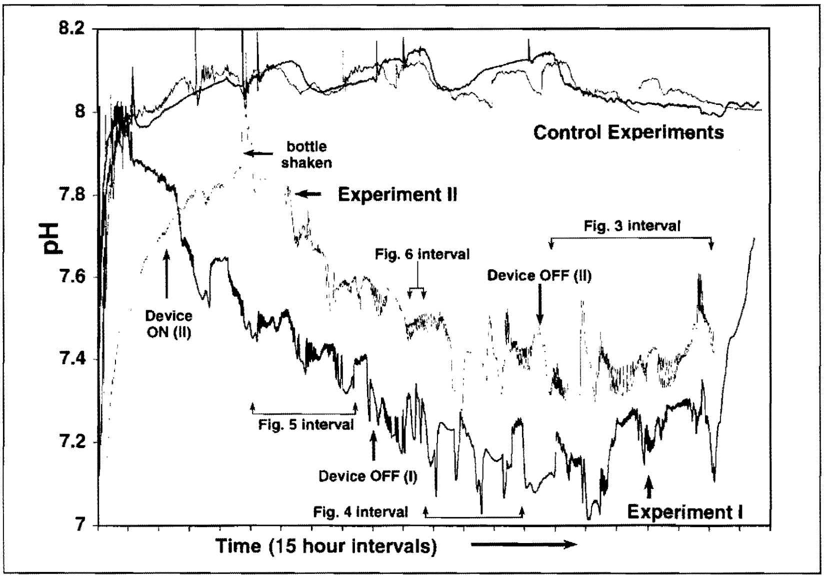

Figure 2. pH versus time plot summaries for all experiments. All vessels contained 250 ml pure water and 1 g $ZnCO_3$ crystallites from a commercial source. Time scales differ between control experiments and Experiments I and II. Two intervals of 14 days of the latter are shown while two intervals of 5 days of the former are depicted. The time scale for controls is about 1/3 the scale for Experiments I & II. Experiment II was performed after Experiment I. The control experiments were performed at remote locations 1 to 2 months following Experiment II. A powered pH-lowering IIED was operating at location A (in another building 156 feet from B) before the beginning of Experiment I measurements. That device was turned off as indicated. For Experiment II, the IIED was powered and deactivated as shown. No IIED's were used during the control experiments. Sharp upward pH spikes identify shaking events during these latter experiments.

hours of this experiment, $ZnCO_3$ crystallites were growing in the vessel at site A, 1 foot away from the IIED. It was noted that the short period pH oscillations in B ceased ~12 hrs after the IIED was turned off at A. However, the well-defined longer period pH oscillations continued (Experiment I, Figure 2). Eventually some short-period oscillations returned (Experiment I, Figure 3); and, near the end of this experiment, the pH increased rapidly (Experiment I, Figure 2).

EXPERIMENT II

The identical solution containing $ZnCO_3$ crystallites used in Experiment I (in the same vessel at station B) was again monitored for pH changes in this new experiment. The unshielded pH-lowering IIED was turned on at transmitting station A as before about 30 hours after the pH-monitoring equipment at station B was re-calibrated and measurements recommenced. The major difference between this experiment and the previous one was that the IIED at location A was not near a vessel containing $ZnCO_3$ crystallites.

The pH of the solution in Experiment I at station B had been moving toward the initial value (pH $\approx$8) near equilibrium, when last measured. In this new series of measurements, the pH of the suspension increased exponentially and approached a value of ~7.9 asymptotically in 3 days. This initial pH increase indicates that the rapid pH increase observed at the end of Experiment I (Figure 2) was not an artifact of instrumental drift. This initial pH increase toward the equilibrium range also supports the view that the large pH decline observed in Experiment I cannot be simply explained by conventional chemical processes.

In this latter measurement sequence at location B (Experiment II in Figure 2), even with an IIED powered in the same location, A, no downward pH trend was observed initially. However, well-defined pH oscillations became apparent somewhat before and more clearly after the device was turned on (Figure 2). After 3 days of measurement, the bottle was shaken to re-suspend the fine-grained powder in the solution. There was a sudden sharp increase in pH to just above 8 (near the previous equilibrium value), then a sharp drop and leveling out to a slightly lower pH level and finally a slow decline with oscillations similar to those observed during the previous experiment but *much better*

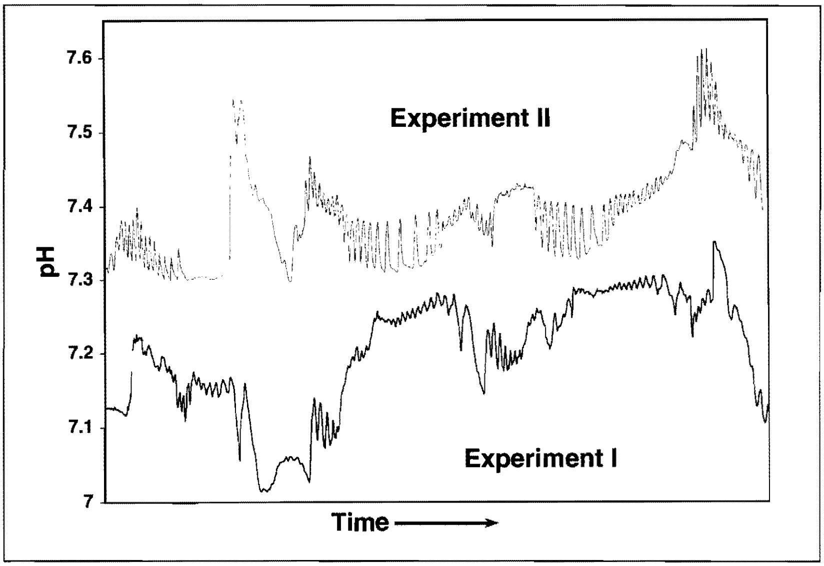

Figure 3. *Close-up view pH versus time plots for vessels at receiving station B in Experiments I and II. Experiment II was performed after Experiment I.*

developed. Figure 3 shows a close-up view of some of these oscillations and a direct comparison can be made between these two consecutive experiments. Higher amplitude oscillations with better-defined periodicity were characteristic of the second experiment compared with the first.

OTHER MEANINGFUL OBSERVATIONS

LONG-PERIOD OSCILLATIONS

Diurnal repetitive pH-time behavior is one of the striking characteristics noticed in these experiments other than the short-period oscillations. Only in the absence of short-period oscillations does a particular diurnal pH-time behavior become evident (Figures 2 and 4). For Experiment II, the pH measurements at station B continued for another 2 weeks after those depicted in Figure 2. During that time, an abundance of short-period oscillations were also observed. Those oscillations as well as those depicted in Figures 2 and 3 are the subject of a paper in preparation.[8]

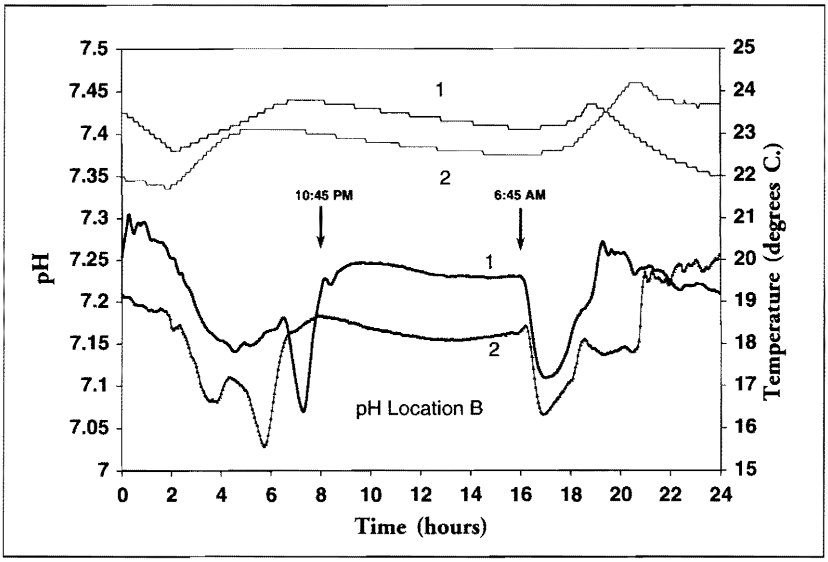

Figure 4. Time-synchronized (24-hour clock) temperature and pH versus time plots for vessel at receiving station B during Experiment I. Two consecutive 24 hour time segments (whole interval shown in Figure II) are superposed to illustrate diurnal repetitive pH behavior along with corresponding temperature profiles.

A particularly interesting highly periodic oscillation train with diurnal repetition was also observed over a 48-hour period during Experiment I (Figure 2). In Figure 5, a comparison of the two 24 hour periods reveals that, with the short-period oscillations present, the diurnal pH variation is completely different from that shown in Figure 4. The damped followed by undamped series of oscillations repeats on two consecutive days in a similar (but not identical) time frame. An early suggestion of a correlation between temperature oscillations and pH oscillations is also seen although the effect is not as pronounced as in subsequent experiments.[6,8]

EFFECT OF SHAKING

The pH changes associated with shaking the water to re-disperse the $ZnCO_3$ particulates while an IIED was operating at a distance are particularly interesting. Shaking the bottle to resuspend the solid particles drove the pH

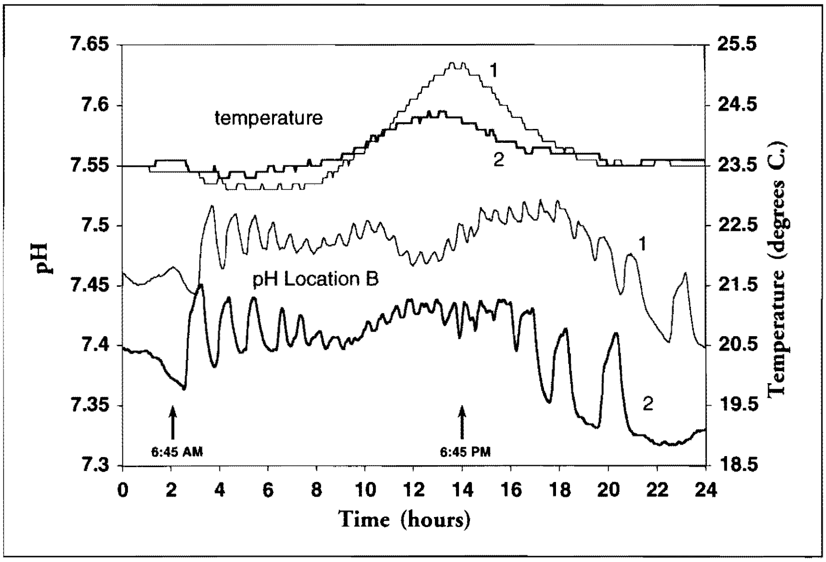

Figure 5. *Time-synchronized (24-hour clock) temperature and pH versus time plots for vessel at receiving station B during Experiment I. Two consecutive 24 hour time segments (Figure 2) are superposed to illustrate diurnal repetitive pH behavior along with corresponding temperature profiles.*

upward into the equilibrium range established by control experiments. However, the solution pH was not long in this range before the pH began a long term decline in the direction of the intention imprinted in the IIED located 156 feet away (Figure 2). The pH eventually declined to a value of 7.2 in Experiment II (data not shown in Figure 2). The other effect of shaking, besides the gradual pH drop, was the development of much greater amplitude short-period oscillations (Figures 2 and 3). These highly periodic oscillations are discussed in more detail elsewhere.[6,8] However, the interesting result to note here is the presence of relatively large-amplitude short-period oscillations that occur along with the long-term pH decline in the direction of the intention.

Because shaking had such a profound effect on the pH with an unshielded IIED 156 feet away in the "ON" state, it became imperative to determine the effect of shaking on the long-term pH of control suspensions not exposed to powered IIED's. The effect of shaking on the pH for control solutions ($ZnCO_3$

crystallites in pure water) is also shown in Figure 2. One set of measurements was performed at a remote location about 9 miles distant from the other (gray overlay). In all, over two weeks of continuous measurements with 20 separate shaking events were done on suspensions of 1g $ZnCO_3$ in 250 ml of pure water. As can be observed from Figure 2, the effect of shaking in all cases was to cause an upward spike in pH, a leveling out and then a gradual decline to the previous or slightly lower value. No long-term effects of shaking, such as prolonged pH declines, were observed.

DISCUSSION

Interpretation of the pH-time behavior illustrated in Figures 2 through 5 requires some discussion of the effect on the pH of pure water by the dissolution of $ZnCO_3$. The pH of pure water in equilibrium with atmospheric CO_2 and coarse-grained well crystallized $ZnCO_3$ is calculated to be below 7. At a pH of 8, the equilibrium concentration of Zn^{2+}, in such solutions should be very low—less than the concentrations of all other ions including H^+ (i.e. $< 10^{-8}$ M).[9] The rise in pH to about 8.1 ± 0.2 seen in numerous dissolution experiments performed using both commercially-obtained and in-house synthesized $ZnCO_3$ is almost certainly a result of dissolution of very fine-grained $ZnCO_3$ with enhanced solubility. Also, the dissolution of metastable hydroxl-bearing phases of significantly higher solubility cannot be ruled out.

In the control experiments shown in Figure 2, shaking the containers to suspend the fine-grained solid always caused an initial upward spike in pH and then a slow slight drift of pH down to near the original level. Such behavior is entirely consistent with kinetically enhanced (increased stirring and temporarily larger surface to volume ratio) dissolution of higher solubility material with subsequent slow growth of $ZnCO_3$ onto a slightly less soluble $ZnCO_3$ substrate ("Ostwald ripening").[10] The equilibrium pH has, therefore, been established to be 8.1 ± 0.2 for the dissolution of the very fine grained $ZnCO_3$ used in these experiments. When the pH deviates significantly from this range, some external mechanism driving it must be invoked.

During Experiments I and II (depicted in Figure 2), we observed significant pH deviations from the equilibrium range established in the control experiments. We also observed for the first time a number of unique phenomena that have become characteristic features of pH and temperature measurements performed where a space has become altered or "conditioned" in some way by the use of IIED's.[8] One consequence of this is that a significantly stronger coupling appears to occur between the physical domain and higher dimensional domains of nature.

During Experiment I (depicted in Figure 2), the pH of the solution at site B entered the equilibrium range for a short-period before a pH decline began that lasted for nearly 10 days in the direction of the intention for the IIED in the "on" state *located 156 feet away.* The total pH decline was a full pH unit that is consistent with the intention for the particular IIED used in the experiment. After 12 days, the pH increased dramatically toward the initial value, at which time, the experiment was terminated (Figure 2). During the pH decline of a full pH unit, both short-period pH oscillations and diurnal repetitive pH behavior were evident (Figures 2-4). Also the first hints of in-phase temperature-pH oscillations were observed (Figure 5). Any of these unique new phenomena by themselves would be interesting and are the subject of continuing studies.

During Experiment II which was a continuation of the previous experiment, better-developed temperature-pH oscillations were observed during the pH excursion away from the equilibrium value that occurred after shaking the water to re-disperse the $ZnCO_3$ particulates. Also noteworthy is the pH movement in the direction of the intention for the experimental device located 156 feet away. In the entire series of shaking experiments for *controls* shown in Figure 2, no highly periodic oscillations or diurnal repetitive pH behavior were observed. Also no large drop in pH occurred in control solutions after the numerous shaking events depicted in Figure 2.

It appears that the unique phenomena described here are observations of the pH-time behavior associated with the broadcast of a specific human intention manifesting effects in a solution at some distance from the sending location. In Experiment I with the IIED in the "on" state and 1 foot away from a vessel where $ZnCO_3$ crystallites were growing, a vessel 156 feet away containing a similar suspension of $ZnCO_3$ particles appears to have received the intention imprinted in the distant IIED. Such transmission at a distance had not been observed before. In fact, investigations that were made of the pH/intention pickup by unshielded vessels of *pure water* located at various distances from an IIED in the "on" state revealed that negligible pH change was observed in a pure water vessel when the vessel was located more than ~3-4 ft from the device![5]

For Experiment II, the sustained decrease in pH associated with shaking shown in Figure 2 is in strong contrast to the results for the control solutions. One interpretation of this behavior is that the water in Experiment II solution is kinetically "stuck" for some reason and cannot keep up with the thermodynamic driving force for pH-change generated by the IIED. An analogy would be the common observation of supersaturation of a solution before a phase-change occurs in the solution. In our case, it is probably some basic property of water that allows it to "stick" at some metastable (with respect to the intention) pH-level. Perhaps this represents a phase transition to a more stable phase of water, one that is more stable in the presence of our augmented electromagnetic field. In such a case, the convection generated by shaking may nucleate small domains of this more stable phase all over the original solution and it is this new phase of water that allows the pH to decrease.

In Experiment II only an IIED was used to broadcast the intention and not a vessel containing growing $ZnCO_3$ crystallites exposed to the device in the "ON" state as in Experiment I. Perhaps in Experiment II, the solid particles acted as the receiver for the intention. By increasing the surface/volume ratio via shaking, the transmission of the intention from the solid to solution was facilitated. We are in the initial stages of developing an understanding of the transmission of intention using small particles in pure water. We know from previous work[1-5] that water in close proximity to a powered IIED can manifest significant changes in pH in the direction of the intention. We now have evidence that small particulates may facilitate intention transmission over a greater distance.

The concept of water being a polyphase material whose structure ranges through a variety of metastable states of comparable free energy is not a new one. Many authors have utilized it to account for the large number of seemingly anomalous behaviors exhibited by water.[11-14] Most recently, Del Guidice and Preparata have considered the quantum-electrodynamic (QED) interactions in water and have shown that this interaction creates coherent configurations of atoms and molecules that oscillate in phase with the exciting field over macroscopic dimensions (microns).[15,16] Perhaps the present data reflects the presence in water of such macroscopic domains of cooperative modes of molecular motion.

One of the more interesting observations shown in Figures 3 and 5 is the presence of highly periodic short-period oscillations, which are unusual in conventional pH-measurements, oscillating chemical reactions being unheard of in simple chemical systems close to equilibrium. Many of the oscillation trains contain abundant structure and cry out for a deeper analysis that is beyond the scope of this paper.[6,8] However, a beginning can be made here on such an analysis by generating the Fourier amplitude spectrum for one of the time-plots. For much of the pH-time course, oscillation trains exhibit variations in frequency over relatively short time intervals making a Fourier analysis not as meaningful since it becomes difficult to separate fundamental frequencies from harmonics. However, near the middle of the time series depicted in Figure 2 for Experiment II, a more uniform frequency interval occurs. This time series and associated FT are shown in Figure 6. The frequency spectrum shows that at least this waveform is close to a simple sinusoid with subdued harmonic components. Other waveforms shown in Figures 3 and 5 are much more complicated with both damped and undamped oscillations showing an inverse relationship between frequency and amplitude. Work is continuing on the waveform analysis of these and other oscillations.[6-8]

The diurnal repetitive pH-time behavior shown in Figure 4 suggests that a new dependence of pH on physical variables such as heat and light may have been observed. Some sensitivity of pH to the time of day may be evident. pH plateaus occur during periods of relative temperature stability in the absence of light. Changes in temperature appear to drive changes in pH much larger than possible by conventional chemical thermodynamics. Changes in temperature also trigger significant changes in short-period oscillation behavior (Figure 5). Peaks and troughs in pH occur at similar times during the day, sometimes correlated with temperature extremes, sometimes not. When short-period oscillations are present, a diurnal variation is still apparent but obscured. An approximately 24-hour cycle of pH minima during the pH decline depicted in Figure 2 (Experiment I) is evident. What causal effect lunar

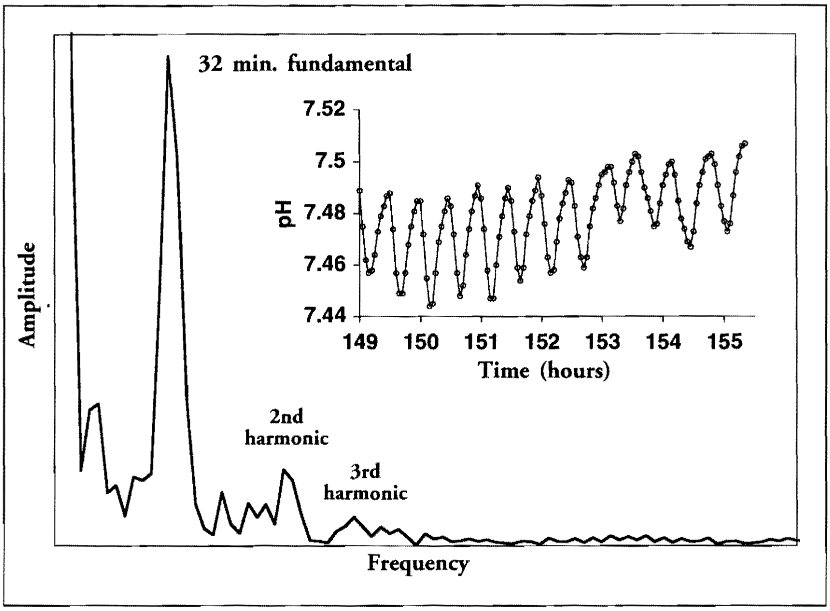

Figure 6. *Amplitude spectrum from Fourier analysis using data set shown in inset taken from Experiment II near the middle of the data set shown in Figure 2. The fundamental frequency of these highly periodic oscillations determined by Fourier analysis is 32 minutes. Note there are 12 peaks and troughs in 6.4 hours shown in the inset.*

or solar rhythms have on these systems is unknown at this time. Further studies on the effect of light frequency EM radiation on these systems also seems warranted.

An additional factor relating to the temperature-pH dependence is the correlation between pH oscillations and small-scale temperature oscillations first observed in these experiments. In Figure 5, between hours 2 and 8, an inverse correlation is seen between small temperature oscillations that are in-phase with the damped pH oscillations. Such correlation was consistently observed during most time intervals when highly periodic, short-period pH oscillations were present. Such features are absent in the control dissolution/shaking experiments depicted in Figure 2. In further experimental work on these systems, such in-phase T-pH oscillations were a relatively common characteristic.[6-8]

Clearly there are factors involved driving the pH (and temperature) changes described above that are outside the scope of conventional physics and chemistry.[17] The $ZnCO_3$ particles appear to be absorbing the intention-augmented EM waves being broadcast from the oscillators in the device.[2] Some of this is probably transferred to the surrounding water in vessel "A" (Experiment I). However, much of it may be transmitted via reciprocal space[3,4,17,18] to the receiving vessel since in subsequent experiments[6] the use of an electrically grounded Faraday cage appeared to rule out conventional direct-space transmission. The system of $ZnCO_3$ crystallites and water studied here appears to be an excellent experimental platform for detecting subtle energies generated by IIED's. A rich variety of features related to this two-vessel communication have been identified. In papers in preparation, we report results from a 4-vessel system with one transmitter and three receivers at remote locations from each other and from the transmitter.

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CORRESPONDENCE: Walter Dibble • Ditron, LLC • P. O. Box 70 • Excelsior, MN 55331

ACKNOWLEDGEMENTS: This work was partially supported by Ditron, LLC and Durance Corporation.

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APPENDIX A—IIED PROCEDURES

The physical size of the plastic case housing the electronics is ~7 in. x 3 in. x 1 in. The electric circuits utilized are quite simple basically involving only an E PROM memory component, a 3-oscillator component (1-10 MHz range), no intentional antenna and either line voltage or battery power supply. The radiated electrical power is less than ~1 μ watt at a distance of ~3 in. The imprinted device was individually wrapped in aluminum foil and stored in an electrically grounded Faraday cage for energy/information isolation purposes. It was taken out and unwrapped only for use in an experiment and then afterward re-wrapped and returned the Faraday cage.

The actual imprinting procedure for a particular target experiment was as follows:

a) place the devices along with their current transformers on a table around which the imprinters sit,

b) four people (two men plus two women) who were all accomplished meditators, coherent, inner self-managed and readily capable of entering an ordered mode of heart function plus sustaining it for an extended period of time, sat around the table ready to enter a deep meditative state,

c) a signal was then given to enter such an internal state, to cleanse the environment and create a sacred space for the intention. Then, a signal was given by one of the four to put attention on the table top objects and begin a mental cleansing process to erase any prior imprints from the devices,

d) after 3 or 4 minutes, another signal was given to begin focussing on the specific pre-arranged intention statement for about 10-15 minutes,

e) next, a final signal was given to shift focus to a closing intention designed to seal the imprint into the devices and minimize leakage of this essential energy/information from the devices. This completed the process so the four people withdrew from the meditative state and returned to their normal state of consciousness.

It should be obvious to the reader that a wide variety of options and variants exist with respect to the erasing, imprinting and sealing phases of the overall treatment process for these devices. The specific intention used for the experiments reported on here was: "To activate the indwelling consciousness of the system so that the IIED decreases the pH of the experimental water by one pH unit compared to the control; i.e., increases the H^+ content of this water by a factor of 10."