

Research Report from Pinelandia Biophysical Laboratory
Grass Lake, Michigan 49240

February 28, 2004

Biophysical Study of Ice Circles at Horton, Michigan 2004
Laboratory Code KS-06-30

Location: Horton, Michigan (about 15 mi. south of Jackson, MI)

Material: Ice taken at Mud Lake, from a 30 ft. circle with surrounding rings

Discovered: Dec. 28, 2003, by Mr. Vaughn Hobe of Horton, Michigan.

Sampled by: Research team: Jeffrey Wilson, Ted Robertson, Dr. Charles Lietzau, Roger and Nancy Sugden, Zach smith and Todd Lemire.

Related Information:

From a diagram prepared by Ted Robertson - a center 30 ft. diameter circle of clear ice approximately one inch thick, was surrounded by a light reflecting ring of slightly piled up ice around 45 ft. diameter, and outside of that a second, darker ring of clear ice giving an overall diameter of about 64 feet. All three regions were contiguous and observed to have clearly outlined boundaries.

The ice samples collected by Mr. Hobe were removed along a North radius and were marked as follows.

- 1.) "Circle Center" – removed at the epicenter of the formation.
- 2.) "Center Ring" – at the midline of the first ring surrounding the center clear ice.
- 3.) "Center of Halo" – at the midline of the outer, clear ice ring.
- 4.) "Control" – taken 100 ft. North of formation.

About 10 days prior to the discovery of the ice formation Mr. Hobe was shutting off lights in his Horton, Michigan, home (around 1:30 a.m. on 12-18-03) when he noticed out a back window, what he described as "the most incredible brilliant light" in the shape of a horizontal bar (see Linda Howe's report on earthfiles.com, 1-18-04, for further details).

While observing this light effect Mr. Hobe stretched out his hand and carefully noted the size of the light source in relation to the position of his fingers. From this information, Jeff Wilson estimated from triangulation that this "bar of light" was about 64 ft. in diameter. As it turned out, the ice circles discovered about 10 days later were on the exact line of sight with the light source. Furthermore the overall size of the formation was found to be about 64 ft. in diameter, which is in close agreement with the "finger ratios" calculated from Mr. Hobe's description.

Laboratory Findings:

If the brilliant "light tube" observed by Mr. Hobe, was in any way associated with the ice circle formation, one might consider the possibility that the internal energy within what appears to be an ion plasma system could have induced molecular changes within the structure of the ice and water in this region of the lake. To pursue an investigation along this line requires a methodology capable of detecting and quantifying the internal energy content of water.

Recent Studies at the Pinelandia Laboratory

For the past two years, internal changes in the molecular structure of water have been studied at the Pinelandia Laboratory. The methodology is based on the detection of very subtle, self-organized groups of Charge Density Pulses (CDP) which are spontaneously generated within the water structure (also CDP's are formed within all living systems). For details concerning this subtle energy work see references 2,3 and 4 at the end of this report.

Briefly, the protocol used to examine CDP changes in the Horton ice water, consisted of placing an aliquot volume of the test water in a semi-conducting, charge collector system, then determining the rate of CDP dissipation by taking 10 min traces over a total 40 min test period. The overall dissipation curve follows a precise log-time function. These data are then examined with statistical regression analyses to determine the degree of change within the ice circle samples in relation to the control ice taken 100 ft. North. For each dissipation analysis there were five data points taken 10 min apart. This procedure was repeated four times for each ice sample.

An analysis of the statistical regression data disclosed that Sample #2, labeled "Center Ring" (mid line of ring around clear circle) disclosed values for all three regression constants, which were well outside the range of all the other samples including the #4 control. The regression values from this #2 ice water were also outside the range for pure water. Based on previous studies, these data provided strong evidence that Sample #2 had been exposed to an external plasma which increased the internal energy of the water molecules. It seems highly probable that the source of this energy was the brilliant light noticed by Mr. Hobe. The high level of energy necessary to maintain this light configuration for a period of at least 20 min (with ambient temperature of around 15°F) can only be reasonably explained by considering a self-organized ion plasma system.

Bioassay Studies

With this degree of alteration in the free energy of the Sample #2 test water it seemed quite probable that this sample could induce growth changes during seed germination. Since 1994 a bioassay technique (developed at the Pinelandia Lab., see Reference-1)) has been utilized to examine the influence of ion-electron plasma energies on the seeds and soil associated with crop formations. In this particular case the Horton

ice-water samples were utilized to examine their influence on a specific "lot" of wheat seeds, which from past studies has proved to have quite stable seedling vigor and germination characteristics.

In each bioassay test, 30 randomly selected wheat seeds are positioned in a row along special germination paper. The paper is then folded over and formed into a roll. Each roll is placed in a separate 8 oz, plastic vial containing 100 ml aliquots of the Horton ice-water samples. The test rolls are then placed inside a temperature regulated germination chamber.

In this type of comparative bioassay a "Development Factor" (Df) is applied in the data analysis. With this factor one is able to statistically take into account the influence of both the fraction germinated and the mean seedling length within each test sample group and at each development stage. This Df factor is given by the relationship,

$$Df = (\text{fraction germinated}) \times (\text{average seedling length})$$

Measurements are taken at the 3,5,7 and 9 day development stage. The data from the approximate mid-point of the germination interval is most frequently reported. In this bioassay with the Horton water the data presented in Table I were obtained at the 5-day development stage.

Table I

Development Factor (Df) in a wheat seedling bioassay using the Horton, MI, ice-water samples (data at the 5-day dev. Stage).

Ice-water Sample	Df	s.d.	N-seedlings	%-Change
1) "Circle Center" (epicenter)	2.52	2.03	20	+8%
2) "Center Ring" (#1 ring)	4.57	2.07	27	+95% *
3) "Center of Halo" (#2 ring)	3.15	1.89	26	+35%
4) "Control" (100 ft. North)	2.34	1.82	21	-----

*- P<0.05

Here the changes in the seedlings exposed to the water from the formation are compared with the water from the normal control ice sample #4 taken 100 ft. north. What is most astounding is the +95% increase produced by the water from the #2) "Center Ring" sample. This level of response exceeds that found in numerous bioassay studies conducted over the last few years, when examining seeds and soil from crop formations. It also does not appear to be a coincidence that this is the sample, as pointed out in the previous section, which under analysis with the CDP method provided strong indication of having a much higher level of internal energy.

To further illustrate the tremendous seedling vigor stimulation effect from this "Center Ring" sample, the Df values taken over the entire test period are plotted in Fig.1 along with the those obtained from the Control sample. It is apparent that this development stimulation continued through the entire test period. In most germination tests, observed differences in vigor are seldom statistically significant, or even visually apparent at the initial measurements at three days germination. By contrast, the 3-day Df value for the "Center of Ring" sample clearly lies above the control point, in fact, this three-day, data point disclosed a development rate 146% higher than the controls. In addition the #3-"Center of Halo" data (not shown in Fig.1) exhibited a +65% development. Both the #2 and #3 samples were statistically significant at the 95% confidence level.

The photographs in Fig.2, taken at the end of the Bioassay test (9-day development stage) illustrate the highly significant development differences between the Control sample (upper photo.) and the Center Ring sample (lower photo.). In addition to growing at a more rapid rate, the Center Ring water produced a greater uniformity of growth. This response is typical of differences found in seeds exposed to ion-electron avalanches (see reference #5).

Proposed Mechanism of Ice Circle Formation:

The situation confronting us at the onset of this investigation was very reminiscent of the problem faced in 1989, when Mr. Pat Delgado (senior author of Circular Evidence) submitted the first set of crop formation samples examined at the Pinelandia Laboratory. The basic question is; what are the characteristics of the energy mechanisms within the system producing the ice-circle Complex? To obtain any degree of information relative to this question, it was found necessary to study the internal energy changes in the ice-water specimens. In some respects the ice formation study offered a more simple and direct approach since it was not necessary to deal with the complexities of living systems, as is the case with crop formation material.

When initially examining the ice samples submitted by Mr. Hobe, there was an impressive, visual difference between the purity of the three ice formation samples and the control taken 100 ft. North. The formation ice was very clear and free of debris even though Sample #2-"Center ring" exhibited a considerable amount of what appeared to be trapped air bubbles. By comparison the Control ice was observed to contain scattered, minute leaf and twig fragments and occasionally a soil particle. This clarity of the formation ice rules out splash patterns from an object striking the ice. Due to the very shallow nature of Mud Lake, an impact would have deposited a considerable amount of debris and mud from the bottom of the lake onto the ice surface.

Based on the CDP and bioassay results presented in the preceding sections it seemed worthwhile to present a hypothetical model for the Horton, ice circle phenomenon. The crucial aspect of this model is the proposal that the light effect observed by Mr. Hobe, was a manifestation of photon energy transitions known to take

place in an ion plasma vortex system. Although this ion plasma concept may at first glance seem far-fetched to the reader, it should be kept in mind that in 1994 (see reference-1) this type of energy system was postulated as being the causative factor involved in producing the anomalous, morphological changes taking place in plants growing in crop formations. Since this idea was put forth, over 250 crop formations have been subjected to detailed studies the Pinelandia Laboratory. In every case where anomalous changes were observed, the results have supported the concept of energy involvement from self organized ion plasma systems.

Following a similar type of approach, the stages believed to be involved in the Horton, ice formation are briefly outlined below:

Stage-1 – an ion plasma system carries with it a significant amount of microwave energy. As the system became positioned over the lake this microwave component rapidly heated the air, snow and ice below. At the same time the rotational momentum of the vortex system produces an internal reduction in ambient pressure, this is particularly evident if the system is composed of two counter rotating vortices (see reference-6). As a result of this reduced pressure, the water being vaporized, would be drawn up inside the vortex, thus becoming exposed to complex ion-electron avalanches which could impart internal energy changes in the water and thus explain the pronounced development differences noted in the bioassay and CDP studies.

Stage-2 – as the energy exposed water accumulates inside the vortex system, it moves outward due to centripetal forces. As it drifts outside the plasma system it condenses into droplets in the cold air (like heavy dew) and builds up a slushy ring around the edge of the 30 ft. diameter circle of open water (“Circle Center”). In photographs, this ring stands out as a light colored area. On Linda Howe’s earthfiles.com of 1-1803, she reports from an interview with Prof. John Magnuson, Limnologist, at the University of Wisconsin, that this type of ice is termed “gray ice” and is normally formed by melting snow on top of ice and then that slush re-freezes.

As demonstrated in a simple, elegant experiment conducted by Dr. Chuck Lietzau on 1-14-04, it is relatively easy to form this type of thick, slush ring, by pouring warm water onto snow covered ice and letting it melt down (for details see earthfiles.com, 1-18-04). Thus the warm water being thrown out of the vortex could very easily form the thicker gray-ice ring around the circle of open water.

Stage-3 – as the plasma exposed water vapor condensed onto the ice around the central region, it built up the thickness of the gray-ice ring. A portion of this heated water would flow off – some flowing back into the open water circle and another portion would flow outward where it would mix with the snow on the lake ice. Due to the fact that this run-off water is now heated and in the liquid state, it would form clear ice, accounting for the “halo” or outer ring.

It is important to note that the “Center of Halo” sample produced the second highest increase in seedling development (see Table I). This is readily accounted for, if

we consider the fact that ice from the halo region is composed of plasma exposed run-off water from the gray-ice region, as well as water from the local snow cover. Although diluted the influence of the plasma energy is apparent in the halo ice sample.

Stage-4 – Since considerable thermal energy was imparted during the formation of the central circle, this area was probably the last to freeze. During the time before this region froze, any energy-exposed water would rapidly diffuse and mix with the normal lake water, and would not be detected. This possibility is clearly indicated in the bioassay data. In Table I the 8% difference between the “Circle Center” ice and the control sample is far from being statistically significant. In other words the ice from the Circle Center did not have any significant effect on the seedling development.

One concluding statement should be made concerning the overall influence of the plasma energy. In numerous crop formations, it has been shown that the affects of the plasma vortex energy may extend far beyond the confines of the visible, downed crop area. Thanks to the very observant eye of Mr. Hobe and his camera, the energy spill-over at Mud Lake was clearly delineated in two of his photographs presented on Linda Howe’s earthfiles.com, 1-18-04. Both photo’s were taken around 50 ft. from the visible ice formation.

Shown in one photo is a clear pattern of radial, re-frozen cracks formed around a small hole in the ice. This type of pattern is not typical of an impact force, but rather, is characteristic of heat produced expansion forces, which caused the ice to rapidly expand and form the radial tension cracks. The central hole appears to be where a plant stem protruded through the ice. The transient, microwave heat from the plasma source caused rapid dehydration and shrinkage of the plant cells, followed by a final retraction down the hole. A second photo shows the effects of rapid heating on the upper part of a plant stem still protruding through the ice, but with the upper end collapsed from the microwave exposure.

Additional evidence of rapid thermal input was also evident in these photographs. Around the plant stem holes, were radial lines forming a very regular, radial pattern typical of convective turbulence. This type of pattern results from a liquid being rapidly heated from above. If the heat had been applied at the lower surface of the liquid, the convective instability would have produced a “Rice Grain” appearance (Benard Convection) rather than the radial line patterns shown here.

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References

- 1) W.C. Levensgood, "Anatomical Anomalies in Crop Formation Plants". *Physiologia Plantarum*, **92**, pp.356-363 (1994)
- 2) W.C. Levensgood & John L. Gedye, *Evidence for Charge Density Pulses Associated With Bioelectric Fields in Living Organisms*, Subtle Energies & Energy Medicine, Vol. 8, PP 33 – 54 (1998)
- 3) W.C. Levensgood & John L. Gedye, Method and Apparatus for Detecting, Recording and Analyzing Spontaneously Generated Transient Electric Charge Pulses in Living Organisms, U.S. Patent No. 6,347,238, Feb. 12, 2002.
- 4) W.C. Levensgood & John L. Gedye, Mechanisms Related to Charge Density Pulse Formation in Living Systems, (in Press) 2004.
- 5) W.C. Levensgood and J.A. Burke, "Method and Apparatus for Enhancing Growth Characteristics of Seeds Using Ion-Electron Avalanches", USA Patent No. 5,740,627 (1998).
- 6) W.C. Levensgood & N.P. Talbott, *Dispersion of Energies in Worldwide Crop Formations*. *Physiologia Plantarum* 105, 615-624 (1999)

Fig. 1

**Wheat seedling bioassay study using water from the
Horton, Michigan, ice ring samples
(Pinelandia Biophysical Lab., Feb. 2004)**

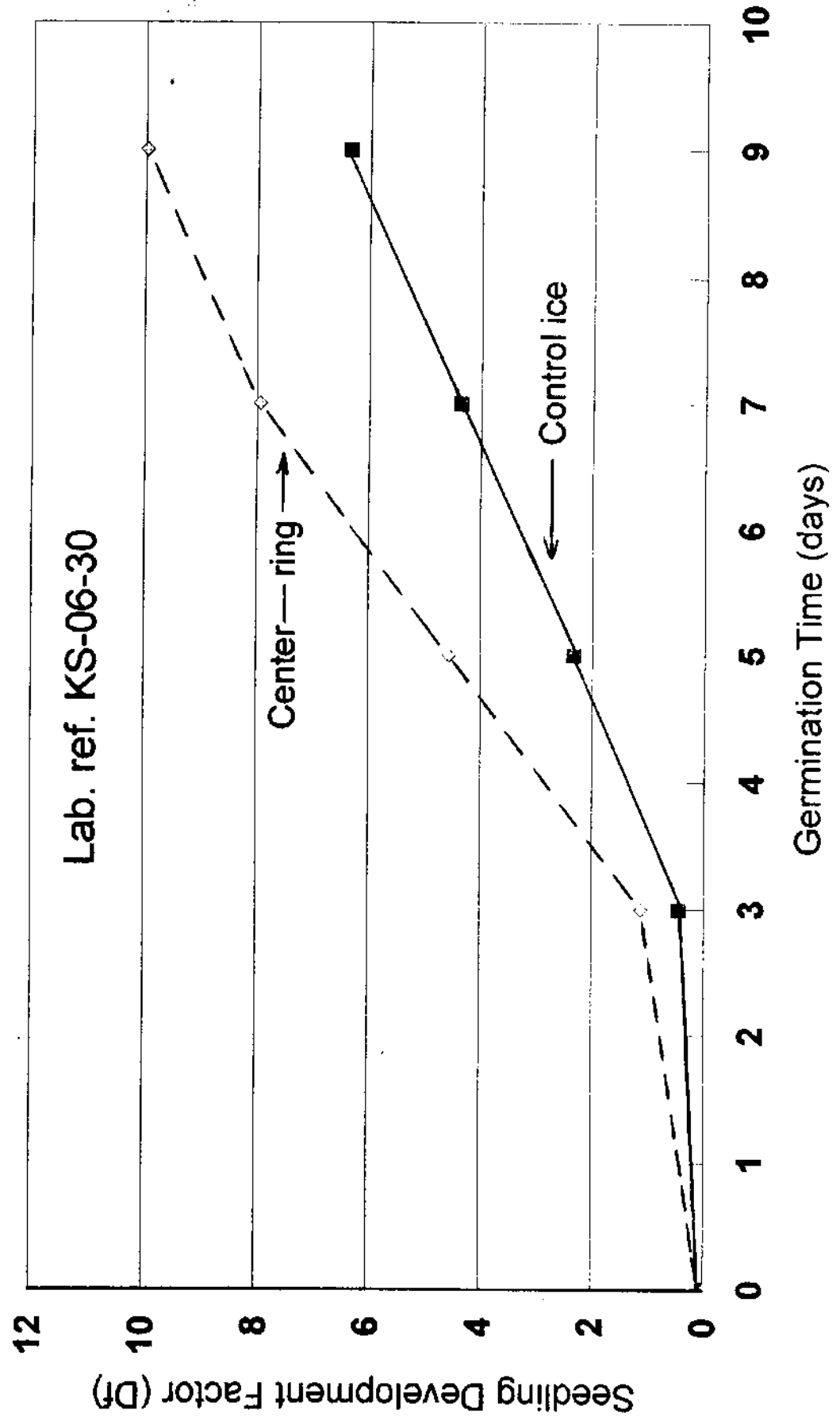


Fig 2. Nine day wheat seedlings from a bioassay study using water from Horton, Michigan, ice formation (lab. reference KS-06-30). Feb. 2004

**Control
(100 ft. North)**



Center Ring

