

THE ORANUR EXPERIMENT

First Report (1947-1951)

By
WILHELM REICH, M.D.



Published by
THE WILHELM REICH FOUNDATION

Orgonon, Rangeley, Maine, U. S. A.

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First Report (1947-1951)

By WILHELM REICH, M.D.

* THE ORANUR EXPERIMENT is reprinted from the *Orgone Energy Bulletin*, October, 1951, pp. 185-344. The importance and breadth of the subject matter made necessary its publication as a separate book. THE ORANUR EXPERIMENT in *Bulletin* form is available to present subscribers only.

Price, \$4.00

LOVE, WORK AND KNOWLEDGE ARE
THE WELL-SPRINGS OF OUR LIFE.
THEY SHOULD ALSO GOVERN IT.

Printed and distributed through the
ORGONE INSTITUTE PRESS

Publishing house of THE WILHELM REICH FOUNDATION
Orgonon, P. O. Box 153, Rangeley, Maine

1. Introduction and Survey

This publication presents the first report on the ORANUR EXPERIMENT (No. XXX, 1). The layout of this experiment was published in the first *Orgone Energy Emergency Bulletin*, December 1950. This report is only a preliminary one; its results are subject to further elaboration and possible change of concepts. However, the basic tenets appear safe enough to warrant publication at this time. Under peaceful conditions I would have preferred to wait much longer before publishing the results. However, the urgency of the present social situation made publication of these first results on the effects of Orgone Energy (OR) upon Nuclear Energy (NR) imperative.

The first series of the Oranur experiment proper was carried through between the middle of December 1950 and May 1951. The first three parts of this report are of a purely physical nature; they deal exclusively with physical OR energy phenomena which are essential to a basic understanding of OR energy and of the Oranur experiment proper. The two parts on the Geiger-Müller reaction of OR energy and on the OR phenomena in high vacuum, comprise an experimental period of four years, 1947 until 1950. The results contained in these two parts were preceded by many unsystematic, incidental observations and experiments which had been made during the years from about the time of the discovery of the OR energy in the SAPA bions (1939) until the systematic investigation of the physical quantum properties of the atmospheric OR energy began during the early summer of 1947. Parts of these results were published at irregular intervals in brief communications in the *International Journal of Sex-economy and Orgone Research* and in the *Orgone Energy Bulletin*.

The *physical* OR energy functions are closely interrelated and very fre-

* THE ORANUR EXPERIMENT is reprinted here, including page numbering, exactly as it appeared in the *Orgone Energy Bulletin*, Vol. 3, No. 4, pp. 185-344.

quently identical with *bio-energetic* OR functions. As a matter of fact, it is quite impossible and even not permissible to separate them, since the bio-energetic functions of OR energy in the living organism are merely variations of the OR energy functions in the atmosphere and in the universe at large.

The OR energy was discovered in radiating bions a few months before the first splitting of the atom succeeded in 1939. At first the two developments in natural research ran parallel without any apparent connection with each other. In December 1940, soon after the discovery of the atmospheric OR energy, an attempt was made to delegate responsibility for the physical aspects of OR research to the nuclear physicist. Several attempts have been made to transfer the responsibility for the cosmic energy to well-established and richly endowed American institutions. As I should have known to begin with, it turned out that nuclear physics was not prepared to take over such a discovery without fundamental changes in the total aspect of its very foundations. OR energy research found itself on its own. The events during the Oranur experiment in 1951 will unequivocally convince the reader of the logic of the initially separate courses of OR and NR research. Fundamental questions of physics and astrophysics are involved. Sharp distinction of OR energy, as *primordial*, mass-free cosmic energy *before* matter, from NR energy, as *secondary* energy *after* matter, became a matter of necessary procedure. In spite of my great reluctance to follow it, no other course was possible, as the later developments so clearly demonstrate. The Oranur experiment could not possibly have proceeded without the distinction mentioned above. *OR energy and NR energy are contradictory functions of nature.* This was fully confirmed by the first series of Oranur experimentation.

To sum it up briefly:

Nuclear energy is a secondary variation of the primordial orgone energy.

NR and OR do not "agree" with each other. The story of the dramatic battle between OR and NR is partially related in this report.

OR energy cannot be comprehended if the laws pertaining to NR energy are applied to the realm of primordial cosmic functioning.

The functional law of primordial OR energy sets in exactly where the theory of NR energy loses itself in the unsharp, foglike assumptions of "material waves" or "wave particles," in the principle of "indeterminacy," in such hypothetical necessities as the "neutrino particle" and similar inconsistencies.

This is a long and complicated chapter of basic physics, still in its embryonic phase. The reader should not be bothered with it at this point. However, it had to be mentioned in order to indicate where the nuclear theory, becoming vague, makes contact with the FUNCTIONAL LAW of nature. I must refer the reader who would like to go deeper into this realm, to the publications on "Orgonomic Functionalism" in the *Orgone Energy Bulletin* and in *ETHER, GOD AND DEVIL (Annals of the Orgone Institute, No. 2)*. Such terms as "Orgonomic Potential from low to high," "Common Functioning Principle (CFP) and Its Variations," the "Functional Method of Thinking," etc., have been elaborated to a sufficient degree over the past eighteen years to enable the serious student of orgonomy to follow this report intelligently.

The Oranur experiment proper (*cf.* p. 267ff.) started with a very practical question: *Can OR energy influence NR energy?* Could an antidote to nuclear destruction of living systems possibly be found in OR energy? The factual results were much more complicated than had been anticipated at the start. The dramatic, deadly dangerous events during the Oranur experiment may easily obfuscate the final result which was *positive*. OR ENERGY CONTAINS POWERFUL FUNCTIONS DIRECTED AGAINST NR SICKNESS, EVEN POSSIBLY THE POWER OF IMMUNIZATION.

This report leads up only to the borderline where the first negative results began to change in a distinctly positive direction. This positive direction had not been followed up to its end in this report. A second series of Oranur experiments are planned to collect whatever may be found of an elaborate, well-founded antidote to NR effects.

In the face of the rampant habit of mere opining on matters of factual evidence, it is not presumptuous to remind the reader of this report that matters of factual evidence cannot possibly be judged by opinions only. The least required of any habitually irrational "critic" is that he put his head into an Oranur arrangement of materials.

WILHELM REICH.

2. Integration of Visual Orgone Energy Functions

OUTLINE

Method of approach. Co-ordination of objective and subjective evidence. Errors in purely psychological study. Foggy patterns of primordial orgone (OR) energy as impression and on photographic plate. Blue in nature and on the plate. Even distribution and concentration of OR energy. Lightning. Heat lightning. Changes of appearance in OR room. Lightning in OR room. Violet points of light. One substratum in different states of existence. OR energy misrepresented mechanically as separate "particles" in nuclear physics. Luminating points floating in air. "Cosmic rays"—reversal of electroscopic interpretation. Electrical energy—a minor function of OR energy. OR energy photographs. OR energy unit-characteristics. Birth and death. Summary.

Those who have worked practically with the cosmic orgone energy over the years, have keenly felt the lack of a comprehensive integration of its visible functions. Numerous observations had been collected over more than a decade, but no integration of these observations had yet come forth. The careful student of organomic research understands why the progress in our presentations is so very slow: The energy we are dealing with has little in common with what is known in classical physics about electrical and mechanical energy functions; one hesitates to rush theory formation, in full awareness of the newness and differentness of the cosmic orgone (OR) energy. It may, however, be advantageous to attempt an integration of the various phenomena and functions of the visible orgone energy. It matters little if we make mistakes so long as we are ready to correct any mistake that might creep in due to incomplete comprehension. Then, even a mistake might point toward a new path.

Let us first consider the *method of approach* to a possible integration of the visual orgone phenomena. There are basically two ways of observation: (1) with the *photographic plate*, i.e., *objectively*; and (2) directly by *visual* observation, i.e., *subjectively*. Here the physical and the psychological methods clearly meet. The integration of visual OR phenomena must mainly rely on the *agreement between the physical* or objective, and the *psychological* or subjective observations. Many reports on visual OR observations were received by the Orgone Institute, all of which had one thing in common: They lacked a basis in physical, objective reproduction of the visual impressions, and therefore were questionable. They also differed greatly in the description of the visual phenomena; this is due to the great variety of individual perceptual faculties. The danger now is this: If we would permit psychological description of OR energy functions to crowd out the physical observations, theoretical chaos would soon result. It is just as futile to rely only on subjective observations, as on merely quantitative measurement of natural functions which are not understood or even observed qualitatively. It is, therefore, advisable to try to confirm every single visual impression by a corresponding physical reproduction or a theoretical integration with what is already known. This has fully succeeded with the orgonotic temperature differences, $T_o - T$; we *feel* the heat at the wall of the OR energy accumulator, and we also *measure* this heat quantitatively with the thermometer. The same principle of procedure should also be applied in the realm of the visual functions.

In some of these visible functions, the coordination of the psychological with the physical observation has already been accomplished:

Blueness

1. A completely light-tight, metal-lined room appears to the eye of the undisturbed observer, not black but *grayish-blue*. This is one of the best secured and agreed-upon psychological observations. The *physical* parallel to this observation, confirming and supporting it, is the fact that photographic plates or films kept over days or weeks in a highly charged orgone room or in an orgone accumulator, clearly show fogging of the emulsion. The pattern of the "fog" is even similar to what we perceive in the darkroom. It has a *wavy, undulatory pattern*. Except for the motion which we see in the darkroom, the subjective perception and the objective reproduction agree in regard to the "*foggy*" nature of the cosmic orgone energy.

2. We perceive the orgonotic natural lumination as *blueness* in different

shades, from blue-gray to a deep purple and violet. If we theoretically abstract the various phenomena of blueness in nature as the common functioning principle of *lumination*, we obtain an observational as well as a theoretical principle; this principle in itself would suffice in establishing the natural color of the orgone energy as blue, varying from blue-gray to blue-violet.

Let us summarize:

Up to about 150 miles, the sky is of a deep "sky-blue" color. According to observations made by fliers in the stratosphere, space beyond the intense blue orgone envelope of the earth is *black*, lacking lumination entirely. The blueness of the atmosphere loses in intensity and changes toward whitish the closer it is to the earth's surface. On the other hand, the blueness increases in purity and intensity as we ascend high strata of the atmosphere. There, also, the "ultra-violet" increases, as is well known to anyone who ever has climbed high mountains.

The question as to *why* the blueness is more intense in higher altitudes, remains unanswered. We must patiently wait until observation, experimentation and theoretical abstraction yield the answer spontaneously.

Thunderclouds, too, are of a deep *blue* color. Since clouds are orgonotically highly charged water vapors, the blueness of the atmospheric orgone energy appears much more intense in the cloud. The lightning which breaks out of thunderclouds is witness to the enormous changes contained in such clouds. Clouds which are widespread over the whole sky and show no major concentrations, are usually gray and rarely develop lightning or thunder.

Blue is, furthermore, most frequently the color of the aurora borealis. The aurora is too complex a function to be dealt with at this point.

The ocean, too, is *blue*, and so are deep mountain lakes. On clear, sunny days, the mountains are surrounded by a *blue* "haze"; the blueness of high mountains appears also without any haze. Shortly before rain, the blueness of the mountains disappears; they appear close-by and no longer far off, as in continuously clear weather. The disappearance of the blueness close to the earth's surface before the onset of rain becomes comprehensible if we assume that the orgone energy is being withdrawn to higher altitudes into the forming thunderclouds. This agrees also with the disappearance of the temperature difference ($T_o - T$) at the orgone accumulator and the speed-up of the electroscopic discharges. (Cf. THE CANCER BIOPATHY, 1948, pp. 97-111.)

Sunspots and *earthly hurricanes*, too, are of a dark blue color. We should

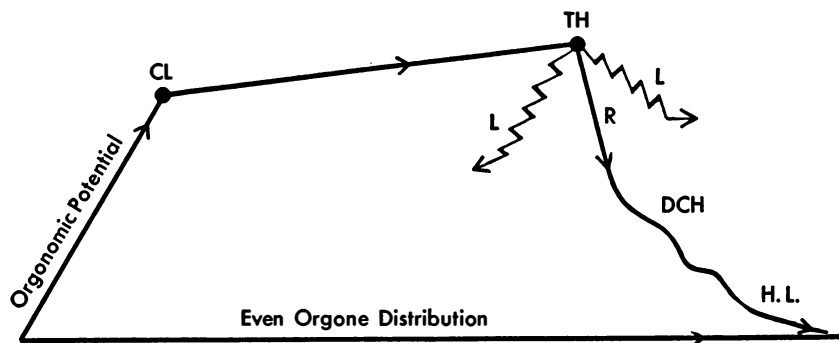
not be distracted from this obvious blueness, even if we are told by some philosophers that the blueness of the sunspots is "only" a visual impression. So are the green of the leaves, the redness of some sunsets, the smile on a child's face, etc.

The impression of bluish light in the completely darkened metal orgone energy room agrees entirely with the general blue character of the cosmic OR energy.

Manifold and complex as the different orgonomic functions in the atmosphere are, they, too, necessarily follow some common functioning principle which governs all of them. In observing the OR energy in the sky and the darkened metal room, one is puzzled by the question as to the manner in which what we see *outside* and *inside* the OR room may be related to each other. Let us proceed slowly to a possible solution of this relationship.

Lightning is usually explained by an equalization of positive and negative electrical charges in the atmosphere. As yet, nobody has found out what electricity actually is. Orgonomy assumes that electricity and magnetism are varied functions of the primal cosmic OR energy. However, there is another inconsistency in the classical approach which has been mentioned on many occasions: *How is it possible that in an otherwise ion-free atmosphere suddenly there appear as if from nowhere, billions of volts in the lightning flashes?* The answer to this puzzle is that the atmosphere is free of ions, but is full of atmospheric OR energy.

In a clear, calm atmosphere, the OR energy is more or less evenly distributed over the whole span of the sky. When thunderstorms develop, OR energy is withdrawn from clear spaces and concentrated in the place where the future clouds will appear. This process follows the so-called *orgonomic* potential, i.e., the flow of primordial energy from the lower to the higher or from the weaker to the stronger charge. If a certain level of capacity in the cloud has been reached, *if furthermore, the amount of OR energy accumulated becomes insufficient to carry the water, rain sets in*, and lightning occurs. In other words: The OR energy again separates from the water vapor and returns to its usual state of even distribution. This occurs by DISCHARGES, i.e., the "lightning." *The lightning thus represents vast amounts of OR energy concentrated and discharging in a very small area.* The discharge in the lightning brings the high potential down again to the usual level, somewhat like this:



- CL Cloud formation through Orgonomic Potential
 TH Thundercloud
 L.L. Lightnings
 R Rain
 DCH Separation of Energy and Water: Discharge
 H.L. Heat Lightning

Fig. 1. Charge and Discharge in Thunderstorm

The equalization of the OR energy content takes place at times in the form of oscillatory movements. Often, after a heavy and prolonged thunderstorm and rain, the so-called heat lightning or "sheet lightning" sets in in a perfectly clear sky, with no clouds present in the atmosphere. These heat lightnings are not accompanied by thunder. The "sheet" lightning occurs over wide areas of the sky. It has a clearly oscillatory character. It also induces luminations over wide neighboring areas as if by relays. From careful observations of the movements of the heat lightning flashes, it seems probable that the neighboring areas are being excited in succession by the nearest lumination. Heat lightning also occurs with no thunderstorm preceding it, mostly in the late evenings after very warm, summer days. We may assume that heat lightning is a special kind of equalization, by luminating discharges, of unevennesses in atmospheric orgone energy concentrations. Some areas in the atmosphere have become more concentrated than others. This is now being corrected, as it were.

Heat lightning, too, is of a bluish, greenish color. The beauty of the phenomenon is emotionally exciting, as are most orgonotic luminations, such as the aurora borealis and St. Elmo's fire.

We met above with a peculiar function in OR energy: The change from evenly distributed to highly concentrated states, and back again from a highly concentrated energy level to the state of more or less even distribution. The same phenomenon can be observed in the darkened metal OR room.

To begin with, the movements of the grayish, bluish "vapors" or "fogs" are slow, undulating, concentrating slowly here and there, and dispersing slowly again. The longer we sit in the OR energy room, the greater the changes which take place. We can speed up these changes by having more people in the OR room or by exciting the OR energy with a simple spark-producing electrical coil system. We then can see that the even distribution of the OR energy is replaced by sharp, long *lines* of bluishly luminating "*threads*." The concentration increases more and more; if we wait long enough or excite the OR energy strongly enough, whitish, rapid, miniature lightnings appear and cross the room in all directions. Some armored people react to this phenomenon with anxiety.

The parallel to the creation of true lightning in the atmosphere is obvious: *When OR energy is being excited*, either by other orgonotic systems or by small electrical discharges, *the even distribution is replaced by high concentrations*. These concentrations cannot last long, but must discharge back again into the surrounding OR energy ocean, just as it happens with lightnings and the consecutive heat lightning.

The orgonotic metabolism (slow movement in an evenly distributed OR energy substratum → concentration toward the higher charge → orgonomic potential from the weaker to the stronger system → limitation by a certain, as yet undefined "capacity level" → discharge in form of flashes of this built-up potential back again into the substratum and thus equalization of potential—"mechanical potential"—from high to low) is thus visibly discernible in atmospheric OR energy functions as it is in living organisms. OR energy metabolism is common to both the living and the nonliving realms.

This lawfulness has a deep significance. Observing the darkroom phenomena long enough and often enough, we are struck by still another function: The more excited the OR energy in the darkroom becomes, the more the purple or deep violet dots appear in form of patches which appear and disappear in different places. Waiting still longer (if we can stand the now highly charged atmosphere), innumerable tiny, deeply *violet points of light* appear and vanish everywhere. In this respect it is essential to watch the

metal-lined *ceiling*. It usually appears brighter than the walls. The background is an even bluish-gray which moves slowly. Against this background, millions of tiny light points appear and disappear. It is rather difficult to present these functions comprehensively. One must actually see them repeatedly. For many years, I have hesitated to present them. However, as I said before, we must break the deadlock in comprehending these functions and start abstracting, ready to change any error we may commit.

The preliminary and tentative assumption is this: *The orgone energy changes through many different, distinct forms of existence when strongly excited by other organotic systems or by electrical discharges. It is not a matter of different "particles" but of different states of existence of one and the same energetic substratum.* These different states *emerge* from the substratum and return to the original state of even, foggy distribution.

It appears most likely that the numerous "particles" which have been observed and photographed in atomic physics are merely frozen states of different kinds of one and the same basic, primordial cosmic energy. Yet, we must make a clear distinction between cosmic energy BEFORE matter and AFTER matter. The former is represented by the observable forms of primordial, mass-free orgone energy; the latter is represented by the well-known different "particles" of radiation such as alpha, beta and gamma rays, neutrons, mesons and so forth. Everything still remains to be learned here. However, the sharp distinction between cosmic energy *before* and *after* matter is of paramount importance if confusion in thinking and applied method of research is to be avoided. It will be shown in a different context that even the influence on living matter is different. In contradistinction to *primordial* energy, the *secondary*, "after-matter" radiation is dangerous to life.

It may be permissible to use psychological analogies to describe this difference. Secondary radiation—Xrays, gamma rays, neutrons, etc.—as they break out from disintegrating or "smothered" matter, are "bad," "*malicious*," as it were; like wild animals breaking out of prison (*cf.* p. 267ff.). On the other hand, the primordial orgone energy is "benign," "*soft*," life-positive. Another analogy would compare the secondary radiation with hate or sadism which are due to frustration of free movement. Freely moving bio-energy is soft, yielding and benign. *To return:*

An overall view seems to indicate that *from the general energy substratum of cosmic orgone energy arise and sink back again countless individual, luminating, concentrated orgone energy units.* They separate from their matrix

and unite again with it. We could compare this functioning with water waves which arise from an undulating sea under the influence of a stiff breeze, producing white, pointed crests. The waves arise from the sea, live through, each in its own way, a certain lifetime, and sink back, dissolving again into the general substratum. *Thus each unit shows a distinct individuality, a birth, a peak of individual existence, and a decline and death.*

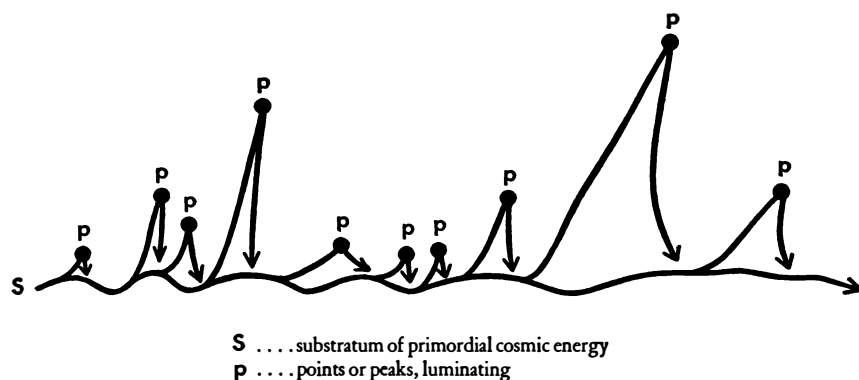


Fig. 2. Birth and Death of Orgone Units

An approximate picture of the birth, growth, decline and death of individual orgone energy units arising from and returning to the general substratum of cosmic energy. Common functioning principles of rise and fall of galaxies, planets, organisms, clouds and primordial cosmic energy.

It is exactly these peaks representing the concentrated orgone energy units which manifest themselves on the Geiger-Müller counter as the action of orgone energy impulses, varying in number per time unit with the condition of the atmospheric orgone energy. The paper on "The Geiger-Müller Effect of Cosmic Orgone Energy" (p. 201ff.) describes these orgone energy functions in their physical manifestation.

"Particles" in the Air

One can observe luminating points in the atmosphere in four ways:

1. By looking into the sky with unaccommodated eyes—into the far distance, as it were. One sees luminating points floating and moving slowly in all directions.
2. By looking at the ceiling of a partially darkened room.

3. By watching a sunbeam which penetrates a slit in a blind. One sees dancing, whitish luminating points which slowly drift or fall toward the floor.

4. By looking with relaxed eyes past one's telescope ON THE OUTSIDE of the tube, the latter directed toward the sun. This last observation is most impressive. The air surrounding the tube and in front of the telescope is filled with slowly downward-drifting, luminating, whitish points of different sizes. They float in all directions, often spiraling, but generally in the direction of the earth.

Let us not do away with these most interesting phenomena by simply calling them "dust particles." The next logical question is: *How do "dust particles" get into the air?* And, if now somebody would adduce the "well-known cosmic dust": *How do "particles" arise in the universe?* One cannot see atoms or molecules, therefore these points cannot very well be particles of matter below average visibility. If they are "dust" particles, they must come from somewhere. The "particles" of atomic physics do not agree with one single cosmic energy problem. Orgonomy approaches the question from a different angle: It postulates and demonstrates a MASS-FREE energy in the universe, in agreement with "material waves" or "wave particles" of nuclear physics. *These luminating points may well be OR energy units which become visible in the glaring sunlight, being triggered into lumination.* This interpretation does not say that there are *no* dust particles. They certainly exist. But we would like to know how and wherefrom they derive. It is entirely within our framework of functional thinking to assume that the "dust particles" are actually particles of matter which come about by apposition or concentration of orgone energy units. The problem on the whole still remains open. However, careful observation should be applied to the above-mentioned appearances of luminating points in the atmosphere.

The so-called cosmic rays have remained invisible to the naked eye. It is questionable whether the present theory of "cosmic rays" will remain standing, carefully worked out as it is. The measurements of spontaneous electroscopic discharges ("natural leak"), on which all these interpretations are based, are doubtlessly *incorrect*, since electroscopes discharge *more slowly*, and *not* faster, in a concentrated OR energy atmosphere. That the cosmic rays have eluded explanation so far so consistently, is probably due to the wrong interpretations in classical physics of the electroscopic discharges:

If cosmic rays are functions of atmospheric OR energy, then they are NOT coming down on us from the universe (WHEREFROM??), but are *part and parcel of the OR energy envelope of the planet*. They are then densest, not in higher, but in lower altitudes, since we must *reverse* the interpretation of the electroscopic discharge: THE FASTER DISCHARGE IN HIGHER ALTITUDES INDICATES A THINNER OR ENERGETICALLY LOWER CONCENTRATION OF COSMIC ENERGY, AND NOT, AS IN ATOMIC PHYSICS, A HIGHER OR ENERGETICALLY STRONGER CONCENTRATION.

In view of the existence of an atmospheric energy which functions contrary to electrical laws, it is advisable to review carefully all valid measurements and observations of cosmic rays, to compare them with the results of orgone physics and to see what is and what is not a function of the cosmic energy ocean which is densest around heavenly bodies.

That the electrical measurements in micro- or electronvolts only divulge a minimal amount of the actual energy at work should also be carefully kept in mind. The electrostatic unit (300 volts), and not the microvolt, is the appropriate measuring rod in the realm of cosmic energy. Electrical energy is only a minor, minimal manifestation of the cosmic energy. What appears at the voltmeter as the charge of the skin surface in terms of 10 to 50 millivolts, actually represents many thousands of volts in terms of OR energy as measured at the electroscope.

These technical details are of paramount importance. The old electrostatic machine regains its value in the realm of cosmic energy. The Faraday potential, achieved by moving magnets in the field of magnets, becomes a secondary function. We shall slowly get used to these changes. We are dealing with tremendous amounts of energy, compared with which a 110 or even 5000 volt tension becomes insignificant.

So far, the theory we have built to comprehend the visual functions seems to be in solid agreement with the light points and light streaks which can easily be seen in the dark OR room. Can this theory also be strengthened by *objective, physical* observation?

In a preliminary communication in the *Orgone Energy Bulletin*, July, 1949, two photographs of OR energy light functions were published. The photographs are reproduced here. The one depicts the OR energy field between two human palms; it was produced by letting an Xray beam pass through an excited OR energy field. It shows a wavy pattern in the darken-

ing of the emulsion, *as if matter of small uneven density had been placed between the palms*. Also, at the tips of the fingers and between them, radially proceeding patterns can easily be distinguished. This Xray picture agrees in essential details with what we see in the darkroom as "foggy" and "wavy" formations. The same is true for Xray pictures of an alcohol flame (*cf.* photos 1 and 3, pp. 198a-198b).

The second photograph depicts OR energy rays and their effects on simple photographic plates (*cf.* photo 2, p. 198a). The source of the rays was old bionous earth. After a few days of irradiation of the plate in complete darkness, light of 1/10th of a second duration was permitted to impinge on the plate. Thus, and only in this way up until now, can the OR energy effects be made visible photographically. This method differs from that which uses Xrays. However, they have in common the fact that photographic plates are NOT influenced by electromagnetic waves, where orgone energy had already influenced the emulsion *first*. The affected regions are *blackened* on the white copy print; they are *not* affected by ordinary light where OR energy had acted first; also, *the OR field impeded the penetration of Xrays*. This reaction is the exact opposite of that produced by light. Thus *OR energy and light are opposites* as far as photographic plates are concerned. Yet, there must exist a close interrelation between light and orgone energy, since we can see light in a completely darkened room. This, now, is the great problem: HOW IS LIGHT RELATED TO OR ENERGY?

We may assume that the OR energy ocean which fills all space, is the carrier of the vibrations related to light. However, the relationship seems to be a much closer one. *The OR energy unit itself*, as it develops from and sinks back into the OR ocean, emits light, *strongest and sharpest at the peak and weakest during the period of rise and fall*.

Careful examination of the dots on photograph 2, p. 198a, reveal several most interesting details:

1. Most of the dots are *black*, only a very few are white, i.e., corresponding to effects of ordinary light.
2. Every single one of the black dots has a sharp "center" or "core," and a less sharp periphery or "field."
3. The intensity and the size of the single dots vary greatly.
4. Some of the white dots show a sharply defined BLACK center.

It is advisable not to interpret all these details at once. A major mistake made at this moment might well jeopardize a correct explanation for decades.

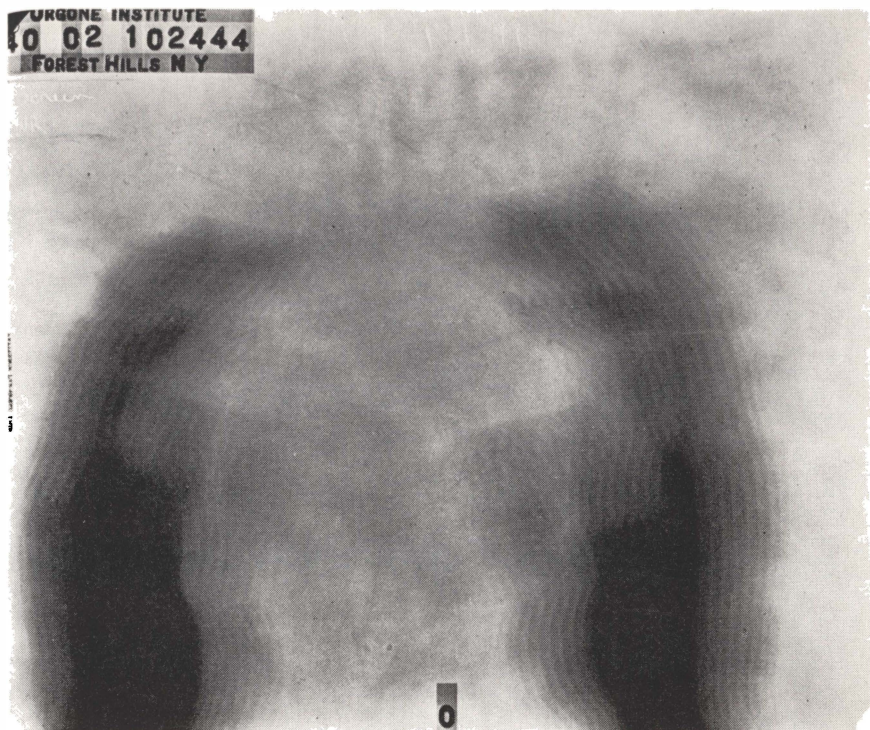


Photo 1. Xray photograph of the excited OR energy field between the palms

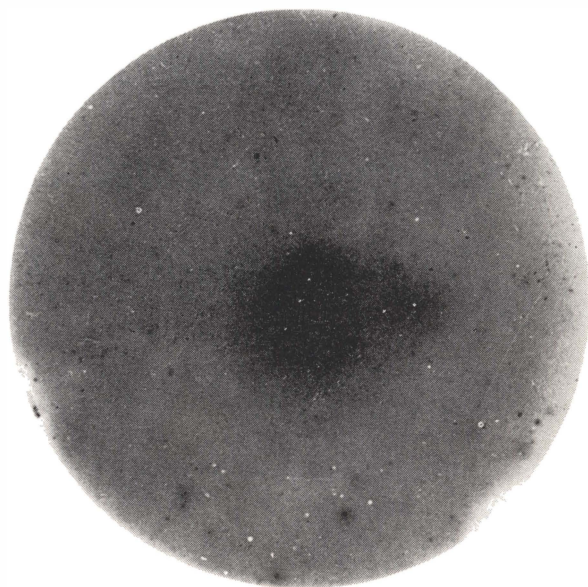


Photo 2. Photographic effect of OR energy from earth bions

198b



Photo 3. Xray photograph of OR energy field from an alcohol flame. The flame was placed between the Xray tube and the Xray plate. Exposure: 0.1 second, 64 kV, 30 mA.

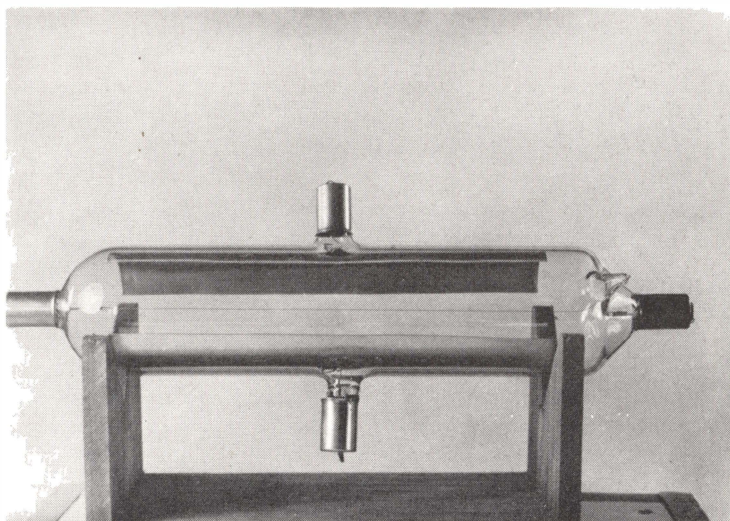
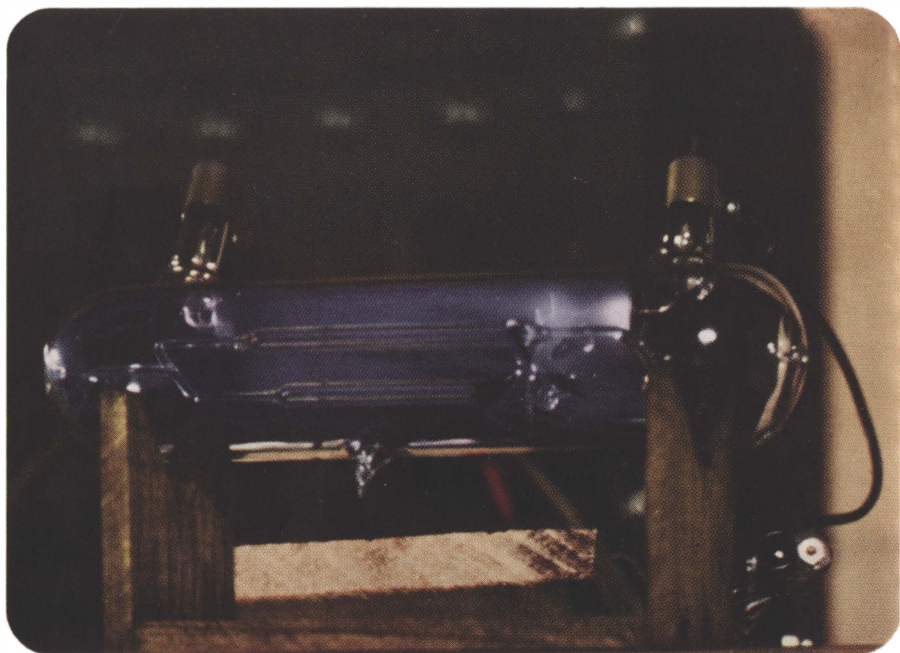


Photo 4. A 3-electrode, 2-plate vacuum tube (*cf.* Ch. 4)



KARI BERGGRAV

Photo 5. OR energy luminating in an 0.5 micron pressure vacuum tube (*cf.* Ch. 4)

We can, however, coordinate one definite characteristic with what we already know about OR energy functioning:

1. The units of OR energy are not rigidly equal. There are not two units exactly the same in size or intensity.
2. Each dot shows, if well developed, a "core" and a "periphery," the former always more intense than the latter.
3. The white fields around some of the black dots point to a luminating area around the OR energy unit. This is exactly what we see with our eyes in the darkroom: The luminating centers have a luminating "aura" of lesser intensity.

This coordination of the physical with the psychological observation forms a sound foundation for further investigations.

The black and white dots we see on the photograph also agree with the theory we have tentatively built to comprehend the functioning of the cosmic OR energy. *What we see are most likely the peaks of the single units.* If we cut one of the well formed single units crosswise, we can easily see that the POINT is surrounded by a less luminating FIELD.



We wish to stop at this point. Further research will probably amplify these first theoretical formulations.

Let us summarize our results so far:

1. The primordial substratum, the cosmic OR ocean, is moving in an undulatory fashion and in a certain direction, in our planetary system from west to east as a whole, faster than the planetary globe.
2. Out of this undulating substratum innumerable single concentrations of OR energy emerge, comparable to sharp crests of single waves of greatly varying intensity and extensity.
3. Both the OR energy ocean and the single OR energy units luminate.
4. The natural color of the general substratum is bluish-gray or bluish-green—sky, ocean, protoplasm, bions, etc.; that of the concentrated units is deep purple or violet. Gross, streak-like concentrations appear whitish-blue and are rapid, in contradistinction to the other types of OR movement.
5. The formation of concentrations to single distinct units follows upon excitation of the OR energy ocean in various ways: presence of other orgo-

notic systems, electromagnetic sparks, metallic obstacles, and, foremost, nuclear energy (*cf.* p. 267ff.).

6. The basic character of all these phenomena is of a *functional* nature. There is nothing mechanical, rigid, or absolutely identical in it. Yet, there is clearly a CFP at work, a common law which governs all distinct units, in the variations be ever so manifold. Each single unit possesses a sharp "core" and a less sharp "periphery." This agrees with the bio-energetic structure of every living organism and also with planetary systems. They, too, are composed of a core and an energetically weaker periphery.

Each single unit passes, accordingly, through four typical phases:

1. *Birth* through *concentration* of a certain amount of primordial energy.
2. *Rise in energy level* through further concentration: "*Growth*."
3. A sharply luminating PEAK, most closely allied to a point of light.
4. *Decline* and *death*; the unit merges again with the substratum. Thus birth and death, growth and decline, the CPF of all living and nonliving nature, seem to be performed already in the basic functioning of the single tiny OR energy unit. *Each unit is a unique, unrepeatable event. Yet all orgone energy units follow a common law of functioning. Lawfulness and endless variation are thus not incompatible opposites; they are paired functions of the CFP of nature in general.*

May, 1950

3. The Geiger-Müller Effect of Cosmic Orgone Energy (1947)

OUTLINE

Orgonomic "reversed" potential. Orgone energy different from electromagnetic or mechanical energy. Transition from OR energy to electricity. Erroneous assumption with regard to Geiger-Müller counter and OR energy. Discovery of motor reaction of OR energy in the GM counter. Importance of orientation in biophysical phenomena. Orgonotic "soaking." Interaction of two orgonotic systems. Electromagnetic energy antithetical to OR energy. OR energy measurements at the GM counter. Charging of GM tube with OR energy. Range of OR energy action at the GM counter. So-called cosmic radiation the normal expression of OR energy. Charts of OR energy action at the GM counter.

When, in January 1939, I discovered the orgone radiation in the SAPA bions,¹ some problems confronted me which I could not solve in that early phase of my work. Electrical batteries went dead in the room where the radiating bions were kept. Instruments made of iron such as scissors and pincettes became magnetic. The smooth, steady glow of radium on the dials of wrist watches was extinguished when I sat in the darkroom, and was soon replaced by a vivid *bluish-green flickering*. It struck me as peculiar that none of the usual electromagnetic instruments such as ammeters and voltmeters, gave the slightest reaction to the strong radiation which I felt and could demonstrate objectively. Paper discs covered with fluorescent zinc sulfide (ZnS) absorbed OR energy and emitted a strong light of bluish-green color when they were bent. This reaction disappeared when the zinc sulfide disc was ventilated in fresh dry air. Also, evacuated bulbs filled with argon

¹ Cf. THE DISCOVERY OF THE ORGONE, Vol. II, pp. 70-77, 1948.

or helium would soak up OR energy and emit light when a plastic rod charged with organismic OR energy was moved next to them.

It seemed most peculiar that the OR energy had not been discovered long ago by the physicists, since, from 1940 on, I could perceive and demonstrate this energy also in the soil and in the atmosphere. Later on, I was able to formulate an opinion concerning this:

OR energy functions according to laws which differ greatly from the laws of mechanical and electrical energy. *In the realm of OR energy, the stronger system attracts the weaker system. The "orgonomic potential" is directed from the lower level or weaker system to the higher level or stronger system*²: OR energy does not flow from an ameba to a bion, but, on the contrary, the ameba attracts the bion and withdraws its energy. When a charged electroscope is touched with one's finger, the energy does not flow from the organism to the electroscope, but, on the contrary, the organism (the stronger orgonotic system) withdraws the energy from the weaker system, the electroscope: the leaf *collapses*. A strongly charged cloud in the sky does not give off its energy to a smaller cloud, but, on the contrary, it attracts the latter and incorporates it, just as the ameba attracts and incorporates a bion. In the OR energy accumulator there exists a continuous potential of heat between the *higher* temperature *above* the accumulator and the surrounding air with its *lower temperature* ($T_o - T = 0.1-1.5^\circ\text{F}$ in a closed room). The special arrangement of metal inside and nonmetallic matter outside is sufficient to attract OR energy from the atmosphere and to maintain it continuously at a higher level of action or concentration as compared with the average atmospheric OR energy.

These and many other similar facts contradicted the assumption that the mechanical laws of potential difference were exclusively valid. The discovery of the OR energy opened a vast realm of nature where *the potential appears to be "reversed"*; where the flow of energy or the direction of potential is from the weaker to the stronger system. Although these facts seem to contradict mechanical physics, they are in agreement with the functions of "gravitation" and of many basic biological processes, such as absorption of food stuff in the intestines. The energetically stronger blood stream absorbs energy from the inside through the walls of the intestines. This fact cannot be

² Cf. Reich: "Cosmic Orgone Energy and Ether," *Orgone Energy Bulletin* 4, 1949, pp. 143-159.

explained on the basis of mechanical laws of osmosis or otherwise. (Cf. THE DISCOVERY OF THE ORGONE, Vol. II, pp. 307 ff.)

Thus, two basically new facts were established in the course of several years of OR research:

1. *The orgonomic potential functions contrary to the mechanical potential, from the weaker toward the stronger system.*

2. *OR energy is basically different from electromagnetic or mechanical energy, possibly even antithetical to it.*

These two facts gained increasing importance as the years went by. Without their recognition, not a single step further could have been taken in my work on the OR energy. They gained crucial importance in connection with the first Oranur experiment in 1951.

On the other hand, a connection between OR energy and electromagnetic energy had to be postulated. I had to assume that we were dealing with the basic cosmic energy, and that electricity and magnetism were *secondary* functions of this primordial energy; therefore, it was necessary to search for the "connecting link," the CFP (common functioning principle) between the general and basic energy process in nature and the special electromagnetic function. For many years this problem was before me, but I had nothing to say about it. The many different experiments did not reveal any trace of transition from cosmic OR energy functions to electrical or mechanical energy functions. Nevertheless, it seemed safe to assume that a simple electrical battery functions according to such a transformation of OR energy into electromagnetic energy.

Although I had established the two-fold position: "*OR energy is not electricity,*" and "*There must be a transition from OR to electricity,*" my work became, for more than five years (1942-1947), the victim of an unpermissible negligence. As if unduly prejudiced, I hesitated to acquire a Geiger-Müller device to ascertain whether or not OR energy is identical with known forms of radiating energy. I regret having been so negligent for such a long time. As an inadequate excuse, I may mention the fact that a Geiger-Müller device costs several hundred dollars; that I had spent a great deal of money on OR research already, and that I hesitated to spend more money on an apparatus which might only have proven again that OR energy is *not* demonstrable with devices designed for electromagnetic energy. My main argument was that the physicists who had worked with electromagnetic radiation by

means of the Geiger-Müller counter, would certainly have discovered cosmic OR energy long ago if this apparatus were able to indicate its presence. Since I knew that such a discovery had not been made by the nuclear physicists; since, furthermore, what I had learned about "cosmic radiation" in the literature, especially in the book by Millikan, did not fit any of the facts I had learned about the OR energy, I was not eager to obtain a Geiger-Müller counter.

The theory of cosmic rays claimed that the rays were coming to the earth "from outer space"; my own observations, on the other hand, taught me that OR energy does *not* "come from outer space," but is functioning right here on our planet. The theory of cosmic radiation claimed, furthermore, that there were only a few incidents of rays per square centimeter or inch, whereas my visual observations on the screen in the metal-lined OR energy darkroom showed hundreds of bright rays per square inch each second. There was agreement only in one respect: The energies involved seemed tremendous compared with other types of radiation, as, for instance, radium or X-rays. Therefore, the assumption prevailed that the Geiger-Müller counter would not give any results.

But my conscience did not rest. In the spring of 1947, I ordered two Geiger-Müller counters from the electronic manufacturers Herbach & Rademan, Philadelphia: one, Model GLP-215, designed to be carried around and powered by batteries; the other, Model CMB-3A, designed for more exact work with electromagnetic radiation, fed by line voltage. My main objective was to find out whether these devices would react to OR energy, and whether the reaction would be the *same as that to cosmic radiation, or different*.

The Discovery of the Motor Reaction of OR Energy in the Geiger-Müller Counter

One Geiger-Müller Field Set, Model GLP-215, was dispatched on May 1, 1947, from the factory in Philadelphia to my laboratory at Orgonon, Maine, and arrived there on May 31. I assembled the device immediately upon arrival. It was important not to let the device go unused in the highly charged laboratory for more than one hour. Previous observations had taught me that electronic tubes and other devices consisting of a vacuum, whether or not they were gas-filled, and metal parts inside the evacuated space, would not quickly absorb OR energy, and therefore give different reactions than

pected. I wanted to test the device first with its original function, namely, to indicate cosmic rays and Xrays. I have a small Roentgen tube in my laboratory, but I had never studied any radioactive substances very thoroughly, except their scintillation effects, etc. I began to test the device by carrying it around in the main hall of the laboratory, which is 70 feet long and 30 feet wide. Adjoining this hall there is a specially constructed "Orgone Energy Room," lined with sheet iron and 20 x 18 feet wide.³ Through the earphones I could hear some clicks; about one or two per minute. There was no increase of clicks when I approached the metal walls of the OR room or when I put the metal cylinder which contained the counter tube into the two-fold or the twenty-fold OR accumulator. Accordingly, I was at that time, firmly convinced that the field set Geiger-Müller counter was useless for OR research. For many years, the temperature difference between the accumulator and the control arrangement was *positive*, varying only with the weather as to the number of degrees in Centigrade ($T_o - T$). There was no doubt, either, that the metal room was highly active with atmospheric OR energy, visible in the dark on the special screen built for direct observation of the energy phenomena. It seemed most peculiar that such a delicate electronic device as the Geiger-Müller counter should not be able to indicate this powerful and abundant energy. It seemed to confirm my point of view that OR energy is not electromagnetic energy and that electromagnetic devices fail to indicate OR energy.

On the second day, when I tested the device again, the impulses were still fewer, only two in a period of about a quarter of an hour. During the following ten days *no more impulses were heard at all. The device was completely "dead."* There were no reactions even in the vicinity of a small Xray source. After a few more days, I decided to write to the manufacturer to cancel the order for a larger Geiger-Müller set which I had ordered some time ago, and to inform him that the field set had proved useless for OR research.

I deposited the field set on a table in the large hall, about 15 feet outside the OR room. I gave up experimenting regularly with the counter. But I used to turn on the batteries about once or twice every week, to see whether anything had changed. The Geiger-Müller counter remained silent for many

³ This room had to be disassembled in March, 1951 after the first Oranur experiment.

weeks. The counter tube was not taken out of its cylindrical metal container. Neither was the counter tube near or inside any special orgone-accumulating arrangement. I had reconciled myself to the seemingly established fact of the uselessness of the device.

Then, on August 8, 1947, at about 4 o'clock in the afternoon, I was passing the table where the counter was located; in passing, I turned on the battery. *The pointer of the impulse recorder (Cyclotron) began instantly to turn with great velocity, about one full turn per second.* I was so thoroughly convinced of the uselessness of the device, and so prejudiced against it, that I did not pay much attention to the rotation of the pointer. It struck me as peculiar, but the extreme speed of the rotation of the indicator, together with the failure of reaction over a period of more than two months, made me think that something had gone wrong with the device; that perhaps connections had become loose and the turning of the pointer was due to some direct action of the battery. This was, of course, a wrong idea, as I soon found out when I thought the matter over. My prejudice was so strong that I forgot all about it the rest of that day. I did not think of it until the next morning when I re-entered my laboratory. I turned on the voltage again, and the impulse recorder reacted again with about one full revolution, corresponding to *100 impulses per SECOND*. I did not understand it at all. I knew that the usual reaction of the impulse recorder to Xrays or cosmic rays amounted to only a very few, from 12 to (the usual) 20-25 impulses per minute. There was no atomic pile in the vicinity, and even if there had been, the reaction would still have impressed one as incredible.

Slowly it dawned on me that this was a major discovery, *possibly the action of a motor force in OR energy*. I felt that only the rapid whitish rays, which I knew so well from observations on the screen in the darkroom, could account for the rapid rotation of the pointer, *if no basic error was involved*. And I was very much inclined to believe that some error was involved. That same morning I registered about 6000 cpm (counts per minute), and the next day, on August 10, 1947, I once counted as many as 2000 impulses in 15 seconds.

I continued testing the device on August 11, between 6 and 9:30 A.M. The counts were increasing from 125 to 134 and even 162 PER SECOND, or about 10,000 cpm. The previous day I had constructed a special cylindrical OR energy accumulator consisting of an outer layer of rock wool, a medium

layer of steel wool, an inner second layer of rock wool and an innermost cylinder of sheet iron. I intended to widen the scope of my controls, but I was afraid of losing the phenomenon and of being unable to find it again. Therefore, I decided to execute a legal document on the event before further experimentation, especially before extinguishing the reaction.

My office called the lawyer's office, Mills and Mills of Farmington, Maine, 44 miles away. Between 2 and 6 o'clock in the afternoon of August 11, 1947, I demonstrated the revolutions of the pointer on the recorder to Dr. Theodore P. Wolfe, Mr. Tom Ross, the caretaker of Orgonon, the lawyer Peter Mills and my assistant, Miss Ilse Ollendorff. The document⁴ was drawn up and sent out during the following days to be deposited with several people and offices.

In experimenting with OR energy, one must be prepared to encounter most unusual reactions. There is nothing one has learned in mechanical physics or astronomy about such phenomena. The safest way to proceed is to orient oneself in accordance with *biophysical* phenomena. For instance, if one expects instantaneous reactions from turning switches on and off, one is usually wrong. If one waits patiently for days or even weeks, one may obtain satisfactory results. This is the reason why I warn against "control experiments" by mechanistically operating scientists. They are not accustomed to the type of functioning that is typical for OR energy. A mechanistically oriented nuclear physicist would have turned on the switch of the Geiger-Müller Field Set with the counter tube in the neighborhood of an accumulator, expecting some sudden reaction. I did the same; but I was acquainted with the slowness of all orgonotic processes, and therefore, I continued to test the device for over two months; whereas, the mechanistic physicist, used to electronic functions, probably would have given up when no reaction occurred at once.

THE COUNTER TUBE HAD FIRST TO SOAK FULL WITH ORGONE ENERGY IN ORDER TO BE ABLE TO INDICATE ORGONE IN THE VICINITY.

An argon gas tube will give no lumination shortly after having been brought into the laboratory. If, however, one keeps this same gas tube in the metal-lined OR energy room for a few weeks, it will sooner or later, depending upon the prevalent atmospheric conditions, react with strong lumination

⁴ *Cf. Orgone Energy Bulletin*, January, 1949, p. 8.

to a plastic rod charged with OR energy from the hair, moved slowly along the tube.

Another important point is this: One fails in OR physical experimentation if one works with the electrical theory of "positive" and "negative" charges. One succeeds if one adheres to the specific interaction of "*two organotic systems*"; they are not charged in opposite directions, but with one and the same type of *nonpolar* charge. *But there must be two organotic systems if any reaction is to occur.*

Another point of great importance is the *reversal of potential*: *The higher charge attracts the weaker charge.* This energy principle also proved correct, as the work proceeded, with the Geiger-Müller counter.

Let us summarize the principles of thought which were applied in the discovery of the organotic motor force:

1. *OR energy does not follow the principle of positive and negative charges but that of the interaction of two "organotic systems."*

2. *In OR energy processes the stronger system attracts the weaker system, or expressed in a different way, the potential is directed from the lower to the higher charge:* ORGONOMIC POTENTIAL.

3. *OR energy is basically different from electromagnetic energy.*

The first principle seemed valid *in all biophysical functions.*

The third principle was a necessary assumption if the existence of a basic, universal, all-pervading cosmic energy was to be sustained on the basis of the organotic phenomena.

The second principle was based on microscopic and electroscopic phenomena, but it was unsatisfactory. The logical question following this principle was: If the potential is directed from the lower to the higher level of energy, is there any limit to the increase of energy level? Does the charging process continue *ad infinitum*? And, if not, as it was necessary to assume, *what kind of function limits the charging process?* A living organism, it is true, keeps a higher level of energy functioning than the surrounding environment. But it does not continue raising its energy level indefinitely. It shows a certain *constant level* of functioning, a *plateau*, so to speak. Therefore, it was necessary to assume that there also exists in organotic functioning the *opposite* direction of energy flow or *discharge from the higher to the lower level*, i.e., *the classical mechanical* potential, from high to low.

The functional thought model for the solution of this problem was the following:

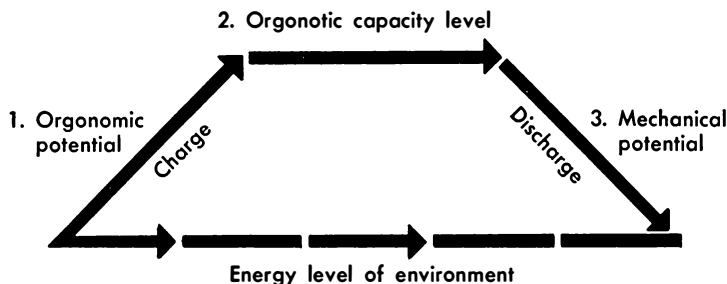


Fig. 3. Schematic presentation of the ORGONE ENERGY METABOLISM and the ORGONOTIC (REVERSED) POTENTIAL, derived from living organotic systems and applied in nonliving organotic systems.

The organotic potential from the lower to the higher level operated in the direction of $A \rightarrow B$. A constant energy level was maintained on the plateau $B \rightarrow C$. The height of the plateau $B \rightarrow C$ as compared with the level $A \rightarrow D$ would differ with different organotic systems, but its basic principle would remain the same: A certain *dynamic* (not static) CAPACITY of the special organotic system. The reversal of the potential from the direction Low \rightarrow High to the direction High \rightarrow Low would occur at C and would function from $C \rightarrow D$. It would represent the well-known physical principle of ENERGY DISCHARGE through a potential from the higher to the lower, or from the stronger to the weaker system. Thus, there would exist an OR ENERGY METABOLISM in the living organism as well as in the OR accumulator or in any other type of organotic system.

This energy metabolism is of a *functional* nature, i.e., constantly shifting its energy content, and keeping a certain level *above* the surrounding atmosphere within certain limits of variation. *Charge* and *discharge* of OR energy would, accordingly, constitute the two variations of the common functioning principle (CFP) of ENERGY METABOLISM.

$$A \begin{matrix} \nearrow A_1 \\ \nwarrow A_2 \end{matrix}$$

In bio-energetic functioning we have encountered this sequence of *charge* from low to high and *discharge* from high to low in the function of the organism. This basic bio-energetic function has since remained with us as a guiding line in all organomic investigations and will remain with us for a

long time to come. Its sequence in biology is *Charge* \rightarrow *Discharge* through CONVULSION.

The principle of a charge before discharge without an *artificial* supply of energy is unknown in mechanistic energy functions. Yet it is an essential characteristic not only of living functioning but also of many functions in nonliving nature. A planet or a fixed star also keeps its energy level continuously higher than that of the environment.

The problem of the reversed or orgonotic energy potential was not solved practically until ten months later when the orgonotic motor force actually set a motor system into motion. The relationship of OR energy to electromagnetic energy was utterly obscure; I did not understand it at all at that time. Its final solution opened up a vast field of technical potentialities.

Let us now return to our experiments:

A strongly charged metal-lined OR energy room was a few feet away from the counter. My plan was to test the phenomena in the vicinity of the OR energy room first before making tests in a building which did *not* contain any arrangements for the concentration of atmospheric OR energy.

I observed the rotation of the pointer in the impulse record for another three days. Then I called up the manufacturer, Mr. Rademan in Philadelphia, told him the basic facts and asked him what was the fastest rate of action achieved so far on Geiger-Müller counters with atomic energy. Mr. Rademan told me that the greatest speed so far was around 50 impulses per second or 0.5 rotations per second (= 3000 cpm). The average in my laboratory at that time was about 1.15 full rotations per second, or 6-8000 cpm.

Two facts had to be established beyond any doubt:

1. *Was any error involved? Had the counter device gone wrong?*

In order to answer this question satisfactorily, I ordered a *second*, more precise Geiger-Müller counter, Model CMB-3A from the same firm.

2. *Was the motor force which made the mechanism of the impulse recorder turn at the rate of about 120 impulses per second purely orgonotic in its nature, or was there any kind of combination with electromagnetic energy at work in the device?*

It was fairly safe to assume at that stage of experimentation that OR energy somehow was transformed into *electromagnetic* energy, and thus, furthermore, was changed into *mechanical* energy. *But:* Did the OR energy in the counter tube and in the surrounding air do the turning itself, or was it *only exciting electromagnetic energy* in the electronic tubes, thus making *electricity*

turn the wheel? These questions could not be answered at that time.

On August 14, 1947, I decided to "kill" the reaction of the counter tube by taking the tube out of the metal cylinder in which it was located. I found the following facts:

1. As soon as the counter tube was outside the metallic cylinder which obviously had acted as an OR energy accumulator, the rotary reaction failed to appear. The impulse counter was ineffective. This was repeated many times, always with the same result.

2. The reaction reappeared instantly when the counter tube was inserted into the metallic container or was put naked into the cylindrical OR accumulator.

3. It struck me that a humming noise would set in when I approached my hand to the handle of the counter tube or when I touched it with my fingers. *My body OR energy had some effect on the action of the counter tube.* Later, this observation turned out to be the key to the problem of the quantum action in bio-energy.

4. The rotation of the pointer would set in instantly when I brought the naked counter tube close to the OR accumulator walls or even to my body. The reaction stopped instantly when the counter tube was removed from the accumulator beyond a certain distance, approximately two feet. *My body reacted the same way as the OR accumulator, exciting the counter tube.* This *functional identity between a living and a nonliving OR function* was familiar to me. I had seen it often before on other instruments.

I was satisfied to be able to "kill" the effect and to regain it at will.

On August 19, 1947, I transferred the instrument from the hall to the inside of the OR energy room. The phenomena were basically the same as outside, only slightly stronger. The pointer moved a bit faster. The naked counter tube gave no reaction on the impulse counter when it rested on the table. But it reacted instantly when it was brought near the OR energy accumulator on the same table, or when it was brought near the organism. The same reaction occurred with several other persons who were present in the laboratory.

On August 21, I received a shock when I touched the handle of the counter tube. *The battery was not turned on.* I did not understand it.

It would, at this point, be useless to try to explain the orgonotic action by the mechanism of the special GM counter. The mechanism would be understood in terms of the energy action; and about this we know nothing at all.

Therefore, we must forego discussions of GM diagrams until we find the bridge from OR energy to electromagnetic dynamics, if at all.

I observed that *before the onset of rain, the reactions of the impulse counter were weaker*; the pointer turned more slowly or with more effort. This fact was in agreement with other well-known orgonotic phenomena, such as the temperature difference $T_o - T$ becoming smaller and the electroscopic discharge accelerating in bad weather. As soon as the rain stopped, the reaction became faster again, apparently due to the liberation of orgone energy from the clouds.

I succeeded in making some further important observations:

I could *weaken* the reaction and even make it disappear by putting the naked counter tube in the fresh air overnight for about 24 hours.

I could *strengthen* the reaction by putting the counter tube back into the orgone accumulator.

Since water is capable of taking away all effects of the OR energy, I ran water over the surface of the counter tube. This had a strongly diminishing effect.

After having extinguished most of the sensitivity of the counter tube, I let it charge up again in the metal room and proceeded to make observations in complete darkness. Working in the darkroom is most important. It is the most convincing and productive way to find things out in OR research by *visual observation*.

I transferred the GM counter to the inside of the metal room. On several evenings, observations in the dark were made in the presence of several other persons—observations which answered some important questions.

I am accustomed to sitting in the orgone metal room for about two hours. After that period, the OR energy becomes so excited that I must leave the room. The first evening when the GM counter was in the orgone room, I had to interrupt the observations after only twenty minutes. The air was very "heavy," the "pressure," as we are accustomed to call the perception of concentrated OR energy, was unbearable. I had time enough to see clearly that the motion of the blue-gray luminating "clouds" was much faster than usual. The sparks, like small flashes of lightning, were moving rapidly, appearing and disappearing, through the room. They indicated strong excitation of the OR energy.

The next evening the riddle was solved:

This time we managed to sit in the metal-lined room for nearly an hour

and a half, and we could secure important observations. I had not turned on the voltage of the Geiger-Müller counter until after about three-quarters of an hour. Before using the Geiger-Müller counter the previous evening, I had worked with it in the OR room for many hours during the day: *Therefore, the exciting factor was the high electrical voltage!* As soon as I let the induction coil operate again, the same phenomena appeared which had baffled me the previous evening: The motion of the organotic clouds became faster; there was a tendency for these organotic clouds to form narrow, strongly luminating streaks. The broad patches of OR clouds were concentrating more rapidly than usual. Finally, strong, lightning-like quick sparks crossed the room in all directions, the air became very heavy, and we had to leave the room soon thereafter.

I had learned some new and very important facts about the functioning of OR energy:

ELECTRICAL ENERGY EXCITES OR ENERGY AND CAUSES IT TO CHANGE FROM THE STATE OF CLOUDY PATCHES TO THAT OF QUICK WHITISH RAYS.

Until then I had thought that the atmospheric OR energy consisted of three *distinctly different* kinds: blue-gray, foggy patches which had a very slow, cloud-like movement; deep blue-violet light points which moved along curves similar to spinning waves; and, third, bright whitish sparks or small flashes of lightning which appear clearly as tiny fireworks on the screen of the organoscope when a very dim green light is turned on. Now it became most probable that there is *only one type* of OR energy *which changes its appearance and form according to different conditions*. Very much remained here to be clarified. But the fact could be safely established that ELECTROMAGNETIC ENERGY IS "ANTITHETICAL" TO OR ENERGY, as if "in disagreement" with it; they contradict, extinguish or excite each other. This observation will be of great value when the attempt is made to understand the interaction of high electrical tension and concentrated orgone energy within the operating gas-filled counter tube. We shall be able to establish a functional identity between the phenomena in the dark metal room and certain phenomena pertaining to atmospheric OR energy in its excited state, e.g., during sheet lightning without clouds, and during thunderstorms with lightning. It will be shown later that this observation became one of the main guiding lines toward the discovery of the organotic motor force. And finally, the severe ORANUR reaction (*cf.* p. 278ff.) is comprehensible only in the light of these preliminary observations.

Let us return to the further development of our experiments.

After a few days, I took the field set counter out of the OR room and deposited it again in the hall outside. I detached the counter tube and put it on the porch in the open fresh air. Tests after 24 hours' ventilation showed that the motor force had nearly died out. There were only a few impulses which were unable to make the pointer turn continuously.

I began to test the larger counter set immediately after its arrival, in order to determine its functioning *before* the *new* counter tube could soak itself full of OR energy. I kept the new counter tube outside the building in the fresh air. The new device was located about 15 feet outside the wall of the OR energy room on a wooden table. The first test gave:

42 CPM to radium on my wristwatch
36 CPM to a small Xray tube
20 CPM to a one-cubic-foot OR accumulator
with the counter tube naked inside.

The threshold voltage was 750 volts in all three tests.

In the early afternoon, the reaction of the new counter tube to the air in the hall was already 25, and a few hours later 36 CPM at a threshold voltage of 700 volts. Radium from my watch dial accelerated the reaction. But it should be kept in mind that my radium dial was exposed for many years to the effects of OR energy and is, therefore, an unsafe source of nuclear radiation (NR) for *control*.

On August 29, 1947, at 6 A.M., the reaction was around 30 CPM with the counter tube free and removed from special orgone concentration, at a threshold voltage of 650 volts. The counter tube was kept in the fresh air *outside* the laboratory building in the intervals between the tests.

At 9:30 A.M. the same day, the speed was 24 CPM with 650 volts.

Increase of voltage from 650 volts by jumps of ca. 25 volts each up to a total increase of 250 volts, gave no marked change in the speed of reaction.

At 11:15 A.M. the same day, I transferred the new Geiger-Müller counter to the OR metal room. The counter tube was left outside the building during the intervals between the tests. *The rate was the same inside the OR room as outside, ca. 25-30 CPM.* No tendency to rotation of the pointer could be observed with higher voltage up to 1500 volts. Therefore, the observed rotation effect had not been due to higher voltage, as some anxious "critics" glibly remarked when they saw the GM reaction of OR energy.

At 3 P.M. the same day, the rate increased to 48-50 cpm at ca. 725 volts. *No tendency to rotation could yet be observed.* The counter tube had not soaked up OR to a sufficient degree to produce rotation. But the speed of ca. 50 cpm was in itself remarkable. It was higher than the usual reaction to OR-influenced radium, Xrays or "cosmic rays." It should be noted that no reliable tests with these sources of radiation can be made when a building contains orgone energy accumulators or even an orgone metal room.

At 4 P.M. the same day, I put the counter tube into a one cubic foot, double layer accumulator and left it there in order to speed up the charging process. At 9 A.M. the same day, I counted 24, 32 and 48 cpm. Then, suddenly, after a short pause, there was a "*burst*" of 60 impulses *per second*, or 3600 cpm for about three seconds. The pointer made nearly one full revolution per second. Then the previous rate of 0.8 per second, or 48 cpm continued. The counter tube had apparently discharged a small amount of accumulated orgone energy.

The following table gives the results of the measurements from August 30 to September 8, 1947. *Continuous slow rotation appeared for the first time on August 31 at 3 P.M., three days after arrival of the counter, with ca. 1500 cpm or 25 per second:*

No. of tests	Date 1947	Time	CPM	Volts	Thresholds and Optimum	Conditions
					Measuring	
1	Aug. 30	6 A.M.	33	700	threshold	
2	Aug. 30	6 A.M.	63	750	(M.T.)	
3	Aug. 30	6 A.M.	60	850	Optimum (M.O.)	
4	Aug. 30	12 A.M.	33	700		
5	Aug. 30	12 A.M.	33	750		
6	Aug. 30	12 A.M.	33	775		
7	Aug. 30	12 A.M.	33	800		Cloudy, rainy day, tube in accumulator
8	Aug. 30	12 A.M.	50	800		
9	Aug. 30	8:30 P.M.	50	750		
10	Aug. 30	10:30 P.M.	60	800		
11	Aug. 31	10:30 A.M.	60	775		Sunny, tube in accu- mulator

<i>No. of tests</i>	<i>Date 1947</i>	<i>Time</i>	<i>CPM</i>	<i>Volts</i>	<i>Thresholds and Optimum</i>	<i>Conditions</i>
12	Aug. 31	10:30 A.M.	110	800	M.O.*	
13	Aug. 31	10:30 A.M.	120	800		Transfer of counter into hall, 15 ft. from metal orgone room
14	Aug. 31	2 P.M.	60	700		
15	Aug. 31	2 P.M.	60	750	M.T.	
16	Aug. 31	2 P.M.	70	750		
17	Aug. 31	2 P.M.	185	800		Tube in accumulator
18	Aug. 31	2 P.M.	250	850	M.O.	
19	Aug. 31	2:30 P.M.	770	900		
20	Aug. 31	3:30 P.M.	1450	1000	R.T. !!!	Rotation threshold: tube inside accumulator
21	Aug. 31	3:30 P.M.	1500	1050		
22	Aug. 31	3:30 P.M.	1500	1000		
23	Aug. 31	3:30 P.M.	1500	900	R.O.	Rotation optimum voltage
24	Aug. 31	3:30 P.M.	45	750		
25	Aug. 31	3:30 P.M.	140	800		
26	Aug. 31	3:30 P.M.	1050	900		Tube naked on table
27	Aug. 31	3:30 P.M.	1830	1000	R.O.!!	Rotation optimum
28	Aug. 31	8-8:30 P.M.	35	650	M.T.	
29	Aug. 31	8-8:30 P.M.	55	700		
30	Aug. 31	8-8:30 P.M.	46	700		
31	Sept. 1	10-11:30 A.M.	56	750		Tube inside accumulator
32	Sept. 1	10-11:30 A.M.	64	750	M.O.	Tube outside accumulator
33	Sept. 1	10-11:30 A.M.	2000	1000		Tube outside accumulator
34	Sept. 1	10-11:30 A.M.	2000	900	R.O.	Tube outside accumulator

* Note: M.T.—Measuring threshold

M.O.—Measuring optimum

R.T.—Rotation threshold ca. 1500 impulses per minute

R.O.—Rotation optimum (=Voltage beyond which speed *decreases*.)

These excerpts from my protocol may suffice to show the reader the slow increase in counting rate as the days passed by. I measured the energy output of the charged counter tube three times daily for the following four weeks. Until the end of September 1947, more than 300 tests were made, one minute per one count series. I learned slowly to distinguish between the minimum voltage that was necessary to count impulses, and the minimum voltage that was necessary to produce continuous rotation of the pointer in the impulse recorder. The first I termed "*measuring threshold*" (M.T.), the second "*rotation threshold*" (R.T.). "Rotation" of the indicator needle in the impulse recorder denotes an EVEN, SMOOTH SEQUENCE OF OR ENERGY EFFECTS OR "IM-PULSES" amounting to an EVEN MOTION OF ROTATION, i.e., LINEAR ACTION COMPOSED OF EVENLY DISTRIBUTED IMPULSES. There was no so-called "plateau," as in nuclear energy during increase of voltage. The number of impulses per minute (CPM) increased steadily and more or less steeply as the voltage was increased in steps of about 25 volts. The threshold voltage varied by about 50 volts up or down, according to weather and OR energy concentration, or according to the location of the counter tube. There was usually a steep rise in the output of impulses, about 100 or 150 volts above the measuring threshold. There was a further steady increase in speed of rotation for another 100 to 200 volts. But when the voltage was further increased, say from 950 to 1000 volts, the speed of rotation decreased again ("JAMMING"). There was an "*optimum voltage*" for measurement of rotation. The rotation optimum was usually around 950 volts with the Geiger-Müller Counter CMB-3A. The measuring optimum was around 750 volts.

The rate of impulse output per minute would increase during the first 4 to 5 minutes of counting or rotating; the action in the counter tube itself would enhance the output of OR energy impulses.

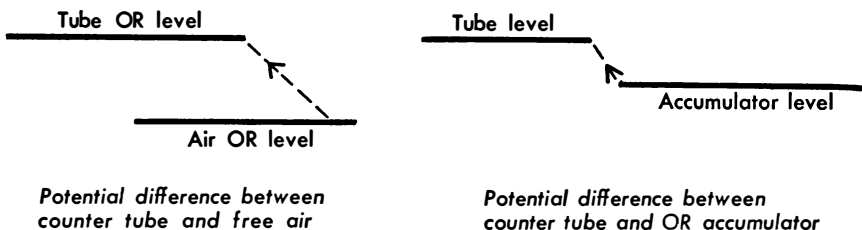
It became clear, furthermore, that one has to keep the Geiger counter tube *within a narrow* accumulator in order to *charge* it up. That, on the contrary, to *discharge* the counter tube one achieved the best results by keeping it *outside* the accumulator during operation. This can be explained in the following manner:

The counter tube itself constitutes a small OR accumulator. It consists of a cylindrical metal tube, the "cathode" for the negative tension, and an outer nonmetallic protecting cylinder, usually of coated glass or metal of different thickness ("sensitivity"). This arrangement is the same as the one used for the accumulation of atmospheric OR energy. It is in itself sufficient to establish a *reversed potential* between outside OR energy and inner OR energy.

The counter tube will, therefore, continuously soak up atmospheric OR energy. It constitutes by its very structure the stronger organotic system, and, accordingly, will draw energy from the surrounding atmosphere. The higher its own charge, the stronger the action of absorption of surrounding energy must become. This function accounts for the sudden increase in energy output after a day or two of soaking up energy. It also accounts for the steep increase in energy output with only a slight increase in voltage above the measurement threshold.

I must leave it to further investigation to decide whether the following interpretation of the faster action *outside* the accumulator is correct or not.

The counter tube (Type: GLC-11, Herbach & Rademan) attached to counter CMB-3A gave *higher* counting numbers when working *outside* the OR accumulator. My impression was that this was due to the steeper potential between counter tube and the atmospheric OR tension. It seemed to work *more slowly* when *inside* the accumulator because the difference in OR concentration within the counter tube and the surrounding air *within* the accumulator was smaller:



In other words: *The counter tube appeared to soak better within the accumulator and to discharge better in the free air.*

But this explanation is contradicted by the action of the *other* counter tube of the counter field set GLP-215. Here the action of rotation stopped instantly when the counter tube was removed from its metal container and was put on the table far enough from an organotic system, an accumulator or the human organism. Why did the one counter tube increase its activity in the free air while the other stopped functioning? I could not tell. It is not necessary to answer at once all questions which come up in such a vast new field. But we must keep this contradiction well in mind. Its simple solution may be found in the course of further experimentation. It may well be that the special difference in construction of the amplifying radio tube system or

battery-fed as against line-fed voltage supply was responsible for the difference in action. But both GM sets had in common the main functions of *soaking up* OR energy in air with high organotic concentration, and the *output of energy* to a sufficient degree to create an even sequence of impulses, i.e., a motor force in the impulse counter.

The highest rate of rotation which I achieved in the counter set CMB-3A during the *ten days* of soaking up OR energy was 2000 cpm. The other counter set, GLP-215, whose voltage could not be regulated, had given a rotation rate optimum of about 130 impulses *per second* or about 8000 cpm after *two months* of charging with orgone energy.

I would like to mention a few outstanding features of the GM action under the influence of orgone energy which require further elaboration:

The action usually slows down shortly before rain. It speeds up again as soon as the OR energy is liberated during the process of raining.

When the rotation optimum is reached with about, say, 1000 volts, after a period of functioning a decrease in voltage to 950 or even 900 volts will still maintain the optimum rate. The reduction of voltage may even further increase the speed of rotation. On September 2, I counted, with the counter tube free in the air:

120 cpm with 800 volts
1000 cpm with 870 volts
1200 cpm with 1000 volts
1500 cpm with only 900 volts

This means that the relation of the exciting voltage to the organotic action is not of a mechanical, but, as we would expect, of a *functional nature*. Neither do the threshold voltages act mechanically; they vary within certain limits. This apparent "lawlessness" is an important characteristic of all organotic natural functions.

On September 3, I counted within six minutes, at 800 volts applied continuously, 145, 235, 453, 380, 400 and 363 cpm each consecutive minute.

The same day I counted with the measuring optimum of 750 volts within 8 consecutive minutes, the following impulse outputs: 115, 120, 148, 100, 205, 140, 85 and 60. The tube was *within* the accumulator.

On September 7, I counted, after a preliminary test of two minutes, 55 impulses at 700 volts and 45 impulses at 750 volts; within seven minutes, at a rotation voltage of 950 volts applied steadily, 400, 500, 1150, 1300, 1300, 1350,

1300. Immediately afterward I counted in two consecutive minutes 65 cpm at 750 volts; then, again at 950 volts, 700, 850, 1100, 1100, 700, 900 and 1100 cpm.

These facts seem to demonstrate the *functional, nonmechanical* character of the OR energy action unequivocally.

On September 8, I counted at 950 volts 1350 and 1600 impulses during two consecutive minutes with the counter tube free in the air.

The reaction of the counter tube at other times would appear steadier and closer to mechanical action, as for instance on September 6. I counted that day at 10 A.M. with the tube close to a five-fold cylindrical OR accumulator in the course of seven minutes:

CPM	at Voltage
55	670
60	750
900	1000
1400	950
50	700
65	750
1400	950

The rotation optimum reached a value of 1600 impulses at 950 volts on September 8 at 4 P.M., that is about 27 counts *per second* (!) with the counter tube suspended freely in the air of the laboratory hall above the table.

According to nuclear physical aspects of "cosmic rays," a counter tube would reduce its action when shielded by lead or thick walls of iron. I put the counter tube into an iron cylinder of $\frac{1}{4}$ of an inch thickness and put a $\frac{1}{8}$ -inch thick sheet of lead around it. The counts at the measuring optimum of 750 volts *increased* on September 9 and 10 from the previous 40 to 50, to around 80 (!) cpm in the laboratory hall. The rotation optimum was 1500 cpm with the tube *inside* the thick-walled metal cylinder on September 11.

In order to make sure of my finding that the tube has to soak full with orgone to have the pointer of the recorder rotate evenly, I had ordered *two new* counter tubes from the firm of Herbach and Rademan in Philadelphia (both, types GLC-19). I had to answer the following questions:

1. What would be the rate of reaction in a new counter tube, unaffected by OR energy, in the free air *outside the laboratory building*?

2. How long does a new counter tube have to soak up OR before yielding a rotary rate of evenly succeeding impulses?

3. Is there any OR energy field reaching beyond the building that houses the OR room? And, if it exists, *how far* does it reach?

4. Does the counter tube measure the radiating energy in its surroundings, or does it measure *its own inner, soaked-up energy*?

It was most essential to find out whether or not the counter tube could be used at all for measuring *external* OR energy. This would be impossible if the counter tube counts only its own inner content of energy.

The two new counter tubes arrived on September 11, at 3 P.M. One of them (Tube No. I) I deposited immediately in a little building situated about 50 feet away from the main laboratory building. This small wooden building does not contain any arrangements which could accumulate orgone energy. The second counter tube (Tube No. II) I took into the laboratory hall, attached it immediately to the extension amplifier of GM-CMB-3A and began to count. Since Tube No. II had surely not soaked up OR energy yet, its counting rate could be regarded as a reaction to the *outer* orgone charge in the laboratory hall. If, furthermore, the rotation was due solely to OR energy *within* the tube after several days of soaking, *two* effects were to be expected:

1. The rate at the *measuring* threshold would be *lower with the control tube* than with the charged tube. The counts would *increase* in Tube No. II during the next few days when kept in the OR accumulating cylinder of iron and lead.

2. Tube No. II, which was located in the hall within an accumulator would show *increasing* rotation effects in a few days or weeks. Tube No. I which was kept *outside* the building, would keep its low rate of measurement and it would not show any rotation effect within the same period of time.

Should these predictions, made on the basis of the previous experiment, prove correct, the facts could be established beyond doubt, that:

1. *The Geiger counter tube counts SURROUNDING OR energy effects when it is itself uncharged orgonotically.*

2. *It counts an additional effect when charged with OR energy, that is, its own charge plus the charge in the atmosphere.*

3. *The motor force which causes rotation of the pointer originates in the tube itself after a period of charging itself spontaneously with OR energy.*

The counting rate with Tube No. II immediately after its arrival within the laboratory hall was the following:

CPM	Voltage
30	650
35	700
40	750
55	950
90	1000 (<i>no rotation</i>)
70	900
55	750

The rate was lower with Tube I than with Tube No. II. There was no rotation effect, only a few single short "bursts" of clicks.

On September 12, the next day, at 10 A.M. the counts with Tube No. II were:

CPM	Voltage
33	700
42	750
25 (?)	800
45	850
55	900
85 with single "bursts"	950

The counts were made with the tube freely suspended in the air about 6 inches above the table. There was no steady rotation, and the rate was unchanged as compared with the first day.

The third control, on September 13 at 11 A.M., gave:

CPM	Voltage
43	650
30	750
36	850
125	950

It was raining that day. On September 14 in the early morning, the rate was:

CPM	Voltage
35	650
35	750
35	900
70	950
145	1000 (<i>no rotation</i>)

On September 15 at 11 A.M., the fifth day of charging, the rate was:

<i>Minutes</i>	<i>CPM</i>	<i>Voltage</i>
1	50	750
2	55	900
3	95	950
4	250	1000
5	400	1000
6	650	1000
7	670	1000
8	700	1000 (Rotation optimum, ca. 12 impulses <i>per</i> <i>second</i>)

The *rotation* effect appeared for the first time after five days. The rate on September 16 was about the same, only a bit less, *due to rainy weather*.

On September 15, 1947, in the early afternoon, I tried to determine the orgonotic conditions in the atmosphere in the vicinity of the laboratory by means of the supposedly uncharged Tube No. I, which had been kept all the time in the wooden building nearby and had never been in the OR-charged laboratory hall. I expected to find the usual rate of reaction to "cosmic radiation," i.e., about 8-12 CPM. I was wrong. The count was the following in the open fresh air on the porch of my laboratory:

<i>CPM</i>	<i>Voltage</i>
46	650
60	1000 (<i>no rotation</i>)
53	750
52	750
42	750
36	750
46	750
41	750
50	750
40	750

As expected, there was *no rotation at 1000 volts*, in contradistinction to Tube No. II. But the measuring rate at 750 volts was very high considering the newness of the tube, its absence from the laboratory and the measurement

in the open air. I suspected that the *OR energy effect of the OR energy room in the main building reached far into the open, beyond the confines of the walls of the building*. I was right. When I put the GM counter up about 50 feet away from the outer walls of the laboratory, I still obtained about the same rate of ca. 60 cpm with 750 volts as on the porch and *within* the building. There was, of course, the other possibility that the tube had soaked up OR energy even in the little wooden building, and that it counted *its own* energy charge. It was impossible to remove the device still farther away from the laboratory, since I had not enough cable at hand. It remained to be determined later what the rate would be with an *entirely new* tube which had never been even in the vicinity of an OR energy laboratory. Since every single building at Orgonon and in Forest Hills, N.Y., contains at least one OR accumulator, it was to be expected that the air would be "contaminated" with OR energy concentration wherever work was done with orgone energy. But the high rate (60 cpm!!) 50 feet away from the laboratory remained a major finding in orgone research. I could understand better now why the laboratory seemed to luminate during thunderstorms, and why I had heard strong discharges within the OR room during one particular thunderstorm early in August 1947, though no direct lightning hit had occurred. The metal-lined OR energy room is heavily grounded with thick wires in several places. This constitutes some safety against accumulation of charges during thunderstorms. At the same time, there is some danger for anyone who works with high voltage within the metal room. All work within this room is done with a heavy insulating material underfoot.

The general conclusions reached so far were the following:

1. *The presence of a structure containing strong metallic accumulators seems essential to the production of a motor force, i.e., even sequence of impulses in the GM counter tube.*
2. *The counter tube must soak up OR energy for a period of several days or weeks in order to produce rotation in the recorder.*
3. *It appears, but it is not yet firmly established, that the metal-lined OR energy room has to function over a long period of time in order to produce an efficient concentration of atmospheric OR energy.*
4. *The orgone laboratory building itself has a wide, strongly effective OR energy field, as demonstrated by the rate of measurement with a NEW counter tube in the open air at 50 feet distance from the building.*
5. *The rate of 6-8000 cpm (100-130 impulses per second) which had been achieved with the GM Field Set after eight weeks' exposure, had NOT been*

reproduced with the GM Set CMB-3A, after nearly three weeks' exposure of new counter tubes to concentrated atmospheric OR energy.

The fact that a Geiger counter tube can be charged organotically, that it can keep and count its own charge, is unknown to nuclear physics, so far as I know. According to nuclear physics, the Geiger counter tube itself is not a radiating structure. The counter tube is assumed to be hit by penetrating radiation from *outside*. There has to be some *source* of nuclear *radiation* in the vicinity of the tube to make it register impulses. Where such a source of nuclear radiation cannot be found, and the tube still registers rays, then nuclear physics speaks of "stray radiation," whatever that may be. The "stray radiation" is to account for the action of the counter tube without a determinable source of energy, just as the "natural leak" is to account for the *spontaneous* discharge of electroscopes.

Yet, what is called "stray radiation" and "natural leak," "static," "heat waves" and "bad seeing," are clear-cut effects of the atmospheric OR energy which is unknown to present-day physics. A heap of metal, simple iron, steel wool, etc. in the neighborhood of the instrument, or some concentration of atmospheric OR energy of whatever kind, will change the so-called "background" counts of "cosmic radiation." Since the *source* of cosmic radiation has never been accounted for; since, furthermore, the powerful atmospheric OR energy has been demonstrated by the electroscopic rates of discharge, by the differences in temperature, and now also by the Geiger-Müller counter, the questions necessarily arise:

1. *Is not the so-called cosmic radiation merely the natural and normal expression of atmospheric OR energy?* Is it necessary to place its origin in far outer spaces of the universe when OR energy has been demonstrated right here as a rotating energy envelope of our planet?

2. The rate of cosmic radiation on Geiger-Müller counters amounts to ca. 8-15 cpm, as the so-called "background count." *Could not this be the normal rate of unconcentrated atmospheric orgone?*

The fact that a Geiger counter tube has a structure similar to a miniature OR accumulator (nonmetallic matter outside and a metal cylinder, the cathode, inside) is sufficient for orgone physics to understand its capacity to soak up OR energy in a highly concentrated organotic atmosphere. We should try to understand the action of the counter tube from the following point of view:

When a counter tube is used which has never been exposed to concentrated OR energy, it may be assumed that it counts the normal and natural rate of

incident atmospheric OR rays, ca. 8-15 cpm, the so-called "cosmic radiation."

When the counter tube is brought near or within a concentrated OR energy field, it will, according to observations so far, count a rate of between 40 and 60 cpm. It may be assumed with some degree of certainty that the *uncharged* counter tube is still counting *incident* radiation from the surrounding atmosphere.

When the counter tube is kept during the intervals between the measurements in an atmosphere without any concentration of OR energy, the counts of concentrated OR energy in the air may vary within certain limits, but they will not exceed 60 counts per minute at 50 to 100 volts above the measuring threshold of 650 to 750 volts. The counts may rise to 80 or even 90 impulses per minute at 950 or 1000 volts, *but there will be no rotation of the pointer in the recorder*, i.e., no rapid, even succession of events.

When the counter tube is kept continuously in orgone-concentrated air, the same voltage that gave, say, 40 impulses per minute in the beginning, will soon yield up to 80 per minute. That means that the tube now does not only count the incident radiation, but that it counts in addition to that *its own content of energy*.

As we increase the voltage, the impulses increase in number more or less steadily. After allowing a certain period of time for the counter tube to soak up energy from the surrounding air containing highly concentrated OR energy, more or less rapid rotation of the pointer will set in, beginning with "bursts" of impulses at perhaps 850 or 900 volts, continuing with slow, uneven rotation of the pointer at a rate of about 5 to 10 impulses per second to as much as 30, 40 and more impulses per second. The longer the voltage of about 900 to 1000 volts acts upon the OR energy charge within the counter tube, the higher the rate per minute will climb, while the voltage may remain the same or even be decreased by 50 or 100 volts. Further increase of voltage will not increase but *decrease* the rate.

I would like to stress this point: Whatever interpretation may be applied to the basic rate of 30 to 50 cpm, *the effect of rotation of the pointer in the impulse recorder cannot be accounted for by any other source of energy than that of OR energy, highly concentrated within the counter tube*. This will be corroborated later by experiments of a quite different nature.

Whether a large metal OR room is necessary to produce rotation, or whether the presence of an OR accumulator in the vicinity is sufficient to produce the same effect, has still to be determined.

As in all organotic functions, a functional identity between the charged counter tube and the living organism can be established.

I reported in the beginning that the energy output seemed faster when the counter tube was kept in the open air during the counting, and in the accumulator during the intervals. That seems to indicate that OR energy, which is absorbed within the accumulator, is discharged during the counting. The living organism reacts just the same way. It will charge up with OR energy within the OR energy accumulator, as seen in the rise of temperature, the subjective sensations, the reddening of the face, etc.; it will feel more active and vigorous in the open air after it has been charged. We may safely assume that the invigorating effects of a combined sun-and-water bath upon the organism follows the same rule of *charge* in the sun and *discharge* of OR energy in the water (since water absorbs OR). There is what may be called a *METABOLISM* of OR energy in the living organism, consisting of an alternate and continuous charge and discharge. The healthy organism is capable of absorbing much atmospheric OR energy and of discharging a great deal afterward, as in all kinds of sports and in orgasmic satisfaction. The weak or sick organism has a low capacity for charging itself up with orgone from the surrounding atmosphere and a reduced capacity for discharging OR energy. It has, in other words, a low *OR energy metabolism*.

We could not in any way explain the charging of an organism with bio-energy in a sun bath if we did not assume a *reversed* potential from the lower to the higher level. The slightest difference in OR energy concentration *within* the organism or the Geiger counter tube with respect to the surrounding air (the tube or the organism being the stronger system) will automatically induce a self-charging process, whereby further OR energy is taken up from the air. There also exists, as explained in the beginning, a self-regulating principle by means of which a steady level of orgone charge ("capacity") is maintained through discharge of OR energy into the surrounding atmosphere. Otherwise the living organism, as well as the counter tube, would finally "burst" with orgone charges.

In any case, the mechanical law of potential from the higher to the lower level *alone* could by no means make comprehensible the function of self-charge in the tube or in the living organism. According to the *mechanical* law of potential difference, the higher charge could not be maintained; it could not be increased from a *lower* level of surrounding energy. The organism would have to lose energy all the time.

Chart A, p. 230, shows clearly the *functional* character of this reaction. The charge in voltage produced the following rates in *one* operation on August 31, 1947, at 2:30-3:30 P.M., with a counter tube (Model GLC-11, Herbach & Rademan in Philadelphia) after three days soaking in the OR room.

CPM	Voltage
60	700
60	750
70	750
185	800
250	850
770	900
1450	1000
1500	1050
1500	1000
1500	900
1830	1000

Chart B, p. 231, shows the difference between the counts of cosmic radiation, nuclear energy and OR energy. The curves corresponding to the typical reaction of nuclear radiation to Geiger-Müller counts are drawn from Barton Hoag, *ELECTRON AND NUCLEAR PHYSICS*. (New York, 1938, p. 429.)

a. The measurement of NR energy requires a higher threshold voltage than OR energy. The general validity of this assumption would have to be established by experimentation on different counters and with a great variety of tubes.

b. In the measurement of NR energy, there appears a "plateau" (p). There is no plateau with OR energy. The counts increase more or less steeply with the voltage. The "background" counts due to "cosmic radiation" average 4.8 per minute, with a maximum, according to Hoag, of ca. 50 to 60 counts at a voltage as high as 1200 volts. The maximum of other NR energy counts at around 1150 volts is about 300 per minute or 5 per second. The average OR energy output at the *threshold voltage of about 700-750 volts* (with Tube GLC-11 and GM CMB-3A) was in a total of 68 counts (68 minutes) 75 cpm. The *average* of 21 counts (21 minutes) over ten days at a voltage of between 800 and 850 volts was 583 cpm. The average in the same period of days in 52 minutes (52 counts) was 1141 cpm at between 900 to 950 volts and 1203 cpm (15 counts, or about 20 per second) at ca. 1000 volts.

c. Chart C, p. 232, shows the changes in the rate of cpm within six consecutive minutes at a voltage kept constant at 950 volts. The rate was (with the counter tube placed within 2 cm. lead and $\frac{1}{2}$ cm. iron within a one cubic-foot OR charger):

1 minute	800 cpm
2 minutes	850 cpm
3 minutes	1300 cpm
4 minutes	1200 cpm
5 minutes	1250 cpm
6 minutes	1300 cpm

d. Chart D, p. 233, shows the result of a test made on September 9, 1947, with control Tube No. I, which was located outside the laboratory building, ca. 50 feet away (ca. 100 feet away from the orgone metal room). The counts in another control tube (III), treated the same way, were in 20 consecutive minutes:

CPM	Voltage
40, 45, 45, 30	700 M.T.
42, 40	750
50, 40	800
65, 45	850
56, 62	900
150, 950, 1350, 1400, 1350, 1300	950
disturbed slow reaction	1000
40	700

Control Tube No. III had also soaked up OR energy, even as far as 100 feet from the OR room, and outside the laboratory building at that, after one month, as against a few days in Tube II; the charge was sufficient to produce rotation at a rate of about 23 impulses per second. This fact points to a rather strong OR energy field around the laboratory building of at least 100 feet width; it is crucial to the understanding of some Oranur effects.

e. The change in rate of impulses at the same voltage, reported in charts C and D, points to a process which is unknown, as far as I know, except perhaps in atomic chain reactions. *It is a self-regulatory, self-charging, stepping-up function in organotic functions.* In mechanical processes one has to apply higher or stronger stimuli to achieve stronger reactions. The relation between stimulus and reaction may be linear or not, but the effect is always

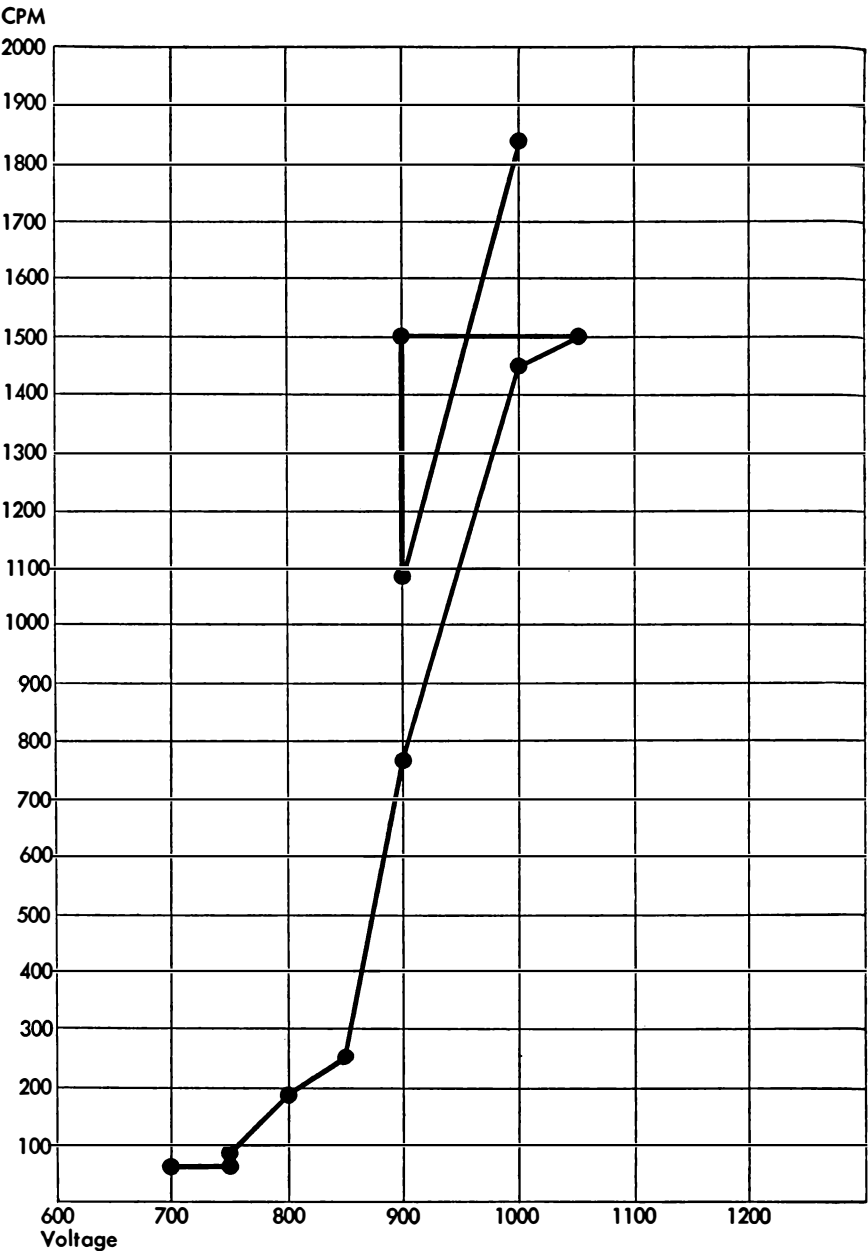


Chart A. CPM with GM Counter CMB-3A, Tube GLC-11, Aug. 31, 1947, 2:30-3 P.M.

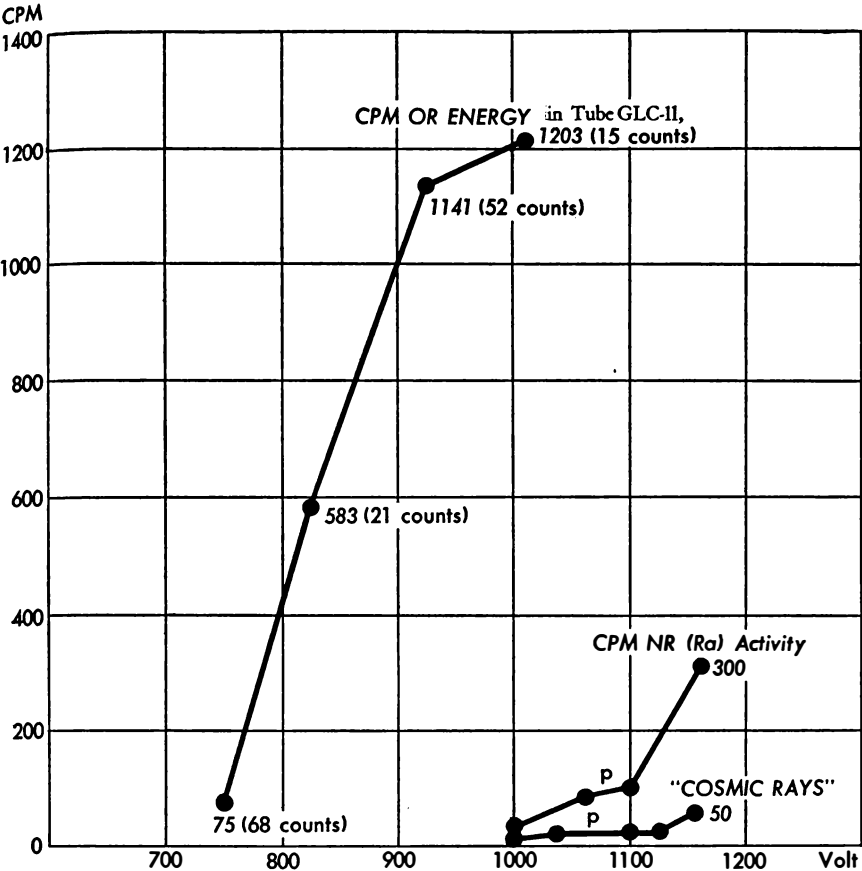


Chart B. TABLE OF COMPARISON

OR; NR; "COSMIC" RADIATION ("BACKGROUND") at approx. 1000 volts. Average CPM: 1203; 25; 10. (NR and COSMIC RA data according to Hoag.) Measurement of OR July 31-September 9, 1947 with GM Counter CMB-3A (Herbach & Rademan); GM-Tube GLC-II.



Chart C. SELF-CHARGE IN OR ENERGY

OR-charged GM Counter Tube (GLC-II) operating during six consecutive minutes (with GM Counter CMB-3A) at 950 volts, kept steady. Counts were made with tube placed within 1 cm. lead and $\frac{1}{4}$ cm. iron cylinder within a one cubic foot OR charger.

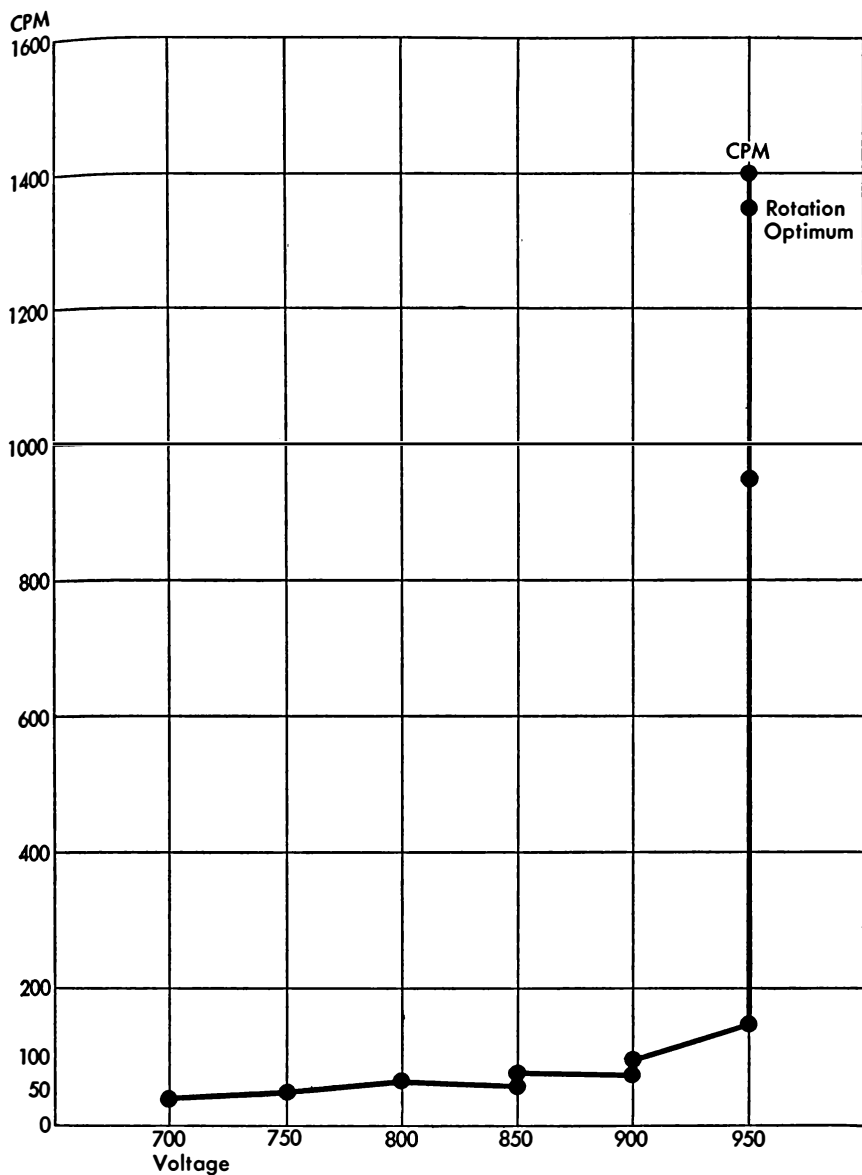


Chart D. CONTROL TUBE (I), kept OUTSIDE OR laboratory, after one month exposure to OR energy field of OR room, 100 ft. distance, has soaked up enough OR energy to yield rotary motor effect; measured during eleven consecutive minutes (Sept. 29, 1947).

dependent upon the quantity of the stimuli. This is not the rule in orgone physics.

We know from our work with *emotional* reactions that an emotion (a clear-cut *orgonotic* function of the living organism) can be stepped-up in intensity without any further outer stimuli, simply through its own functioning. In sexual functioning the stimulus may remain the same or even cease to exert influence; the orgonotic excitation may still increase solely by its own inner dynamics. The same is true in the perhaps most representative orgonotic function of embryonic development; in the beginning, the stimulus to cell division and development is merely the penetration of the ovum by the sperm. But this single stimulus suffices to set in motion a process of self-excitation and increase of energy processes by way of the orgonotic potential, as strong as that of an embryonic development. The same, furthermore, is the case in the orgonotic lumination of argon gas tubes. We excite the gas tube by a moving OR energy field which remains constant; but the lumination increases the longer we let the stimulus, which remains the *same*, act upon the tube.

I said in the beginning that physical and even astronomical OR energy phenomena, as, for instance, the aurora borealis, can be studied best if we orient ourselves in self-regulatory *living* functions. This also applies to the reaction of the GM counter. The jump in the number of counts from 850 to 1300 during the third minute is a *non-mechanical, self-regulatory, functional process* due to the ability of an excited orgonotic system to draw more and more energy from the OR energy ocean, according to the orgonomic potential.

This is crucial for the understanding of many bio-energetic functions.

It seems quite clear now that the energy system called "organism" could not maintain its functioning if it followed the law of the mechanical potential difference only, i.e., from high to low. The organism would lose its energy; it would inevitably dissipate into the surrounding air. The organism would quickly dissolve if it did not keep a level of energy constantly higher than that of the environment. As a matter of fact, this happens when the orgonotic pulsation in the organism ceases to function, when "death" occurs: The body substance loses its *coherence*, it "falls apart"; it loses its orgone energy to the surrounding lower energy level because the orgonomic potential has slowly decreased and finally ceased to function. "Aging" may therefore be regarded as an outer expression of a slow decrease of the orgonomic potential and loss of bio-energy.

4. The Orgone Energy Charged Vacuum Tubes (VACOR) (1948)

OUTLINE

Quest for higher CPM output. Characteristics of OR energy at the GM autoscaler. Disappearance of effects with bad weather. The OR energy pulse in living and nonliving systems. Orgonomic functions of biosystem expressed in pulsation. Range of pulse rates in living systems. Pulsatory function in atmosphere and ground. The alive antenna-grid wire in the radio. Simple questions and "air germ" answers about functioning of radio. Orgonotic Geiger action without gas ions. Questions, experiments and answers. Vacor lumination. Refutation of "ionization" theory. Problem of physical properties of "space." Off the road of routine technology. Methods of measurement of the vacor energy field. Calibration of the electro-scope. Definition of the ORG. The unit of the Orgonotic Impulse Action Area.

Quest for Higher CPM Output

I had the impression during all operations with the GM Counter CMB-3A, that a much higher rate of impulses could be obtained either with a less complicated device or with some other type of counter tube.

The magnitude of the problem made it imperative enough to try everything possible to find out the nature and the quantity of OR energy output. Therefore, I ordered one simple GM arrangement, a GM monitor and a third GM counter, a 32-scaler unit, from the same firm.

The Herbach & Rademan Scaler, Model GL-532 C, arrived on December 2, 1947. This scaler unit enables one to measure every 2, 4, 8, 16, or 32 impulse only. Thus the impulse recorder is not speeded up beyond capacity. We multiply the number of impulses which are coming through to the impulse counter with the number of the scale which was interpolated, and thus cal-

culate the counts per minute (cpm). In our case, the time unit was 60 seconds; in special, theoretically significant counts, 64 seconds.

Experimentation with the 32-scaler confirmed and even accentuated the main findings obtained with the GM devices which had been used before. It was found by using ordinary non-selfquenching counter tubes that the rotation optimum was at about 925 to 950 volts. The control of operations with different scales and different counter tubes revealed exact operation within a range of differences ca. 50 to 100 cpm. This margin of inaccuracy is not large when 40 to 50 impulses *per second* are involved. We must also keep in mind that OR energy does not function rigidly, in a mechanical way, as a mechanical wheel does; for example.

It was much easier to study the *characteristics* of the OR energy action with the scaler. It was striking that certain groups of numbers recurred; that certain levels of the rate of impulses seemed to be the rule. All this requires further elaboration in detail. Let us adhere to what is essential at present.

The main point seems to me that the GM-scaler (32), using ordinary *gas-filled counter tubes*, produced rates up to 50 impulses per second or around 3000 per minute, whereas the GM CMB-3A could only produce rates up to 1800 per minute.

Here are the results of measurement over a period of twenty days, from December 2, 1947, to December 22, 1947, in Forest Hills: 201,957 impulses; 4640 seconds; approx. 45 average impulses per second; highest rate per second, 50.6. The average counts per minute (cpm) were 2814; the highest single count was 3036 per minute. The tube used in these measurements was type GLC-10, non-selfquenching, from Herbach and Rademan, Philadelphia. The counts were the same with the tube inside the lead cylinder and open on the table. Self-quenching counter tubes gave similar results.

It was found that even the highest scale of 32 was too slow to absorb the speed of impulses. Therefore, it was planned to put in an additional scale of 64 to 128 to cope with the problem, and to obtain, if possible, the original rate of rotation (of August 1947) of 100 impulses *per second*, which I still had not regained. However, the following phenomena were observed:

The rotation effect at the impulse recorder was slow during the first few (2-5) minutes of operation. It seemed as if the OR energy in the counter tube required a "warming-up" period before highest efficiency was obtained.

Therefore, the actual counting with gas-filled tubes should begin only when the rate increases to a certain higher and constant level.

One day, *when it was raining heavily, the scaler failed to operate at all.* The effects re-appeared with clear weather. *This phenomenon is in full agreement with the drop of the organotic temperature difference on rainy days.* We shall find later on that the impulse rates in orgone-charged *vacuum* tubes are far less distinctly dependent on weather conditions.

The highest rates of rotation with ca. 3000 cpm could be obtained with new counter tubes which were left to absorb OR energy over a period of two to three weeks. Old, much used counter tubes give a *lower* rate. Therefore, "aging" of the tube does not account for the OR effect. But it seems that the drop in output is not a linear one, but corresponds to certain numerical levels as, for instance, 2600 per minute, 1200 to 1300 per minute, 600 per minute, etc. The nature of this intermittent behavior is still obscure. However, the *intermittent* character of this phenomenon is obviously important with regard to possible numerical *levels in the functioning* of cosmic orgone energy. In a different context, we shall encounter a similar phenomenon in the action of pendulums of certain lengths.

It will be necessary to present the many questions and errors which arose in the process of this work, in order to convey to the reader the development of the organotic motor function in the *workshop*. I cannot think of a better method of introduction into the detailed intricacies of the physical properties of the orgone energy *in the vacuum* ("VACOR").

The Orgone Energy Pulse in Living and Nonliving Systems

I said previously that I was completely ignorant with regard to the concrete functions in this new realm. I had at my disposal several observations which I had made in the course of more than a decade of experimental OR physics; I had not understood them at the time, but now some of these observations gained significance in a quite different context. Let us summarize these experiences:

My work hypothesis postulated a basic functional identity between *pulsation in the organism* and *pulsation in nonliving nature*. The pulsation in the living organism could easily be observed; but it was difficult to conceive of a similar pulsation in nonliving nature. It is true, I had observed the wavy west-east motion of the atmospheric OR energy for several years by means of the telescope. It was also certain that not only waves but pulses as well

were observable through the telescope; rhythmically recurring, push-like changes in the course of the waves. There was no arrangement to ascertain it objectively. Planck's quantum action in nature had once made a great impression on me, but there was no bridge between the quantum action: h of 6.55×10^{-27} erg. seconds, and the tremendous pulses I believed to have observed in the atmosphere. The idea of "pulses in the atmosphere," however, stuck in my mind; yet, I felt helpless in my attempt to get hold of the function in a practical, objective manner. Careful observation of the motion of the atmospheric OR energy in the sky during the daytime, distinctly gave the impression of DISCONTINUOUS, *rhythmically* recurrent functions. On the other hand, the gap between these observations and the later OR energy pulses at the GM apparatus, seemed at first unbridgeable. Still, if both facts were true, there must exist a certain CFP uniting both into an understandable unity.

In 1944 we obtained a Du Mont Oscillograph (Type 208-B, Serial No. 1214) and found out that the pulse rate of a certain operational setting *increased considerably* when living systems were connected. The pulse action of the oscillograph was set at the rate of 2 beats per second (120 per minute), which coordinated exactly with the beat of a time signal. Only the X-axis of the coordinate system was used; the Y-axis (the amplitude indicator system) was disconnected. No grounding was employed. The external signal was conducted through one single wire to the amplifying grid system of the oscillograph. After completion of the base of operation, i.e., 120 pulses per minute *exactly*, the *external* signal was put in at the grid extension wire, and the switch of the synchronizing circuit turned on, with the scale turned to 100, i.e., full synchronization.

The basic result of these observations and pulse measurements over a period of several years, was a gross average of between 160-200 pulses per minute for human beings. The average beat rate for *ground* and *atmosphere* was between 900-1100 pulses per minute. These observations are still not completed.

Different persons produced different pulse rates, but they were always faster than the rate of the basic setting—160-200 pulses per minute as against the base of 120 p/m.

There was what seemed to be a functional identity between this pulse phenomenon and the lumination effect at the OR energy field meter: ONLY LIVING MATTER GAVE THE REACTION OF INCREASE OF THE PULSE RATE; NONLIVING MATTER SUCH AS *dried* WOOD OR UNEXCITED PLASTIC SUBSTANCE, DID NOT CHANGE

THE PULSE RATE. *The OR pulse rate was not in accord with the mechanical pulse rate of the heartbeat.* A pulsation in the living organism other than the beat of the heart, was, to my knowledge, unknown; and there was no way to coordinate this pulse with any known biophysical functions. The rate varied with different persons, but it was *always higher* than the comparative base of 120 per minute or 2 per second in the basic setting of the device. A series of tests gave the general impression that *children had a faster rate than older people; emotionally sluggish individuals a slower rate than very alive ones.* The pulse rate also changed in one and the same person from day to day in accordance with changes in mood, alertness or fatigue, etc. Therefore, the conclusion was warranted that we were dealing here with *orgonomic functions of the biosystem expressed in a peculiar pulsation which was NOT due to the mechanical heartbeat.*

The surprise came when I tested different kinds of materials and arrangements to determine whether or not the pulsation was also demonstrable in nonliving nature. When I connected the grid system of the oscillograph (X-axis) with the ground, the pulse rate immediately increased considerably. *The rate also increased with lengthening of the connecting wire. But the connecting wire alone, when it was removed from the ground and fixed at about 10 feet above the ground, ALSO gave an increase in the pulse rate.* I did not understand it. *There was the same reaction in the air and in the ground as in the living organism.* I had to assume that I was dealing here with *the basic function of orgonotic pulsation in the organism AND in the surrounding OR energy ocean.* A strange fact!! However, over the years, I had become accustomed to such "strange" things. It was in agreement with many other orgonomic functions well known to me. I did not understand, however, *where* this pulsation took place, or, expressed differently, *what* pulsated. This was early in 1944, when I had not yet arrived at the conclusion that pulsation most likely was a basic characteristic of the primordial cosmic OR energy, and that no pulsating substance or material substratum for pulsation is required to make it comprehensible. Later, it was shown that it was *not the substance* of the ground or the air which pulsated, but the *free* OR energy in the ground and atmosphere.

Briefly: THERE EXISTED A PULSATORY FUNCTION, HERETOFORE UNKNOWN, IN THE LIVING ORGANISM, IN THE ATMOSPHERE AND IN THE GROUND, CLEARLY DEMONSTRABLE AT THE OSCILLOGRAPH.

In 1946, I tried to find out more about this phenomenon by sending up gas-

filled balloons some 500 feet into the atmosphere, with a thin wire connecting the balloon with the oscillograph in the laboratory. There was an *additional* speeding up of the pulse rate, but the results were inconclusive, since the wire itself gave the same reaction when it was stretched out some 6 feet above the ground.

The pulse action in organism and surrounding nature was later fully confirmed at the GM counter.

The Alive Antenna-Grid Wire in the Radio

Another observation had been made during the preceding years, which later gained great importance in the detection of the organotic motor force, primitive and crude as it certainly was:

I used to test all kinds of materials and arrangements to determine the presence of organomic functions wherever I could. In most cases, I found peculiar reactions which either had never been mentioned in classical physics, or which were done away with by some kind of wholly unfounded "interpretation." This phenomenon was "only due to this," and the other was "only due to that." My knowledge of technical matters was limited; therefore, I could not form any independent opinion, nor could I quite contradict the physical technician. I showed the speed-up of the pulse rate at the oscillograph to several physicists and radio technicians. The response was different in each case: it was "only this" or "only that." It was "only static," or "only effects of capacity," or it was already "very well known," or "nothing at all." I was very slow in connecting these evasive answers with others I had heard several years before when the bions had been discovered. Then, it was "only air germs," or "only refraction of light," "only staphylococci," or "only fat granules(!)." My mind apparently refused to accept the fact that these physicists and radio technicians simply did not know what it was all about; they probably had often encountered these phenomena in the course of their routine work and, not understanding them nor being able to integrate them in any way, had discarded them as "just this" or "just that." However, the "this" and "that" later turned out to be fundamental manifestations of the cosmic OR energy. It was due to my much disliked stubbornness that I pursued the "this" and the "that" wherever it appeared to the senses or at a mechanical device.

Early in 1940, soon after the discovery of the atmospheric OR energy, I tried hard to understand the functioning of the radio. To the radio technician, everything seemed pretty well settled: A singer sings into the microphone in

Los Angeles, the electromagnetic waves carry his song to the grid of the radio tube in New York, and "the electrons" in the radio tube in some magical way reproduced the song for the listener. There is hardly any more mystical mind than that of a mechanistic physicist. The radio tube is a passive receiver only, the "electromagnetic waves" travel with a certain speed and a certain wave length through "empty space," and the mechanical technician felt perfectly satisfied. A medium for these waves is not required, since most complicated, ingenious, as well as incomprehensible equations have done away with the "ether." We must insist that the function of hearing music is not comprehended at all when we say: "Oh, of course, it is the complicated hearing system in the complicated ear structure which makes you hear sound." It doesn't say or explain a thing. The world is full of riddles, but the technical "experts" had succeeded in obliterating these riddles with ready-made, though wrong, slogans. Later, we came to subsume all such moonshine knowledge under the single heading "*Air Germs.*"

The way the mechanical technician looks at the radio function seemed odd to me, but I had nothing to offer as an improvement. However, as an empirical worker, I felt that these technicians lacked curiosity and a sense of critical inquiry. They seemed satisfied with what they believed they understood, and asked no more questions. The ignorance is in some cases covered up by arrogance.

When I touched the antenna with my finger, the volume of the tone increased. Sometimes there was a peculiar hum. With my eyes adjusted to the darkness, I could see strong bluish sparks when I barely touched a piece of metal with the antenna wire of the radio in operation. I asked a physicist of a well-known radio corporation how this phenomenon could be explained. He had never paid attention to it. He seemed puzzled for a moment, then he said: "Oh, this is nothing; just some accumulated charges, most probably 'static.'" "*Air germs*" again! I gave up trying to obtain information from physical technicians, but a certain question stuck in my mind: "*Why does the antenna wire give sparks when it touches a piece of metal? There must be some energy at work, coming from the inside of the electronic tube.*" For many years I had no answer. The antenna is supposed, so far as I know, only to transmit the electromagnetic waves from the atmosphere to this grid between the glowing filament and the charged plate of the electronic tube. It was *not* supposed to give off energy to the outside. It is, according to the theory, the electrons traveling from the "hot" filament toward the positively

charged plate which, under the influence of the changes in the grid tension, reproduce a voice thousands of miles away. All this is very obscure, but the radio operates. Still, many questions remain open. These questions turned up again, full of significance, when I discovered the bio-energetic reaction at the Geiger-Müller counter.

The electronic tube cannot possibly "pick up waves passively"; it must be a very *active* energy system IN VACUO, an *orgonotic* energy system. The living organism also acts as an active receiver when it makes the radio tone sound louder.

During thunderstorms one hears strong discharges in the operating radio. They are short clicks which accumulate, under the name of "static interference," when the atmospheric discharges are close by. They are reactions of the radio tube to *orgonotic discharges* in the atmosphere. They are energy function in the *tube*, and *not* only in the clouds. Why does a crackling sound appear in the radio when a lightning strikes miles away, or even without any lightning occurring at all? Another observation: When passing high-tension electric wires with a car, the car's radio starts crackling or clicking. I am not aware of any explanation of this peculiar fact. The idea persisted that somehow the *electrical charge in the wire affected the OR energy in the radio tube*. All this was very obscure in the early 1940's, but found its simple explanation during the Oranur experiment in 1951. This observation was one of the many which prepared the observer for the great experience of the Oranur experiment.

I had approached the experiments on the Geiger-Müller counter with these impressions in the back of my mind. However, they played no vital role whatsoever during the first few months of GM experimentation; they remained, as it were, a silent part of the experiences in the accumulated background of the work. They connected themselves with the function of the *orgonotic pulse action toward the end*, and here they were very helpful in clearing up important OR energy functions.

I suggest now going back to where I interrupted my account on the work with the Geiger-Müller counter tubes: *OR activity and lumination*.

It had already been established that the GM counter tubes functioned in accordance with other well-known *orgonotic* phenomena. The counts continued, over the years, to increase with clear, sunny weather; they decreased with approaching rain, snow or thunderstorm. They could be operated with a *lower* threshold voltage in *good* weather, and they needed a *higher* op-

erating voltage in *bad* weather. They ceased to operate altogether when the weather was extremely bad. After the severe snowstorms which began at Christmas time, 1947, newly obtained counter tubes did not charge in the OR energy room at all. If a malevolent nuclear physicist had tried to "control" my GM experiments during 1948, he would certainly have reached the conclusion that my experiments were "all wrong," that a counter tube does *not* react without excitation by nuclear radiation, and that it was all a phantasy of mine; that it was "this" or "that" only, or "already well known."

Whereas the counter tubes usually began to operate orgonotically after about eight to ten days, during the storm period in December 1947, only one counter tube out of six began to operate, and that one on a very low level after a period of *ten weeks*, instead of a few days of charging.

It seemed important to me to observe the counter tubes in the darkroom and to find out *whether they lumined* like argon light bulbs at the approach of an orgone-charged plastic rod. The observation verified this postulation. *Those tubes which were active spontaneously in connection with the GM apparatus (without the influence of nuclear radiation), also gave lumination.* On the other hand, *those which were "dead" at the GM counter, gave NO lumination in the darkroom.* Therefore, the conclusion was warranted that activity of OR energy impulses and lumination belonged together; that these functions were somehow functionally identical. It should be emphasized that in the darkroom the lumination of the orgone charged counter tubes appeared, with from 4 \times to 8 \times magnification, GRANULAR. The problem as to why some of the GM tubes had been charged with OR and others had not, remains a riddle to this day.

Orgonotic Geiger Action Without Gas Ions

A new question came up:

Do the atmospheric OR energy impulses, which are counted by means of the GM counter tube, as such activate the electromagnetic system of the impulse recorder? Or, is the energy which activates the impulse recorder NOT derived from the impulses in the counter tube at all, as nuclear physics asserts?

From nuclear physics, through its publications, as well as through several electronic physicists with whom I discussed this problem, I learned that nuclear physics was quite certain that in the Geiger action the outer radio-activity merely acts like a trigger on the "*gas ions*" *within the counter tube*;

accordingly, the energy which activates the GM recording system has its source in the electricity which comes from the line to the electronic tubes (filament and plate voltage). With each "ionization event" in the counter tubes, the resistance between the anode and the cathode is lowered in such a manner that an instant *electromagnetic energy* flow is activated. The radium ray, as such, has, to this view, nothing whatsoever to do with the impulses recorded at the output end of the device.

I am formulating these questions deliberately in a primitive manner, just as they turned up in the course of my work years ago. I should like to apologize for this primitiveness. The phenomena are to be scrutinized from *a quite different point of view* than that of the atomic. The final results of this procedure will justify the simplicity of the approach in thinking and in language. We repeat: The nuclear theory of the GM action claims that the incident radiation does *not directly* produce the impulse which activates the recorder.

According to the assumption of nuclear theory, no reaction could be expected if an electroscope were attached to the "anode wire" of the counter tube which is connected with the grid system of the GM device. Such an attachment would be located *before* the input to the electronic amplifiers, i.e., *before* the grid of the extension amplifier, which activates the EM mechanism of the GM device.

1. Question: Will an electroscope attached to the GM grid system through the "anode" wire of the GM tube react to OR charges?

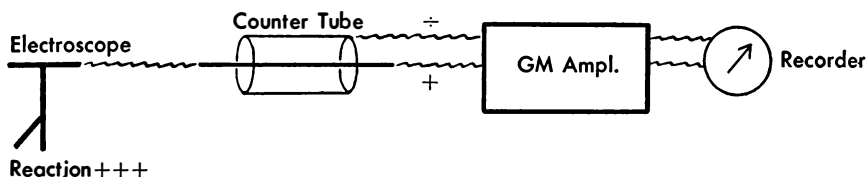


Fig. 4

The result of this experiment challenged the theory that the impulses which activate the GM tube are only triggers for "ionization events" in the counter tube. The electroscope leaf would jump high with each impulse developed in the counter tube. The leaf was constantly kept away from the metal rod of the electroscope if the succession of impulses was fast enough, i.e., in the neighborhood of ca. 2000 impulses per minute. The energy at the electroscope in each single impulse amounted to about the equivalent of a range of 100-200

electrostatic volts (!!), i.e., the amount of electromagnetic voltage necessary to achieve the same degree of deflection of the leaf. The equivalent in volts with rapid succession of impulses was in some electroscopes much higher—with 3000-4000 CPM in the vicinity of 500 e.s. volts. These were incredible, *tremendous* reactions. They in no way fitted the minimal amounts of energy as expressed in the theory of electron *microvolts*. The great amount of energy in itself contradicted the theory that ionization was responsible for the action of the counter tube plus amplifying grid system.

The next step of experimentation followed logically from the first:

2. *Question: Are the impulses which are activating the electronic amplifying system of the same kind as the impulses which emerge from the amplifier?*

Experiment:

We attach a calibrated aluminum or gold leaf electroscope with *one wire* only to the anode wire of the counter tube (i.e., the grid of the GM amplifier), and a second electroscope with *two wires* at the jack for the recorder, i.e., to replace the recorder. If the impulses are the same *before* entering into and *after* emerging from the amplifier, the reaction of the electroscope should also be the same.

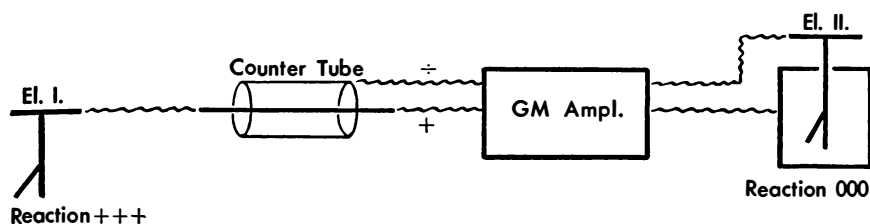


Fig. 5

Answer:

The second electroscope, the one *after* the amplifier, remains inactive, whereas the first electroscope, *before* the amplifier, reacts strongly to each impulse. *Therefore, the energy coming INTO the electronic system is different from the energy coming OUT of it.*

3. The next logical question is this: *Are the outgoing impulses of an electromagnetic nature? Do they activate a volt- and ammeter?*

Experiment:

We leave the first electroscope attached to the anode wire of the counter tube; and at the output we replace the recorder by a volt-ammeter.

Answer:

In A both the electroscope and the volt-ammeter *react* (cf. fig. 6). The *outgoing* energy shows a value of about 8-10 volts, and of 0.005 amperes per single impulse. With rapid succession of outgoing impulses amounting to about 2-3000 cpm, the voltage deflection in the *volt-ammeter* reaches values of from 50 to 75 volts. *The output is steady. The greater the impulse output, the steadier, i.e., the closer to linear action, is the energy flow. The DISCONTINUOUS character of the impulse action disappears nearly completely; it is replaced by LINEAR, steady, continuous action.*

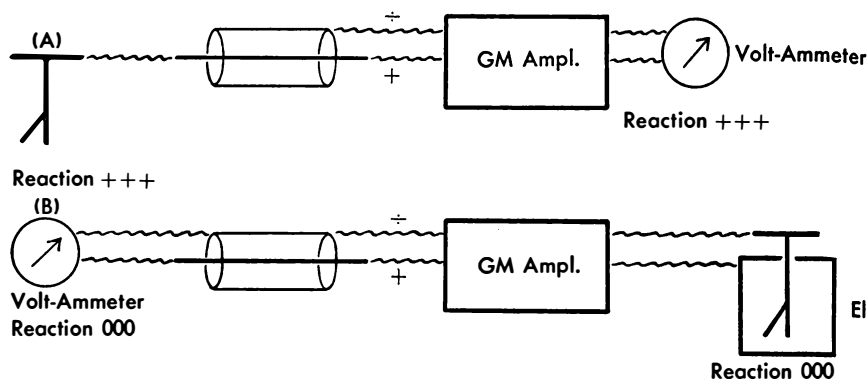


Fig. 6

In B the volt-ammeter replaced the electroscope and vice versa. Now both fail to react at all.

We feel inclined to draw the following general conclusion:

The incoming energy is of a different kind than the outgoing energy. The first is *OR* energy ("static"), the second is faradic, electromagnetic energy. The transformation of the first into the second takes place within the electronic tube system in a manner as yet unclear.

It is known to the theoretical physicist that the need to derive the *negative* voltage from the *ground* in all electrical installments driven by dynamos has remained unexplained. The need to distinguish *galvanic* from "*static*" electricity, as to their basic nature, has been discussed in "*Orgonotic Pulsation*" (*International Journal for Sex-economy and Orgone Research*, 3, 1944).

We have been careful in drawing *final* theoretical conclusions. Our conclusion sounds well and is in agreement with our cherished expectation to send *OR* pulses into a device and to get electromagnetic energy out of it. The

great problem of transformation of OR energy into electromagnetic energy would thereby seem solved. All we would have to do would be to attach a motor to the jack of the recorder and thus "drive a motor by cosmic OR energy."

As a matter of fact, this conclusion proved wrong, and it took hard thinking and much experimentation from August 1947 till July 1948, to find the right answer, and with it, the orgonotic motor action.

I shall now proceed to present the important deviation from the above conclusion which was imposed by the facts.

The answer to question No. 3 (p. 245) was, of course, unsatisfactory. It seemed necessary to simplify the whole structure of the OR energy system. I continuously had the impression that the output of energy impulses was somehow limited by the material arrangements. It was not easy to find out how one could start eliminating unnecessary material arrangements. The ideal appears to be complete elimination of *all* electronic tubes, and to find the technical arrangement which would transform atmospheric OR energy *directly* into a mechanical motor force, without any intermediary amplification.

It seemed of primary importance to answer the following:

4. *Question: Are the impulses originating in the counter tube due to "ionization events"?* IS FILLING OF THE COUNTER TUBE WITH GAS AT ALL NECESSARY TO COLLECT ENERGY AND TO PRODUCE COUNTABLE IMPULSES?

Experiment:

Counter tubes were constructed according to the same design as the ones used hitherto: cylindrical cathode, 1 cm. diameter, central anode wire. They were, however, *not filled with gas*. They were put into the OR energy room for several weeks to charge.

Answer:

Counter tubes which are not filled with gas do not produce impulses countable with the GM device.

This seemed to confirm the electronic theory according to which impulses are due to gas-ionization events in the counter tube; but they contradicted well-established orgonomic facts such as that OR energy penetrates everything, and that, accordingly, it *necessarily also exists within a vacuum*. No other assumption would have been in agreement with the findings and development so far.

5. Question: Can OR energy be accumulated and made visible in high vacuum?

Experiment:

In order to reach a decision in this crucial matter, I had to abandon the GM tube arrangements as used in nuclear physics entirely; only arrangements which corresponded to *orgonotic* functions could solve the riddle, whether the impulses were due to "ionization events" or to OR effects. Therefore, vacuum tubes were constructed with aluminum metal plates inserted parallel into the vacuum 4-6 cm. apart, opposite each other. Thus, a kind of "OR ENERGY ACCUMULATOR IN THE VACUUM" was created: the "VACOR TUBE."

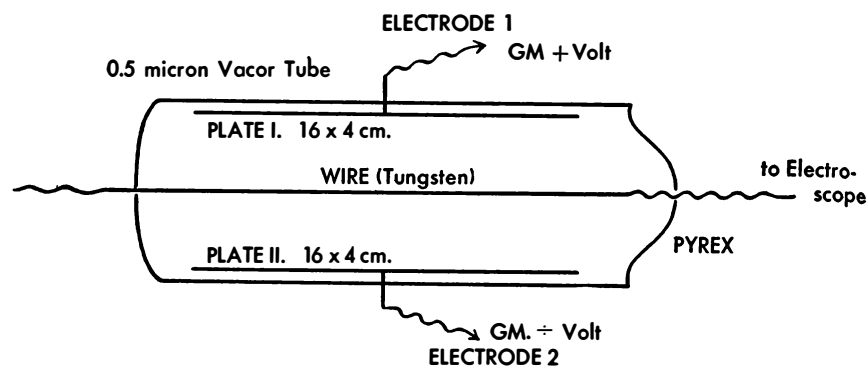


Plate electrodes: 16 cm. long, 4 cm. wide (64 cm.²), aluminum

Distance: 4-6 cm.

Vacuum: $\frac{1}{2}$ micron pressure

Central wire: tungsten

Fig. 7. 3-electrode, 2-plate VACOR TUBE

The orgonomic temperature difference $T_o - T$ becomes manifest as soon as two metal plates are set up parallel to each other. Therefore, it was to be expected that OR energy effects would also appear at the GM device. But the vacuum tube was at first "dead," giving no reaction at all. The temptation was great to give up the whole project, when, after a few weeks, *I could observe lumination in the vacor tube* upon excitation by an OR-charged plastic rod. The color of the lumination was *deep blue*, i.e., orgonotic. It

could be obtained regularly by the usual method of repeatedly passing an orgone-charged plastic rod along the tube.

The article on "Further Characteristics of Vacor Lumination" which appeared in this *Bulletin*, July, 1949, pp. 97-99, is reprinted here in its entirety.

As reported in this *Bulletin* 1, 1949, 9 ff., evacuated tubes (0.5 micron pressure) are capable of *bluish* lumination if they are sufficiently charged with orgone energy and are excited by a moving OR energy field or by an electric tension of from 100 to 1000 volts [cf. photo 5, p. 198d]. The following characteristics of the function of organotic lumination *in vacuo* have been secured in one special vacor tube:

1. With the two electrodes some 15 cm. apart (surface area ca. 2 cm.²), the bluish lumination begins at *both* electrodes and extends from both ends toward each other as the voltage is increased. The two luminating fields make contact with each other; then the field which is excited by the *negative* electric pole *extends* further; the other field, which depends on the *positive* pole, *recedes*, until it disappears altogether. It seems as if the negative electrode field were the stronger one, since it "pushes" the other one away. After disappearance of the lumination at the anode, and with further increase of the voltage up to about 800 to 1000 volts, the whole tube luminates strongly with a bluish-violet color. With further increase of voltage the lumination becomes brighter, until it shows a *whitish* color like daylight.

2. A static electroscope, attached with one wire only from the plate to the anode of the vacor tube, or to a third unconnected wire within the vacuum, demonstrates clearly that the lumination effect corresponds to a process of *charge*. *Discharges* occur in the form of very bright, whitish, rapid flashes of light between the two electrodes at intervals depending on the degree of the charge. The leaf of the electroscope *deflects* during steady lumination; it deflects more with higher excitation, and it *collapses* slightly with the single flashes, deflecting again when the flashes disappear. Therefore, it can be assumed that the steady organotic lumination represents a *charging* process, while the flashes represent *discharges*, i.e., lowering of the potential which has been built up during lumination. If we do not increase the steady lumination, flashes will occur nevertheless after a certain period of time.

3. In observing these vacor phenomena, one cannot escape the impression that what we are witnessing here is the PROCESS OF DAWN AND THE DEVELOPMENT OF DAYLIGHT. Their similarity in color and process is most impressive. However, only further experimentation can reveal what, in the atmosphere of our planet, corresponds to the "triggering" excitation which, in the vacor lumination, is exerted by the electromagnetic voltage. Our assumption has been that "LIGHT" is a *local*

function, an orgonotic lumination effect; that the phenomenon of *light* must be separated from the excitation which triggers the OR energy into lumination. We must assume that there are many kinds of such trigger functions, such as a second, *moving* OR energy field, and electromagnetic tension whose trigger effect depends on the surface area of the electrodes (plates of 64 cm.² each require only 100 to 200 volts for their trigger function; the white discharges are more frequent at a much lower voltage); an as yet undefinable excitation coming from the sun, which triggers the earth's orgone envelope into bluish-violet and finally whitish lumination, called "DAWN" and "DAYLIGHT." I do not agree that it is electromagnetic waves which are propagated from the sun. We should not hurry to solve this riddle but wait patiently for further experimental disclosures. We can expect such disclosures from careful observations of cloud and thunderstorm formations.

4. The orgonotic lumination in the vacor tube is brighter, up to *white*, at the electrodes, and diminishes in intensity and changes toward blue-violet, the farther away it is from the electrode in a continuous scale of shades.

All vacor tubes which were built and exposed to concentrated OR energy before the big snowstorm at Christmas, 1947, reacted at the Geiger-Müller counter as described in my communication in *Bulletin*, 1949, No. 1. *All of these vacor tubes are still functioning in regard to blue lumination and high speed impulse output at the Geiger-Müller counter (up to 18,000 per second).*

However, since the end of December, 1947, no new vacor tube showed any of the phenomena as described in the aforementioned communication. All through 1948, the 0.5 micron pressure vacuum tubes remained silent or showed only minimal orgonotic effects.¹

It is difficult to explain this fact. It was responsible for my decision to publish only a preliminary communication, and to withhold a paper on the orgonotic motor force which is ready for print save for the unexplained fact of the amazing lack of charge in the tubes of 1948. It is possible that the charging was due to the fact that 1947 was a severe sunspot year. Should it be true that the vacor phenomena were due to sunspot activity in 1947, we would have to wait until the next sunspot cycle occurs to be sure of this. However, the fact that these tubes charged whereas the tubes of 1948 did not charge, would constitute a *corroboration* of the orgone phenomena in the vacuum, although it would be restricted to sunspot cycles. Another interpretation would require that, possibly, better vacua would have to be devised to demonstrate the phenomena at all times.

Whatever the answer may turn out to be, we are forced to follow the functions

¹ Note, April 7, 1949: One of the "dead" vacor tubes, a year old, reacted with lumination for the first time this date.

of nature as they guide us; in orgone research, most unusual, nonmechanical reactions are always to be expected.

I ordered a few other vacuum tubes with parallel 16 x 4 cm. plates inserted. (Cf. photo 4, p. 198c.)

Description of the manufacture of the vacuum tubes used, as given by the manufacturer:

First, the glass is cleaned with potassium bichromate and sulphuric acid. Then it is thoroughly rinsed with water, and after that washed through with wood alcohol.

Then the electrodes are cut to proper dimensions, made of aluminum, and washed with carbon tetrachloride. Tungsten metal is used to seal the electrodes onto the glass. Tungsten makes a vacuum-tight seal with Nonex, a special Corning glass. If we use uranium glass we can seal the electrodes directly onto the adjacent glass envelopes; if we use Nonex we have to add some uranium between the Nonex and the wires.

Then the pump is put on. A Cenco Magavac pump is used which is backed up with an aspiration oil pump, a diffusion pump.

While exhausting the tube, a tension of 20,000 volts is put across the electrodes to liberate all the occluded gases in the metal and the glass. After the tube is pumped to a degree of $\frac{1}{2}$ micron, no discharge will take place any longer. The tube is then pumped with 2 mm. of pressure of an inert gas, such as Neon, Argon, or Helium. Again a tension of 20,000 volts is put across the electrodes until the elements are heated sufficiently to liberate any residue gases. The pump is then opened to exhaust all the gases left in the tube. The gases are pumped out with the stop-cock open to the pump until no discharge takes place in the tube. It is then left pumping for 15 minutes to insure that no gas remains in the tube. It is then sealed with the pump open.

The glass of the tubes is pyrex glass.

Question: When do we get ionization with air?

Answer: With 2-3 mm. pressure.

Question: If you want to get a discharge with Helium or Argon, how much would you need?

Answer: 1/10 mm. pressure would be sufficient.

Question: How do you know that there is not 1/10 mm. Helium, etc. in these tubes?

Answer: Because the discharge would cease with 20,000 volts. *The two-plate tube has an Xray vacuum. 20,000 volts would not give a discharge.*

The vacor tubes gave no orgonotic effect on Xray film when new; but

after several weeks of charging with OR they reacted the same way as the first vacor tube, with bluish lumination in the darkroom.

These were important findings toward the solution of the nature of the OR energy effect in high vacuum.

Answer:

OR ENERGY CAN BE ACCUMULATED IN A HIGH VACUUM. The OR energy in vacuum has the same qualities as organismic and atmospheric OR energy: *Blue lumination, penetration of matter, impedance of electromagnetic waves*, such as Xrays. An ordinary vacuum, one which was not exposed to a highly charged OR energy atmosphere does *not* have these properties, or does not manifest any of these properties.

6. *Question: Will the rate of impulses be more or less in a vacuum than in gas-filled Geiger tubes?*

If they are less frequent, *ionization* is an important factor *enhancing* the energy output at the GM counter. If they are *more* frequent, then the conclusion is secured that *matter in the form of gas molecules or air molecules IMPEDES the energy function of the cosmic OR energy, and that OR energy is strongest or "fastest" in space free of gas.*

Experiment:

The negative wire of the GM extension amplifier was attached to one plate, the positive wire to the other. *The central wire of the vacuum tube was attached to an electroscope to observe possible field reaction between the two plates in 0.5 micron pressure vacuum.*

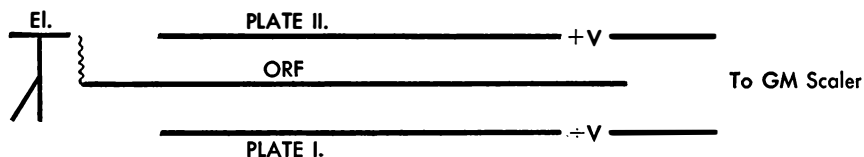


Fig. 8. Arrangement for the measurement of the excited OR energy field (ORF) in high vacuum. The deflection of the leaf of the electroscope indicates the strength of the OR energy field

Answer:

a. Whereas the usual GM counter tubes required from 750-1000 volts tension to yield counts, the 2-plate, 3-electrode vacor tube yielded *much higher* impulse rates at 350-500 volts (!) after several weeks of charging with OR energy—THOUSANDS PER SECOND in 1951.

b. The electroscope which was attached to the central wire demonstrated a CHARGE *within* THE VACOR TUBE; *it increased with increase of voltage at the two plates*. This function made MEASUREMENT OF THE OR CHARGE WITHIN THE VACOR TUBE POSSIBLE. Operation of the GM counter would set in with about 350-500 volts at the plates, sometimes even with as low as 200 volts, when the weather was particularly good—sunny and dry. I shall return to the method of measuring OR energy in the vacuum very soon.

c. The appearance of lumination in the vacor tube, impulses at the neon indicators or the impulse recorder and an OR field tension of about 300-500 volts within the vacuum would usually, but not always, coincide.

d. Whereas the most strongly charged gas-filled counter tubes had yielded no more than 3200 impulses per minute with the 32 GM scaler, the two-plate vacor tube easily gave 10,000 cpm in New York during the winter months of 1947 and 1948, at around 800-1000 volts at the plates. New, *uncharged* vacor tubes did not react at all, gave *no* lumination, *no* reaction with the electroscope, and *no* reaction at the GM counter.

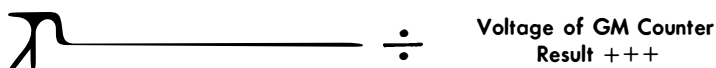
e. The insertion of plates instead of wires into the counter tubes made a decrease of the voltage possible. This fact encouraged the expectation that the exciting voltage could possibly be reduced still more and perhaps ultimately be abandoned altogether.

In order to reach a practical answer to these basic problems, several intermediary questions had to be answered first:

7. Question: *Is the attachment of a positive AND negative volt tension ABSOLUTELY required? Or, would the attachment of an electric tension of either sign ALONE be sufficient to excite the OR energy within the vacor tube?*

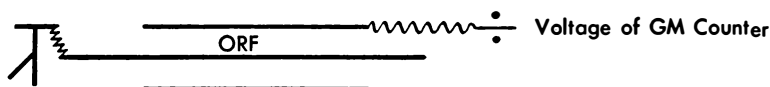
Experiment:

a. Unipolar tension at electroscope: Positive and negative alone.

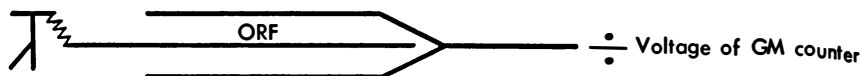
 Voltage of GM Counter
Result +++

Result: *The deflection of the electroscope leaf can be achieved with only a negative unipolar tension*. Positive tension alone gives no electroscopic charge.

b. Electroscope at central wire of vacor tube; only *negative* tension at *one* plate:



c. Electroscope again at central wire; negative tension split up into two branches each attached to one plate:



Results of both *b* and *c* were *positive*. The *negative* pole of electric tension is sufficient to excite the vacor tube and to yield counts.

d. Attachment of the *anode* tension to one or both plates of the vacor tubes gave *no* result; *no* lumination, *no* field reaction, and *no* counts.

General Answer:

a. THE IMPULSES CREATED IN THE VACOR TUBE AND COUNTED AT THE GM RECORDER HAVE NOTHING WHATEVER TO DO WITH IONIZATION OR EVEN ELECTRICAL BIPOLAR FUNCTIONS.

b. The electrical tension only plays the role of a *trigger*. IT EXCITES OR ENERGY TO LUMINATION AND PULSATION AT A HIGHER RATE.

Point *a* is in agreement with the old postulate of OR physics that *OR energy is not electricity* but antithetical to it. Point *b* follows logically from point *a*. The corresponding facts were important stepping stones in the search for the link between OR energy and electromagnetism. These important connections would certainly have been missed if I had followed the admonitions of some of my well-meaning critics, mostly physicists, not to introduce a new type of energy, but to explain the new phenomena on the basis of the electronic theory. Had I done so, I would have gained nothing and have lost everything. It is, therefore, to be pointed out again that *the electronic theory of nuclear particles does not lend itself to working with primordial OR energy*. The electronic theory, valid and useful as it is within the realm of nuclear physics, is a dead-end street in orgone physics. Still, there exists a certain definable, connecting link between primordial, mass-free OR energy and secondary NR functions. This point of view will be corroborated by further observations and experiments. The whole problem of the *physical properties of "space"* which does not contain air or gases of any kind, the

so-called "vacuum" is involved; and with it the total foundation of present-day astrophysics. These are very serious matters. The responsibility involved is great. We are on the verge of an entirely new view of the universe.

To summarize:

Only the so-called "negative" tension of an electrical energy source acts upon OR energy in an exciting manner, like a trigger or "irritant." The "positive" tension is without effect. Due to the involvement of the "ground" energy, line voltage acts differently from battery voltage. This point is important: Electro-technology uses "grounding" of the *negative* pole in order to "provide electrons from the ground" for the electrical functions. We suspect, with good reason, that the "electrons from the ground" are OR energy units moving freely in the earth's crust. But this must be confirmed.

8. *Question: We assume that the ground contains OR energy on the basis of the temperature difference $T_0 - T$ and other, mostly bio-energetic functions. Would the ground accordingly give counts at the GM counter if it were connected with the anode wire of the counter tube?*

Experiment:

We connect the anode wire of the counter tube of the GM counter to the ground.

Answer:

No amount of voltage applied to the counter tube will yield any counts from the ground. On the contrary: *Impulses will disappear with the anode wire grounded.* The ground seems to react differently from concentrated atmospheric OR energy. This fact contradicts the established fact of the pulsation in the ground at the oscillograph and the OR phenomena in earth bions as well as the temperature difference. Our result is therefore questionable. *Could it be that the high electrical voltage which is applied to the counter tube or to the vacor tube extinguishes the function the existence of which we must postulate theoretically?*

9. *Question: Would the impulses still appear if we tried first to separate the high voltage from the amplifying system and then to eliminate the high voltage step by step entirely?*

Experiment:

We use *two* GM counters. The negative voltage of GM I is attached to the plates of the vacor tube in the "split wire" fashion. The central wire of the

Answer:

- a. The ammeter indicates, as expected, 0.005 amp. per impulse;
0.015 amp. at rotation
rate of 2000-3000 cpm.

b. The voltmeter indicates 8-10 volts per impulse; an equivalent of 50-70 volts at 2000-3000 cpm, i.e., rotation rate.

c. The electromagnetic recorder shows fast rotation of the pointer, ca. 2 per sec.

d. THE ELECTRIC BULB, HOWEVER, DOES *not* GLOW AT 70 VOLTS: IS THE AMPERAGE TOO LOW?

e. *The neon indicator reacts positively with vivid flashes.*

This answer is confusing: The outcoming impulses behave both like galvanic electricity (positive volt-ammeter reaction, activity of the electromagnetic system of the recorder) and also like OR (or "static") energy; the electric bulb does not glow, and the neon indicator reacts positively.

In OR experiments, one encounters the most unusual and confusing reactions. Some of them run counter to all well-established views on EM energy. The experimenter must be very flexible in his approach, he must not cherish any rigid assumptions; he must work without any kind of prejudice, and yet he must have at his disposal, at every step, all the observations made previously in order to apply the appropriate facts at the proper moment. It would be much simpler if he dealt with a known form of energy. This, however, is like work in complete darkness where only past experiences and keen senses can help.

If we wish to succeed, we must by all means go off the road on which routine technology is traveling; we must not only *not avoid* the unusual, the “thing out of the way”; we must, quite on the contrary, search for exactly the facts and phenomena which have been so consistently overlooked. I should like to summarize the facts pertaining to this requirement:

Psychiatry consistently evaded the orgasm function; we consistently investigated it, and discovered not only the energy source of the biopathies but also, following this line, the cosmic energy.

Pathology evaded the autogenous infection and missed the degenerative process in cancer; we followed this road and found the degenerative (rotting) process in the organism out of which the cancerous shrinking biopathy develops.

We followed up the *subjective* impressions of light which had been evaded

as "only subjective," and we discovered the atmospheric OR energy phenomena in the darkroom.

We followed the function or fluctuations of the "natural leak" of the electroscope and found in it the natural organotic expression of atmospheric energy.

We pursued the function which was called "only heat waves," and we discovered the west-east motion of the rotating OR envelope.

We studied the function which was discarded by astronomers as "bad seeing," and we found the pulsatory, light-refracting function of the atmospheric OR energy.

We followed to the end the function which was done away with as "static electricity," established its identity with OR energy, and made it turn the recorder of the Geiger-Müller device.

This principle of following our sense organs and of trusting our organ sensations—IF THEY ARE RELIABLE—proved so useful and rich in its possibilities that we should continue to use it still more consequentially; we should try to form it into a controllable tool of natural research. We must be especially careful *not to exclude the characterological and perceptual functioning in the observer*; the observer is a piece of functioning nature, perceiving and acting upon another piece of nature. Finally, we must take most seriously rational human emotions as a tool of recognizing natural functions, once we have made perfectly certain that these emotions are free of secondary drives and obstruction through armoring.

Orgonomic theory had postulated the functional identity of organismic and cosmic OR energy. Logical conclusions had attributed pulsation also to non-living nature. Therefore, *it was to be expected that the organismic and the cosmic OR energy functions would meet somewhere and unite in a definite way at the GM device*. But it was entirely impossible to predict in what kind of function they would meet. Attention, however, was centered on this possible outcome. It was necessary at that state of experimentation to ascertain in what manner interference by different devices, and especially by the *organism of the observer* would influence the OR energy reaction at the GM device. We remember that quite at the beginning, the living organism had activated the counter tube with the hand unit operated by batteries. This was not the case with the GM counters which were operated by *line* voltage.

In our experiment (XXI-10, p. 256), a second GM counter, *with the high voltage off*, registered the impulses which came through from the vacor tube

attached to the first GM counter with its high voltage applied to the trigger plates. *When the voltage circuit was PUT IN in the second GM counter, without voltage actually being turned on, the registering of impulses failed to appear or stopped.* This means: THE BIO-ENERGETIC GEIGER REACTION HAD BEEN OVERLOOKED BECAUSE IT WAS OBFUSCATED BY THE HIGH VOLTAGE OF 700-1200 VOLTS, AND BECAUSE THE THEORY POSTULATED GAS IONIZATION.

The following diagram depicts the pulse-forming and amplifying section of GM CMB-3A; *the high voltage system is excluded*:

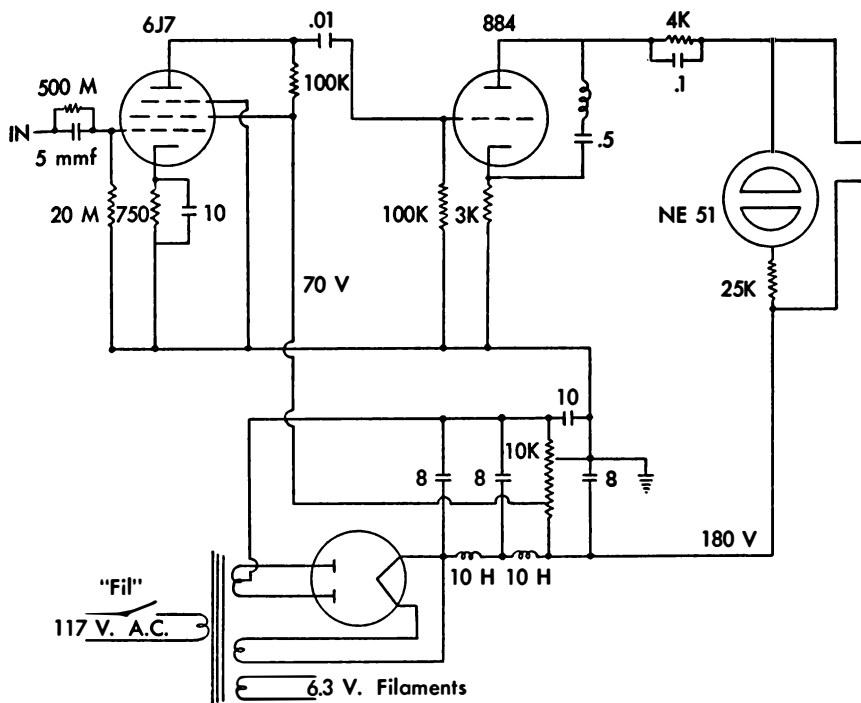


Fig. 11. Amplifier and "pulse circuit" of Geiger Counter, CMB-3A

11. Question: How does the body OR energy of the observer influence the reaction of the GM amplifying system?

Answer:

Touching of the grid of the extension amplifier with the finger creates a strong noise at the audio-amplifier, and activates the neon lights. Insulation of the hand with rubber does not change the effect. The hum is less noisy but

has retained its characteristic tone. Bringing the hand near the grid system gives the same reaction.

When the cathode wire is connected, the hum *disappears*.

The reaction appears if *only* the grid wire of the electronic audio-amplifier is touched.

12. *Question: Does nonliving matter produce the same reaction?*

Experiment:

We touch the grid wire of the GM extension amplifier with the filament switched *on* and the high voltage circuit shut *off*, with wood, plastic (uncharged), rubber, a piece of iron (without rubbing).

Answer:

There is no reaction in the audio-amplifier with any of these nonliving systems.

13. *Question: In metals, the "electrons" are supposed to be freely movable. Will RUBBING of metal on the grid wire of the amplifier produce reactions?*

Answer:

Yes: Rubbing with metal on the grid of the amplifier gives single irregular clicks and neon signals.

14. *Question: COULD ORGANISMIC OR ENERGY ACTIVATE THE IMPULSE RECORDER?*

Experiment:

We attach a dry cell battery, for the purpose of isolation only, to the grid of the extension amplifier, and touch the battery with our hand.

Answer:

Yes: The recorder needle starts rotating as soon as we touch the battery or the grid wire directly. The rate of impulses amounts to approximately 3000 CPM. Since we know quite definitely that the organism contains OR energy and *not* electromagnetic energy; since, furthermore, the recorder is constructed as an electromagnetic system, we have obtained for the first time in our experimentation the *transformation of OR energy into electromagnetic energy*. No high voltage was applied.

15. *Question: Is there any nonliving substance which would give the same reaction in the GM filament system without application of high voltage under the same conditions?*

Experiment:

We attach a battery, a piece of metal, wood, celotex, uncharged and charged plastic.

Answer:

Nonliving matter does not contain PULSATING OR energy, nor freely moving OR energy; it does not activate an electromagnetic system. There is a basic difference between living and nonliving matter. The first pulsates; the second does not pulsate.

16. *Question: Would highly charged nonliving matter activate the electromagnetic system with the high voltage off?*

Experiment:

We attach an electric voltage from a battery of 1000 volts to the grid of the amplifier.

Reaction: NONE.

We approach a plastic rod *charged with hair OR energy* to the anode wire of the counter tube or directly to the grid wire of the extension amplifier.

Reaction: positive; crackling noise; recorder operates; neon light flashes.

Answer:

Electromagnetic energy of a galvanic or faradic nature does not activate the GM counter; *orgonotic field energy does activate it.*

17. *Question: If our conclusions concerning the functional identity of friction "electricity," the energy field of the excited secondary coil system and the life energy are correct, then an active secondary coil field would also activate the amplifiers with the high voltage shut off.*

Experiment:

We let the secondary coil system of a diathermy apparatus or a simple demonstration set for Tesla-waves, operate in the vicinity of the GM counter from a distance of $\frac{1}{2}$ to 5 meters, depending on the strength of the oscillations.

Answer:

So-called electromagnetic oscillations or waves are capable of activating the GM amplifier in such a manner that rotation of the recorder needle sets in immediately when the sparks occur, *with high voltage at the GM counter off* and without any wire connection.

18. *Question: Will a simple aerial, if attached to the grid of the extension amplifier tube of the GM counter, produce the same result as touching the grid wire with one's hand or finger? If it does, the basic functional identity between OR energy in the atmosphere and in the living organism would be firmly established; it would be a perfect parallel to the chemical identity be-*

tween atmosphere and living organism with respect to the four basic elements: oxygen, hydrogen, carbon and nitrogen.

Experiment and Answer:

An aerial attached to the grid system of the GM counter will (on condition that *the high voltage is not applied and no counter tube used*) activate the GM counter, make neon lines flash, turn the needle of the electromagnetic recorder, set a spinner motor of a certain type into motion, produce an output of about 3000 cpm in a steady, even flow, with about 10 volts (EQUIVALENT, since it is uncertain whether this output is of an electrical nature) per single impulse and between 50 to 70 volts in our arrangements per sequence of ca. 3000 cpm. The action can be easily stopped by disconnecting the aerial or by removal of the finger.

BASIC CONCLUSION: IT IS EVIDENT FROM THESE FUNCTIONS THAT ORGANISMIC ENERGY (*life energy*) IS FUNCTIONALLY IDENTICAL WITH ATMOSPHERIC (COSMIC) OR ENERGY. THERE EXISTS NO VACUUM. COSMIC OR ENERGY FILLS ALL SPACE.

The evidence for the existence as well as the origin of Life Energy is abundant and irrevocable. The elements of this basic functional identity so far established, are the following:

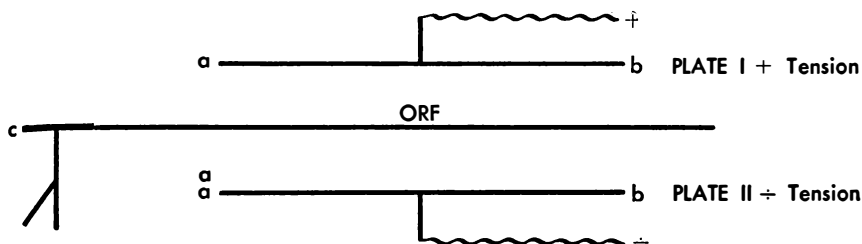
1. A constantly higher temperature in living organisms *and* OR energy accumulator compared with the environment ($T_o - T$).
2. The Organomic Potential *from low to high* and OR energy metabolism.
3. The identity of the basic chemical constituents: H.O.C.N.
4. Electroscopic reactions in the form of fluctuations of the rate of discharge.
5. OR Energy Field action *in vacuo*.
6. PULSATION.
7. RESPONSE OF THE GEIGER-MÜLLER COUNTER.

Methods of Measurement of the Vacor Energy Field

Before proceeding further, let us summarize the methods of measuring OR energy in the vacuum *quantitatively*. We can summarize only those methods which are available at the present time; we do not know, and we cannot predict, what kinds of measurement will develop from further OR research. We are far from having detected all the functions operating in cosmic OR energy.

a. *Measurement of Orgone Energy Field Strength*

In order to measure the field strength within an OR energy-charged vacuum, a 3-electrode vacor tube is required with 2 parallel metal plates and one metallic wire in the center between the plates. The plates are used to provide the exciting electric trigger voltage; the wire is used to pick up the charge of the OR energy field (ORF) between the plates:



The factors involved in the *measurement of the OR energy field strength in the vacuum* are:

- a. The surface area of the two plates.
- b. The electrical voltage at the plates.
- c. A calibrated electroscope which is attached to the central wire (ORF).

The experiment shows that broad surfaces are far better for use of the electrical trigger action than small surfaces or points. Broadening of the surface lowers the amount of necessary voltage.

By July 1948, the voltage had been lowered from the usual amount of 800-1000 volts to 200-500 volts. Further reduction of trigger voltage was to be expected from further experimentation.

Uncharged vacuum tubes show no field reaction at the electroscope regardless of the amount of voltage applied. If the voltage is high enough to bridge the gap between the plates (50,000 volts and more), the usual Xray phenomena will occur. But in order to achieve lumination and field reaction between plates 4-6 cm. apart from one another, high *OR energy concentration within the vacuum is required* (VACOR): Under disturbed atmospheric conditions (much rain, low OR energy concentration, etc.), it will take many months to obtain the necessary vacor concentration of OR energy and the vacor phenomena. But whatever the conditions may be, the presence of two parallel plates is essential and preferable to points or small-surfaced electrodes.

The orgonotic field action in the vacuum increases with the degree of air evacuation, with the plate surface, with the voltage applied to the plates and with dryness of the atmosphere. Also, the season of the year or the sunspot cycle have some, as yet undefinable, influence upon the vacuum.

The calibration of the electroscope which was used in these measurements was equipped with an aluminum leaf and showed the following values in its 10-division calibration (*cf.* chart E, p. 265).

DIVISION	VOLTAGE
1	200
2	440
3	580
4	720
5	860
6	1080
7	1320
8	1640
9	1800
10	2020

We try as best we can to keep our quantitative definitions within the framework of the orgonometric number system, the kr^x — system. In my report on electroscopic orgonometry (*International Journal of Sex-economy and Orgone Research*, 1944), I had expressed the unit of OR energy, ONE ORG, in terms of 120 volts, i.e., the voltage necessary to obtain a certain deflection of the leaf. The number 120 is not within the kr^x system; it is also too small to express the unit of OR energy. Therefore, I changed the unit, setting ONE ORG equal to $256 = 4^4$ volts. Since the amount of energy necessary to deflect the leaf of the electroscope varies with the divisions, we charge the electroscope first to a certain division, and then we put in an additional charge which raises the leaf to one of the next divisions. If this additional amount is in the close vicinity of 256 volts, we have obtained a standard measure for ONE ORG.

These quantities will never be quite exact because the deflection changes with atmospheric conditions within rather broad limits. But the actual quantity of field strength in the vacuum can be exactly determined and expressed in the voltage necessary to achieve the desired amount of deflection of the leaf.

We can thus count the impulse output at certain levels of field strength. Under certain atmospheric conditions, the *measure* threshold will be, say, at

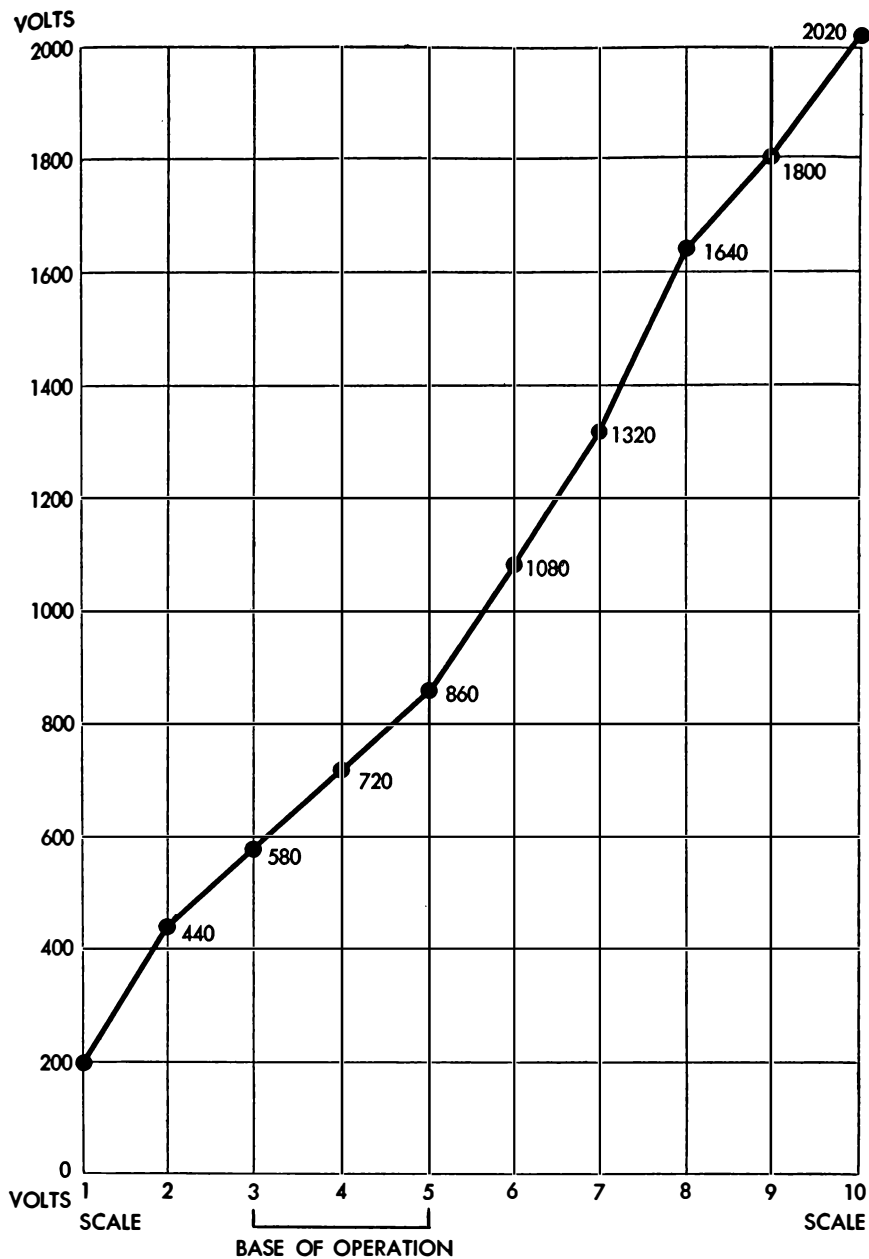


Chart E. Calibration of electrostatic voltmeter, aluminum leaf. 1 ORG \neq 256 Volts.

300 volts or slightly above 1 Org; the *rotation* threshold will require 750 volts or about 3 Orgs. Under different atmospheric conditions, the rotation threshold will be very close to the measure threshold, at, say, about 300 volts or 1.15 Orgs.

b. *The unit of the Orgonotic Impulse Action Area*

In order to remain within the framework of the kr^x system, the plate surface was chosen in such a manner that the number of square centimeters which is being excited by the electrical voltage and which gives off the impulses to the GM grid system is either $64 = 4^3 \text{ cm.}^2$, or $2 \times 64 \text{ cm.}^2 = 128 \text{ cm.}^2$. Each plate is 16 cm. long and 4 cm. wide. The surface area is called the "IMPULSE ACTION AREA." *Its unit is 64 cm.}^2* ONE IMPULSE ACTION AREA (1 IA). Thus, a vacor tube with 2 plates 32 cm. long and 4 cm. wide has a total action area of $2 \times 32 \times 4 = 256 \text{ cm.}^2 = 4^4 \text{ cm.}^2 = 4 \text{ IA}$.

The elimination of the gas filling of the evacuated tubes and the introduction of plates instead of wires as impulse action areas, has increased the impulse energy output quite considerably. The highest rate per minute with the classical gas-filled counter tubes was 6000 cpm in 1947. In July 1948, when plates in 0.5 micron pressure vacuum were used, the rate per minute was already around 200,000 cpm with rotation at scale 32. Millions of impulses per minute were to be expected with systems of greater capacity for impulse transmission. Theoretically, it had to be assumed that the "empty space," that is, space entirely free of atoms, functions at a very high rate of pulses per time unit. How high this rate actually is, no one can tell as yet. But it must be assumed as *very* high in consideration of the fact that these pulses or impulses constitute the motor force which makes the planets rotate. In August 1948, measurement with an electronic 4096 Autoscaler (Tracerlab) yielded *10-12 thousand impulses per second* at 500 volts trigger action, with 4096 scale. These are tremendous energies, considering an equivalent of 10 volts per impulse or 50-70 volts per 3000 cpm. At present (1951), in certain vacor tubes, an output of 20-25 thousand counts *per second* are obtainable under the proper atmospheric conditions. It was proposed to call the output of 25,000 cps a REICH-ORG, amounting to $4^2 \times 10^5 \text{ cpm}$ (one ORG minute = 64 seconds).

5. Orgone Energy (OR) Versus Nuclear Energy (NR)—ORANUR (December, 1950-May, 1951)

OUTLINE

Introductory remarks. Basic premises of the ORANUR Project. Sequence of events. Practical preparations for experimentation. OR energy runs amok (DOR): The "ORANUR SICKNESS." Specific biological reactions: Oranur hits the weakest spot. An "immunization" effect in Oranur. Atmospheric Oranur chain reaction. Lingering effects of Oranur. Oranur results in mice. Health measures and evacuation of diseased workers. A close call for one physician. Interruption of the Oranur experiment. Considerations in publishing and not publishing the results. Danger from emotional plague misuse of Oranur. State of affairs at the end of March 1951. Xray effects and Oranur sickness. A surprise event: GM counts with radium in thickly shielded safe. Phases in the Oranur process.

Introductory Remarks

It is a common experience in natural-scientific work that one starts some research project with a certain problem in mind to be solved, and that the actual operation forces its way in an entirely different, unexpected direction. Careful vigilance combined with complete lack of preconceived ideas will then achieve important, though unexpected results. The discovery of the radioactivity of pitchblende was made this way, and many other discoveries made in a similar manner are known. This magnificent rationality in true natural inquiry was at work also in the series of Oranur experiments which began toward the end of 1950.

As proposed in the first ORANUR report (*Orgone Energy Emergency Bulletin*, No. 1, December, 1950), the Oranur experiment proper had as its primary objective the investigation of possible anti-nuclear radiation effects in the atmospheric orgone (OR) energy; in other words, the experiments were planned with the prospect of finding a powerful antidote against nuclear (NR) radiation sickness. On the basis of years of previous experi-

mentation and observation, it was assumed that the powerful forces contained in the cosmic OR energy would neutralize NR radiation and mitigate its effects. It was roughly taken for granted that "radiation sickness" is the effect of *nuclear* radiation acting upon living tissues and blood; this assumption was in accordance with the prevalent view in today's radiological pathology.

Now, the first series of the specific Oranur experiments did not fully reach this goal, although several important and hopeful observations had been made in the intended direction. *However, the main result of the Oranur experiment proper was the nearly complete disclosure of the true nature of a type of radiation sickness which has much in common with what is known about biological effects of atomic energy.* IT WAS FOUND, BEYOND ANY REASONABLE DOUBT, THAT SO-CALLED RADIATION SICKNESS IS NOT, AS HERETOFORE ASSUMED, A DIRECT RESULT OF NR RADIATION UPON LIVING TISSUE BUT AN IMMEDIATE EXPRESSION OF A *severe reaction of the organismic OR energy against the action of NR radiation.*

To explain these astounding results in familiar terms of medicine:

To a superficial view, an abscess or an inflammation may appear as the direct result of the invasion of virulent bacteria into the organism. However, it is well known in organic pathology that abscess, inflammation, high temperature, etc., are due to strong *defensive* reactions of the organism *against* invading infectious bacteria. Concentration of leucocytes in the invaded area, concentration of blood, and, in severe cases, high-pitched activity of the heat regulation system (high temperature) are the immediate symptoms in infectious disease.

This clinical example may suffice to give the reader an initial idea of the first results we achieved. To continue with the analogy: Steeped in the wrong belief that it is the bacteria which are acting as the specific factors in abscess formation, inflammation and high temperature, we had started with the expectation of finding an effective agent against infectious bacteria. To our great astonishment we discovered that the bacteria are no more than the eliciting cause, mere triggers which stir leucocytes, blood concentration in the area of infection, and the general rise in temperature into action. This reaction *on the part of the organism* to the infection is in itself an attempt at *self-cure*. However, under certain specific conditions, *the process of defensive health reaction can or does turn into the true killer.* We are most probably dealing with an organismic reaction similar to that of *immunization* to an infectious disease.

To anticipate briefly:

RADIATION SICKNESS IS A SPECIFIC PROBLEM OF ORGANISMIC OR ENERGY FUNCTIONS AND NOT OF NR RADIATION. THE LATTER IS NOT A *specific* CAUSE OF RADIATION SICKNESS. Symptoms which appear in the course of radiation sickness can also come about without the action of NR radiation.

Nausea, hemorrhages, petechiae, general malaise, loss of hair, sclerosis of the skin, decline of the blood function, fatigue, anemia, leukemia and final death are not specific symptoms of radiation sickness. They are to be found singly or in complex syndromes in diseases which were not elicited by overirradiation. In addition to these symptoms, during the Oranur experiment other symptoms were observed which, as far as we know, have not been reported by observers of NR radiation effects. The Oranur experiment has produced some of the well-known NR radiation symptoms, and in addition, symptoms which were specifically related to overirradiation by OR energy.

Thus we did not yet, in this first run, secure a safe antidote to radiation sickness, but we found the true dynamics of this disease and were able to link it up comprehensibly with other disease pictures. These introductory remarks will now be substantiated by concrete facts and observations.

The Oranur experiment proper has left too many questions unanswered to yield a clear-cut picture of all the underlying processes. This is reflected in the presentation which is less compact and systematic than the three preceding reports on the preparatory Oranur experiments. It is hoped that in due time the main body of the Oranur experiment will reach the same degree of clarity and consistency. The urgency of the subject matter made not premature but less elaborate publication necessary.

Before entering the main subject, I would like to express my deep appreciation and my thanks to my assistants, who helped carry the dangerous job through during the five months of experimentation in Oranur. They were fully devoted to their tasks; they took severe criticism at times, with the attitude of the man or woman who knows fully what doing a responsible job means; they have exposed themselves to dangerous hazards and even to possible death without hesitation or complaint; at times they have worked uninterruptedly day and night; and last but not least, they have stood by all through the task as good friends in a team. I am very grateful to all of them, and I would like to express my regret that, without intention, they have become, in these experiments, objects of a dangerous threat to their health and even to their lives.

Basic Premises of the Oranur Project

The Oranur project was inaugurated on several well-known and commonly understood premises.

1. *Atomic energy* (nuclear energy, NR) represents cosmic energy which is freed from matter through disintegration of the atom, which is the constituent of the universe in terms of classical and quantum physics. It is energy AFTER MATTER. OR ENERGY, on the other hand, represents cosmic energy BEFORE MATTER, i.e., energy which has *not* been caught in or has not been transformed into solid matter. It is universally present, penetrates everything, surrounds, as the so-called OR energy envelope, our planet and most likely all other heavenly bodies (sun's corona, Saturn's ring, etc.). Cosmic OR energy, moving freely within the living organism, is called BIO-ENERGY OR ORGANISMIC OR ENERGY.

2. From many observations over a period of some 15 years, it had been deduced that OR energy and NR energy are antagonistic to each other. NR energy, according to current views, damages living functions in the form of "*radiation sickness*," in severe cases with consequent death; in organomic terms, NR energy somehow affects bio-energy, rendering it incapable of functioning to various degrees. On the other hand, it was assumed that OR energy, in sufficient concentration and strength, would counteract NR radiation. It seemed most likely that the spontaneous recovery from radiation sickness was to be attributed to the OR energy in the organism getting the upper hand over NR energy.

3. In order to make this interrelationship of atomic and OR energy more readily comprehensible to ourselves and to the world at large, a parallel had been drawn in *psychological* terms many years ago to the age-old notions of the human mind such as the antagonistic functions of "GOOD" and "EVIL," or, meaning the same, of "GOD" and "DEVIL". (Cf. ETHER, GOD AND DEVIL, 1949).

The physical *Life Energy* had been discovered in consequential pursuit of the functions of what is called "LOVE" in the whole animal kingdom. The human mind has always conceived of LOVE as being capable of coping with HATE and DESTRUCTION. It was also always clear that hate can kill love and that love, in its struggle against evil, can turn into hate by mere frustration.

To the experimenter in the Oranur project, the antithesis of OR energy and NR energy easily merged with our psychiatric knowledge about

emotional functions, which are, in a deep biophysical sense, truly *physical* functions. OR energy had never shown any ill effects on living organisms; it was shown to be capable of coping with such afflictions as tissue and blood degeneration by charging of the organism to a high bio-energetic level. On the basis of these medical experiences, it was assumed that "*OR Energy*" or "*Life Energy*" represented in strictly physical terms what the layman is used to calling "Good" or "God". Furthermore, it had been found and was secured as a piece of well-founded knowledge that the BIONS or OR ENERGY VESICLES which constitute the living substance also appeared in two antagonistic forms, as PA bions and T-bions; the PA bions are capable of killing the T- or death bacilli. But it is also true that T-bacilli, highly concentrated or active in bio-energetically weakened tissues, destroy healthy tissue. This was learned from the cancerous shrinking biopathy. (Cf. Reich, *THE CANCER BIOPATHY*, pp. 11-63).

Thus our background of operation contained two series of functions which were antagonistic to each other and were amply represented in human ideology, in microscopic observations and in physical functions. Synoptically:

GOOD	EVIL	Ethics
GOD	DEVIL	Religion
LIFE	DEATH	Biology
PA-BIONS	T-BIONS	Bio-energetics
ORGONE ENERGY (OR)	NUCLEAR ENERGY (NR)	Physics
COSMIC ENERGY	COSMIC ENERGY	Astrophysics, Cosmology
<i>before</i> MATTER	<i>after</i> MATTER	

Though no more than a useful framework of thought, this coordination provided a perfect base of operation and a safe guiding line into the dark realms of a dangerous unknown. Its general human and scientific basis seemed broad and firm enough to serve as a reliable outlook onto things to come.

Moreover, extensive work on the cancer problem for the past fifteen years had yielded a rich harvest of various facts about life functions and their counterparts, the forces of evil and destruction. A firm hold had been established with regard to diagnosis of initial decay and degeneration in living systems through such measures as the Reich Blood Tests and the cultivation and microscopic observation of the indicators of death, the T-bacilli (cf. *THE CANCER BIOPATHY*).

Our first report contains the general outline. Now, let us turn to the

events proper as they began to develop around the middle of December 1950 to about the end of May 1951. These events, to say it bluntly, represented a severe knockout blow in many directions: With respect to physical functions, with respect to the crucial breakthrough into the concrete experimentation, and with respect to Oranur particularly.

The workers who partook in these first steps of Oranur all became afflicted to various degrees with "Oranur sickness"; experimental mice died; the experimental building was knocked out of function for several months and possibly permanently; all plans which were carefully designed to carry out the project, were thrown over and had to be redesigned; crucial physical concepts tottered. Only the open, free, truly scientific mind will be able to follow this report without prejudice or fear.

Sequence of Events

On August 30, 1950, I had reported at the annual meeting of the Board of Trustees of The Wilhelm Reich Foundation about the *anti-nuclear* possibilities of OR energy. (Cf. *Orgone Energy Bulletin*, 3/1, January, 1951, pp. 59-60.)

During the first week of December 1950, we began to proceed toward effective action.

The medical organomists in New York were alerted through our educational secretary, Dr. Elsworth F. Baker, to stand by after information was given on our plans.

We made it clear, to begin with, that there is at present no remedy known to medicine in cases of decline of organismic functioning, except OR energy as applied in the cancer biopathy. This, naturally, constituted a heavy responsibility which fell on *our* shoulders. We alone were able to find out whether or not OR energy contained any hope in the treatment of NR radiation sickness. The USA faced a dangerous situation in the first days of December 1950, when the disaster in Korea had struck with the evil attack of the Chinese communists; with the hands of the USA bound by the pledge not to bomb their hinterland in Manchuria; with the English allies still doing business with the red dictators; with the helplessness in the face of the tactics of the red fascists who were far superior in the use of all of the most refined methods of the emotional plague, and with the terrible experience of the Chinese aggressors making propaganda through the UN right in the middle of the USA, while their forces marched in Korea. The USA was left holding the bag.

I mention these social events in order to make comprehensible why I felt impelled to step out of my usual reserve and to do something crucial: This was the moment to rush in to help with whatever we had. It was, however, the first time that I started an experiment having in mind a particular purpose to be achieved.

The following steps were taken:

1. On December 15th, an application for the procurement of 20 millicuries Phosphorus P-32 (a radioactive isotope of phosphorus) was dispatched. In an accompanying letter to the AEC in Oak Ridge, Isotope Division, it was pointed out that we would not do any routine experiments with radioactive material such as tracer work or radioactive therapy; that we would solely test the effects of orgone energy on mice injected with P-32. An accompanying chart surveyed the plan of treatment of 80 mice in particular. The main question to be answered was:

CAN ARTIFICIALLY PRODUCED RADIATION SICKNESS BE TREATED OR PREVENTED BY OR ENERGY?

2. Preparations were made at Orgonon for the deposit and disposal of radioactive material P-32, approximately four millicuries per two weeks, was to be kept in a small wooden cabin some fifty feet away from the main students' laboratory building. Since Orgonon is miles away from any habitation area (four miles from Rangeley), there seemed to be no problem with contamination of inhabited areas, water supplies, etc. We planned on burying the carcasses of the animals used in the experiment several feet deep in the ground about 500 yards away from the laboratory and other buildings at Orgonon. Injection and dissection of mice was to be done in a small building, separated from the others, where no one would be present at any other time. The protective devices which we had ordered, the lead aprons we possessed, the lead gloves and the use of strong OR energy accumulators seemed sufficient measures to secure the safety of the personnel at that time. This was in accordance with what was known at that time about radiation protection. We had no inkling of what was in store for us. In December 1950, before the experiment started, we could not possibly have guessed that all these measures would not work. But as we found out later, *no protection at all was possible in such experimentation as using OR energy versus NR energy.*

3. One of our physicians in New York offered his services in contacting various agencies to find out whatever he could about the different materials and the rules for handling them. We had heard that the AEC was par-

ticularly strict in its requirements for the handling of isotopes, and that this strictness was not shared by many commercial or even scientific laboratories. We learned, for instance, in one place, that no lead brick shielding was necessary in handling one or two millicuries of radioactivity. In many years of contacts between orgone physics and classical physics, we have learned that many things are not as exact and commonly agreed upon as it would appear from the claims of exactness; that one cannot find answers to some of the most primitive questions in the routine handbooks of physics, such questions as, for instance, what is the absolute rate of counts per minute (CPM) for a mg. of pure radium. It is essential to state these facts; it is not meant to criticize or to devalue the labors of our colleagues in other branches of knowledge.

4. While these contacts were made (*cf.* Historical Record, p. 337) and application forms sent out, I devoted myself to a recapitulation of very old observations which I had made some seven to twelve years ago, of NR radiation and its relationship to OR energy. I also began to prepare my base of operation. First of all, the natural "radioactivity" in all places where the future experimentation was to be performed, had to be monitored, and the instruments had to be prepared and calibrated for action in the main experiment. Here are a few results of these preliminary investigations, December 15-27, 1950:

No.	<i>Background CPM</i> (No NR present)	<i>Orgone-Treated</i> <i>radioactive</i> <i>zinc sulfide</i>	<i>Orgone-Treated</i> <i>1 mcgr. radium</i>	<i>Distance</i>
		CPM	CPM	
Day	A	B	C	
1	40	500	30,000	1 cm.
2	50-70	2-300	20-30,000	" "
3	40-60	3-400	30,000	" "
4	40-50	4-500	30,000	" "
5	40-50	2-300	2-3,000	C dist. 10 cm.
6	60-70	60-70	3-4,000	" " " "
	(within ORACC)*	in ¼" lead		
		2-300 free		
7	60-70	200 in lead	3-4,000	" " " "
		300 free	3-4,000	" " " "

* Orgone energy accumulator.

These preliminary results on the BASE may suffice. Lead shielding did not appreciably reduce the activity. The background counts went up when radioactive material was put into an OR energy charger. No attention was paid to this fact, since we knew that OR effects on the GM counter vary greatly.

The background activity in the students' laboratory, where the main experiment was later to be performed, varied between 40-60 cpm. The measurements were made with a SU-5 Survey Meter and a tube Serial No. G-632, Type T6C5, Tracerlab, Inc. (30 mg./cm.² wall thickness).

*Background monitoring with SU-5 Beta Gamma Survey Meter, Dec. 15, 1950
to Jan. 10, 1951*

<i>Date</i>	<i>Student Lab. CPM</i>	<i>Mouse House CPM</i>	<i>Garage CPM</i>	<i>Observ- atory CPM</i>	<i>Shop CPM</i>	<i>Free Space CPM</i>	<i>Remarks</i>
12-15-50	30-50	30-50	30-50	30-50	30-50	30-50	Normal for Orgonon
12-16-50	30-50	30-50	30-50	30-50	30-50	30-50	"
12-17-50	30-50	30-40	30-50	50-70	30-40	30-50	"
12-18-50	30-50	30-50	30-40	50-60	30-50	30-50	"
12-19-50	40-50	30-50	40-50	40-50	30-50	40-50	"
12-20-50	30-40	30-40	30-40	30-60*	30-40	30-40	*Preliminary Oranur experiment
12-27-50	30-40	30-40	30-40	50-70*	30-40	30-40	*same
1-3-51	40-50	40-50	50-60	60*	40-50	30-40	*same
1-10-51	30-40	80-90*	30-50	90*	40-50	30-40	Oranur at work since 1-5-51

These examples are only to give an idea of the base functions, and are not a thorough account of the investigation. The high background count of 40-70 cpm was always observed in concentrated OR atmosphere.

We ordered a sample of radio cobalt (CO-60) from Tracerlab for the purpose of calibration of instruments. The counts from this source vary greatly and would have to be established in our laboratory. We had hoped, however, to obtain the counting rate from Tracerlab since we knew that the radioactivity would change and begin to vary a great deal once its

source reached the highly charged orgone energy atmosphere at Orgonon. 2.26×10^{-5} millicuries CO-60, with a half life of 5.3 years, arrived on December 28, 1950. The source was not permitted to touch the highly charged students' laboratory and was rushed to a place in the OR energy observatory where no sizable OR effect could reasonably be expected during the short period of a few minutes. At 20h in the evening, the background count was still only 40-50, i.e., normal for Orgonon buildings. The source was left within the brass container and yielded 70 cpm and 0.016 MR/H (milli-röntgens per hour) with the SU-5 Survey Meter. The ionization effect on a calibrated aluminum leaf electroscope was rapid within seconds over 10 divisions (90° deflection). *Spontaneous* discharge rate in ORG time during that period was approximately 180 seconds per *one* division. Thus the ionization effect appeared quite clearly.

In order to protect the source, it was wrapped in *lead foils* of altogether some $\frac{1}{2}$ " thickness. Now the first surprise came. Three and one-half hours later, at 23:30h, I tested the source again. This time, though far away from any concentrated OR and *outside* the concrete rock walls of the observatory, the cpm amounted to 150, with the MR/H still at 0.016. *However, the ionization effect was gone. The NR source had no effect whatsoever on the charged electroscope beyond its spontaneous OR discharge rate.* Since the NR source had not been exposed to OR and had carefully been kept away from any OR accumulator, this astounding result could only be explained by the OR activity of the *lead shielding: the lead had been situated in the OR energy laboratory for many years, and although it itself did not give any counts, it most likely had eliminated the ionization effect.* The ionization effect did not return during the following three weeks, even when the source was taken out of its brass container and put naked on the plate of the electroscope. This, then, was a major first result in the direction of the expected OR-versus-NR effect. On December 29, the following day, the NR electroscopic discharge rate was even much slower than the OR rate: 300 (NR) as against 180 (OR) seconds per one division. Until January 2, 1951, the cpm with the source shielded in its capsule of brass, had *risen* to 200, measured with the survey meter *and* the autoscaler (Tracerlab). It varied greatly from one measurement to the next: between 150 and 250 cpm as against 70 upon arrival. Also, the MR/H went up from the initial 0.016 to 0.02 and 0.04 on the second day. It remained at that level for several days, having more than doubled its energy output. Also, the background counts had

slowly climbed up from 60 cpm on the second day, to 100 on the third day. All this remains to be investigated in greater detail.

The rise in background counts did not disquiet us since for four years I had worked in an atmosphere yielding 40-70 cpm background counts, and surrounding OR activities as high as 20,000 counts PER SECOND in high vacuum; furthermore, it was perfectly clear that it was not the well-shielded tiny amount of NR activity, but the reaction of the OR which was responsible for the increase of the atmospheric energy level. Though the NR source was handled with tongs, and with the use of lead gloves as well as lead apron, precautions far beyond the established health safety requirements, there was already at that early phase no way of protecting oneself against the clear-cut high OR activity, due to its *ability to penetrate everything—lead, cement, brick, metal of any thickness, etc.*

I just had to proceed, hoping that ill effects of high OR charges would continue to be absent.

The CO-60 was put into the "discharge funnel" and inserted into a small 5x OR "shooter" for further OR irradiation of the NR source. On January 4, 1951, I took the NR source out of its container and shielding, and measured it naked with two GM counters. At the autoscaler it yielded 5-6000 cpm at one cm. distance from the mica window. The rate *within* its container was around 200-250 cpm, and around 0.04 MR/H measured with the SU-5 Survey Meter. This rate began to change considerably as the days passed. The activity was 7000 cpm on January 8, down to 3000 cpm on the 12th, and somewhat below 5000 cpm, naked, on the 15th.

The counts per time unit were *not* constant; they varied so greatly that the question presented itself as to how constant other radioactivities were. The problem of quantitative *nuclear* radioactivity had never occupied much place in the framework of organomic research, with the exception of the most primitive observations, such as scintillation, measurement of small amounts of radioactivity in the calibration of instruments, ionization, etc. But now, when the question of influencing NR by OR had come into sharp focus, it was of crucial importance to determine the constancy of NR radioactivity. Unfortunately, in no book on nuclear radiation which was available, could any definite answer be found.

A vial of radioactive luminescent matter (zinc sulfide) had been kept in a small OR charger for many years. It had lost its ionization effect through OR influence long ago. It still luminated very strongly. I measured the

activity with the autoscaler (scale 4096). The result over several consecutive days was nearly constant at 245,760 cpm, increasing occasionally to 307,200 cpm. This seemed a high count for less than a microgram of radium as compared with 5000 cpm for 2.26 micrograms of CO-60.

My wristwatch radium dial which had soaked up OR energy for many years, gave between 40,000 and 45,000 cpm in a fairly constant manner. I had worn this watch for years, and no ill effects had ever been observed on my wrist. The count seemed tremendous for the minimal amounts of radium on a dial. It was soon found that the OR influence was quite substantial. Radium dials on wristwatches which had newly been bought and had not been in contact with the OR atmosphere for any appreciable length of time, gave only 3-5000 cpm. We had to assume, but could not safely ascertain, that the distribution of radium on watch dials would be approximately equal. Yet, my wristwatch dial had yielded ten times the count of a newly-arrived wristwatch. This was striking.

The dial on the wristwatch of another worker in the laboratory who had been in much less contact with highly concentrated OR, gave between 5500 and 8000 cpm.

All measurements were done with the same autoscaler 4096, the same GM tube, and at the same distance, i.e., one cm.

These results, confusing as they were, also disclosed a very strong influence of OR upon NR. As in so many other cases, we had to realize that we had to learn anew, from scratch.

Orgone Energy Runs Amok (DOR): The "Oranur Sickness"

In order to save time, we decided to order two milligrams of *pure radium*, and, instead of injecting fluid radioisotopes, to irradiate some of our mice with radium. The radium, in two one milligram units (each 8.3 R/H) and each in a separate 1/2 inch lead container, arrived on January 5, 1951. The NR sources were measured immediately and gave 245,760 CPM naked at one centimeter (cm.) distance.¹ One mg. radium was designated as a control, to be left untreated; the other was to be treated with OR energy. The first, No. I, remained untreated and was put into the garage near the observatory on the hill; the other, No. II, was put into a one-fold, small OR charger on

¹ In the early summer of 1951 we had a third sample of radium, one mg., measured in New York before it was brought up to Orgonon. The count in New York was only 16,000 CPM naked and 7,000 in 1/2" lead shielding. This we did not know, of course, in January 1951.

January 5, 1951, at 11:30h. This charger was placed in the 20-fold OR energy accumulator which was located in an 18 x 18 foot OR energy room, lined with sheet iron of gauge 26. The experimental hall of the laboratory measuring 60 x 70 feet surrounds the OR energy room as depicted in Fig. 12.

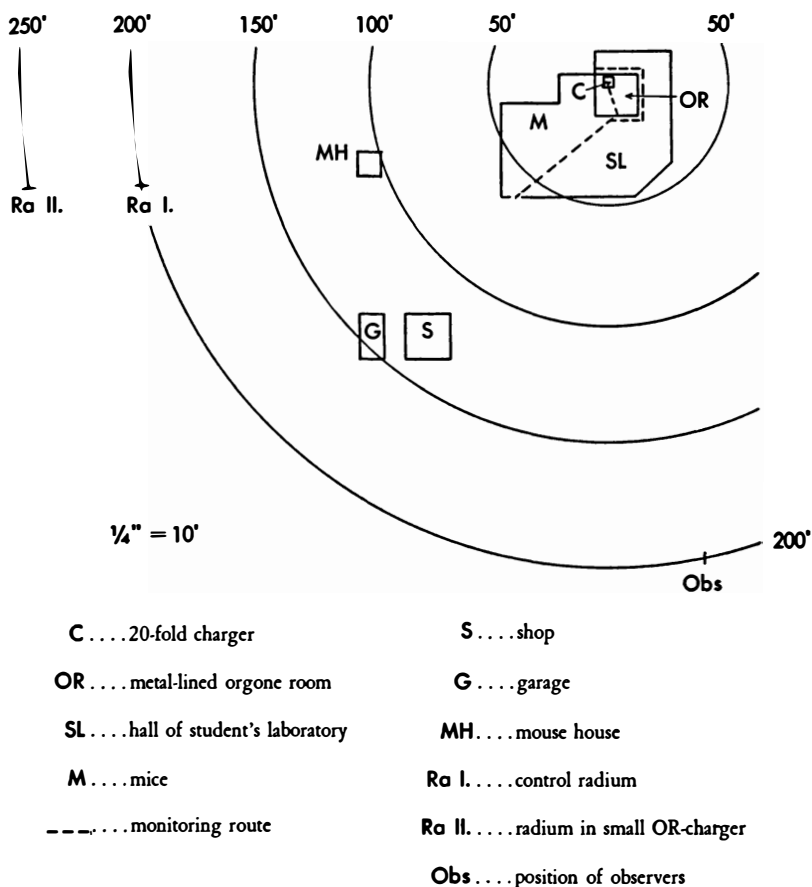


Fig. 12. Sketch showing distances of places in Students' Laboratory and surroundings from OR energy room and 20-fold charger.

The background count, immediately before the Ra needle was put into the charger, was between 40 and 50 cpm everywhere, i.e., normal for this building.

Now we made our first major mistake, which, however, was responsible for the tremendous results we obtained that same day: *I did not measure personally the background count right away after the radium needle was put into the charger.* Had I done so, I would have found a very high count in the hall; I would have immediately taken the Ra needle out of the charger and the hall, and would have missed the whole Oranur effect. I did not personally measure the background count right *after* the beginning of the experiment because I had measured the activity of the radium before with the autoscaler and counter tube (mica window, 2.3 mg./cm.² thickness), and had found a count of only 2457 cpm with the needle *naked* at *one-meter* distance. The 20x accumulator into which the charger containing the needle had been put, measures 5 feet square horizontally, i.e., about 1½ meters. The distance between the outer walls of the 20x accumulator and the metal-lined walls of the OR energy room adds another 6 to 7 feet on each side. This means that the needle of Ra was at a distance of about 10 feet on two sides, and some 16 feet on a third side from the walls of the OR room. We had the notion that the metal lining of the OR energy room itself would add some shielding. There were workers doing their jobs outside in the experimental hall at a distance of an average of some 30 feet (i.e., ca. 10 meters) and more from the shielded radium needle.

TABLE OF DISTANCES

No.	Symbol	Place-object	Distance in feet	
			Distance in feet from students' from OR room	laboratory
1	M	mice	40	
2	W	worker's desk	23	
3	MH	mouse house	105	50
4	S	shop	130	75
5	G	garage	145	85
6	NR	control radium	200	150
7	NR+OR	radium in charger	250	200
8	Ob	observer's position	200	160

Feeling safe about the distance of the radium from the outer hall of the laboratory, we committed a second mistake. We left the needle of Ra in the charger until about 16:30h (in the afternoon of January 5, i.e., 5 hours). We had intended to keep the Ra *continuously* in the shielded place. We had no inkling of the happenings that are now to be recounted.

The background count had been measured at 13h by a technical assistant. It was high, 70 to 80 cpm in the hall. *The assistant failed to report this high background count.* At 16:30h when I came down to the lower laboratory, the air was sticky and heavy. The background count ran up to 80 cpm 50 feet away from the Ra-needle, and amounted to *several hundred* cpm on the *outside* of the walls of the OR room. The workers were immediately ordered out of the hall. The inside of the OR room was unbearably charged. The walls felt "glowing" 10 to 16 feet away from where the Ra needle was located. The portable survey GM meter "jammed" when I approached the 20x accumulator. There seemed no sense in counting cpm's at that moment. The first thing to do was to take the Ra needle out of the charger in order to calm down the OR reaction. It was not a failure in the battery of the survey meter which had caused the jamming. I remembered similar phenomena when I had worked with highly charged counter tubes in the first GM experiments back in 1947 (*cf.* p. 201ff.). If the GM meter operated again after having been in the fresh air for a while, the jamming would certainly have been due to blockage of the operation through extreme OR energy action. The GM survey meter actually recovered without repair after a few minutes in the fresh air, counting the normal 30-50 cpm background count in the open air. The radium was deposited within the small charger in a garage some 150 feet away from the metal room. We aired the building right away and hoped that this would remove the high OR charge quickly, to no avail. It still is "active" at this date (May 1951).

The radium itself did not produce any of the effects described above when it was taken outside into the garage. Whereas every one of us could feel the heaviness of the air, the oppression, the pulling pains here and there in the body, headaches and nausea right away within the OR energy building, no such sensations were felt outside in the vicinity of the radium as close as one foot. Furthermore, to our great astonishment, ventilation did not seem to remove the oppressive air from the laboratory building. After one hour ventilation, it was still impossible to enter the OR energy room, the radium having been removed long ago. *This was new.* Usually fresh

air would remove any orgonotic overcharge. However, the high background count in the hall came back to nearly normal soon after the removal of the Ra needle. It sank to 60 cpm after half-an-hour's ventilation.

It is essential to acquaint the reader more fully with the subjective sensations which all of us experienced long after the removal of the radium; sensations which came back intensely and typically, and even more intensely as the days passed, whenever we came near the orgone energy laboratory, especially the OR energy room *with no NR material in it*. The OR researcher is professionally required to be free of blocking of his perceptions. He relies on his impressions and sensory reactions to a great extent as guiding posts into new territory, and what he thus finds he controls with objectively operating devices. Both the *subjective* and the *objective* experience are essential and must go together. An emotionally blocked or "dead" researcher would be completely useless in OR research. He would only endanger himself and others.

A penetrating salty taste, turning slightly bitter or sour on the outstretched tongue, was felt by all present everywhere within the building and even outside the building as far as 50 feet. With further experimentation, this unpleasant sensation became more intense and was felt increasingly outside the building in the fresh air.

All workers who partook in the observations developed more or less severe conjunctivitis within a few minutes after entry into the hall.

All observers reported independently a severe pressure in the depths of the cheek bone in the region of the exit of the II branch of the trigeminus nerve.

Most workers became nauseated, lost appetite later on, felt weak; some to the extent of losing control of balance.

A ringlike pressure around the forehead and back into the occipital region was felt by many observers almost immediately.

The diaphragmatic segment seemed especially sensitive. Pressure, pain, or a strong pulling sensation were felt in the epigastrium.

Some participants became very pale within a few minutes upon entering the hall. Feelings of cold shivers alternated with hot flashes, as manifestations of severe impairment of the vago-sympathetic equilibrium.

In some cases, the skin became mottled, especially on the palms. This may suffice until more is reported about the following events.

THE OR ENERGY ITSELF SEEMED TO HAVE CHANGED INTO A DANGEROUS, DEADLY POWER. We came to call this effect "DOR" (Deadly ORgone).

All work in the building had to be stopped immediately. Nobody was permitted to enter it. Those who had certain chores to fulfill such as cleaning, filling the oil heaters or caring for the mice which were left in the experimental hall, were ordered to work inside only 2 to 3 minutes at a time, then to leave the building and to "air out" for at least 10 minutes. Workers who had shown great sensitivity to the stormy orgone reaction were told to stay away entirely. Organomic Reich blood tests were done with all workers each week, except the two maintenance men who, on special personal grounds, refused to have their blood examined. One of them was then prohibited from working in the hall at all, and the other was directed to stay in no longer than 2-3 minutes at a time. The results of the blood tests will be reported separately. They were of great theoretical and practical value and opened up new vistas upon the nature of the common functions of "*Oranur sickness*" and its relation to leukemia.

We repeated the same experiment from January 5-12, daily, for one hour. On Friday, the 12th of January, we undertook the last experiment in this series of daily Oranur experimentation. The *Experimental ONE mg.* of radium was put into the 20x OR charger. It remained there for only half-an-hour. The results of this last experiment were so severe that they deserve to be reported in great detail.

Three experimental observers remained outside the laboratory within about 100 yards. One assistant rushed the experimental piece of radium into the OR energy room and into the 20x charger. We desisted from measuring with the GM survey meter this time, in order to avoid unnecessary additional exposure. A few minutes later, we could clearly see through the large windows that the atmosphere in the laboratory had become "clouded"; it was moving visibly, and shined blue to purple through the glass. As we walked up and down some 100 to 250 feet OUTSIDE the laboratory, all three of us had the same experience, but no one at first dared to mention it. I felt severe nausea, a slight sensation of fainting, loss of equilibrium, clouding of consciousness, and had to make an effort to keep erect on my feet. I saw Dr. S. Tropp, who was with me, getting very pale. He had not said anything, and I had not told him how I felt. Then I asked him how he felt, whether he felt what I felt. He immediately admitted to feeling very ill and faint, with pressure in the forehead, nauseated, cramped in the stomach, and weak. Then I confirmed his experience by mentioning my own reactions. We had both hesi-

tated to tell about it since we were so far outside the experimental hall in the fresh, clear, dry air of a late afternoon in midwinter.

Thereupon, we interrupted the experiment and put the radium away to half a mile distance from the laboratory, within an uninhabited area of 280 acres.

It was perfectly clear, from what we had experienced, that the *OR energy field of the laboratory had been greatly extended and excited to a dangerous degree far outside the outer walls*. Since there is no sharp borderline anywhere in OR energy functioning, the reaction seemed not only to persist all the time, **WITHOUT ANY RADIUM IN THE CHARGER**; more, it seemed to extend rapidly. We began to worry about how far this spreading of the Oranur reaction would go and where it would halt. We began to feel responsible for what might happen to the village some four miles away. The closest inhabited building was at least $1\frac{1}{2}$ miles away.

We also wondered what *could* happen if we continued with the Oranur experiment: whether all hope of an *anti*-nuclear effect of OR had gone; whether an explosion was possible if a high concentration of OR would act upon some as-yet-unknown NR material; whether we would recover from the sickness we were suffering from, and whether it would leave any after-effects.

Our eyes burned and the conjunctivae were heavily inflamed. We drove up to the OR observatory some 500 yards away on the hill, took a sharp drink and began separately to write down our physical and emotional experiences. These notes were signed and deposited with the protocols in the archives. Common to all of us were: severe belching, nausea, pressure in the nasal bone structure, in the depth of the eyes, alternating cold and hot flushes, paresthesias, feeling of disequilibrium, wandering pains in the legs, weakness in arms, especially in the ulnar region, dull headache, tension in the pharynx, severe headache.

The morning of that same day we had dissected two OR mice, i.e., formerly *healthy* mice which had been exposed to the Oranur atmosphere. They were very ill and about to die. Both mice showed clearcut bleeding in the subcutaneous tissue, petechiae, an exudate of the fibrinous type at the pleurae, change in the shape and charge of the RBCs in the direction of leukemia (to be described in a separate report), and an increase in white cells. The blood cultures of both mice were T-positive the following day.

We had apparently found the bridge from Oranur sickness to leukemia, in the blood picture as well as in the T-picture.

My co-workers left after a rest of about two hours. I went to bed early, tired and worn out and fell asleep immediately, still nauseated.

We had fallen ill with "Oranur sickness."

I slept some five hours soundly and heavily. At 24h I woke up and felt refreshed. I was struck by what appeared to me as *perfect, crystal-clear vision* and a sharp awareness of things around me, as if my OR energy field were particularly wide and active. My eyes were clear and sparkling; the conjunctivae were still slightly injected.

Things now appeared somewhat rosier. I had gone through a similar but lesser experience 12 years ago, in January 1939, when for the first time I had encountered the OR radiation from the SAPA bions in my laboratory in Oslo. Then, too, I first had felt frightened, nauseated, with eyes inflamed; then, too, I had tried in vain to "protect" myself, had called a physicist in Amsterdam for help, and had feared what might happen or develop. Then, too, after a few days things began to look less dangerous. I felt crystal clear in my head, I was tanned on my whole body (with clothes on) in the middle of the northern winter, and then, too, I had lost my fear of the danger involved. I began to learn to rely upon BIO-ENERGY without any protection.

These experiences have been reported at some length in my book, *THE CANCER BIOPATHY*. This time, however, all reactions seemed increased a thousandfold. The OR energy seemed to have run amok, possibly even to the extent of a chainlike reaction in the atmosphere, far outside the building. Extreme caution was imperative. In 1939, I had worked quite alone. This time a dozen workers were doing their jobs at Orgonon, and many more were standing by in the New York area.

At one o'clock at night, I turned on the radio in my library. There was no transmission, only a clattering noise as from a Geiger counter when it reports atmospheric orgone energy action. I thought something had gone wrong with this particular radio. I turned around the plug in the wall outlet. The noise remained. I turned on another radio with the same result. A third radio, result the same. This could not be an innocent coincidence. It occurred to me that I had transferred two micrograms of radio cobalt to the tower above the roof of the observatory building. This tower rests on a 6" cement floor. Therefore, it seemed unlikely that the radio cobalt acted through the cement floor which was some 60 feet away from the third noisy radio. Then

the reaction became understandable: The tower where the radio cobalt (contained within a small 10-fold charger) was located, also housed the antenna structure for the whole building, with wires running from the antenna in the tower through the wall linings to the several outlets in the lower laboratory hall. This effect was now explainable in the following manner: *If it is the atmospheric OR energy which gets excited by nuclear activity and runs wild, then countless discharges take place and make a noise like "static," an approaching thunderstorm, or an operating secondary coil system.* I planned to remove the radio cobalt with the containing charger from the observatory tower the following morning, and to deposit it in the garage some 100 feet away from the north wall. If the noise would stop then, my interpretation could be considered correct. I was right: the noise stopped the following morning and all three radios were operating again. This observation required repetition.

The Oranur effect showed up in the following manner, too. The observatory houses several Geiger counters, one of them designated to record the atmospheric and organismic OR energy action. The latter, the organismic action, is transmitted through a coil of wire, six inches long and five inches wide, which is connected to the grid of the extension amplifier of the GM apparatus. It can be shut off and on at will by means of a switch. The organismic OR reaction appears in the form of a steady sequence of impulses and light flashes at the neon indicator the moment one touches the coil with one's hand. Strong bio-energy systems produce a reaction on dry, sunny days at about one or at most two inches distance of the palm from the transmitting coil. However, this reaction at a distance *without touching* is very rare, and occurs only on very dry, sunny days. My palms give it only when I feel particularly strong. I went to the GM set-up in order to test the OR field of my hands. I was stunned when the reaction occurred even at a distance of *TWO FEET!* I tested again and again. There was no doubt. The field of my palm had stretched out measurably by some two feet. I was, accordingly, severely *overcharged*, or at least in a state of abnormally high bio-energetic activity.

I am reporting these facts as they happened during those exciting days, without claiming to understand or to explain everything. Many of these facts were in agreement with what I already knew well from former experiences of some fifteen years of operation with OR energy. Others, such as the mass dying of mice, were not explainable as yet. But there could be no doubt whatsoever that the severe reactions were due to OR and *not* NR effects, as already

elaborated before. However, if any slight doubt may have bothered us in this respect, it was dispelled in a perfect way when the following happened:

The small amount of radio cobalt, 2.26 microcuries, after having caused the widespread atmospheric disturbance through the antenna, was deposited in the small charger in the garage of the observatory 150 feet away.

Three physicians had arrived from New York for a conference at Orgonon. In order to demonstrate the Oranur effect to them, I asked an assistant to bring in the small charger without the radio cobalt sample. The *empty* charger had been on the table no longer than one minute, when all of us began to feel sick, as if affected with seasickness. We felt nauseated, pressure in the head and eyes, twitchings in various parts of the body. The charger was removed right away again, but the effects persisted for about one hour in spite of ample ventilation and our taking stiff drinks. The physicians were quickly convinced of the truth about the first Oranur experiment. I would suggest that anyone who, on whatever grounds, refuses to accept the well worked-out and well reasoned orgonomic functions, subject himself to the atmosphere which emanates from such an empty shooter, or to the atmosphere in the OR room for only twenty minutes, with a small amount of NR in it. Efficient methods of scientific debate such as the one proposed are fully justified in the face of the irrational objections to orgonomy. In science, not opinions, but only experience decides the issue. The only way to reach a valid opinion about OR energy is to use an OR accumulator regularly for a considerable period of time.

Specific Biological Reactions

It became increasingly evident that the workers who were in contact with the Oranur effects reacted in a highly specific manner. It seemed as if the high-pitched charge in the atmosphere *attacked each person at his or her weakest spot*.

One worker had suffered from inflammation of the liver several years ago, and at times developed bloating of the abdomen. This worker complained during the experiment about feelings of being bloated in the abdomen and pains in the liver.

A second worker had been suffering for many years from a hypersensitivity of the skin. It would react to any kind of irritation with erythrodermia. He developed skin inflammation during the experimentation, although he had been free from trouble for many years before that time.

A third worker was prone to develop obesity and an appearance of "being blown-up" when in emotional distress. During the experiment, she looked swollen all over, obese, and sick, as if suffering from some inner secretory dysfunction.

A fourth worker used to suffer from sinusitis and Basedow with protruding eyeballs at times. During the period of the Oranur experiment, she suffered severely from exactly these symptoms, to the point of needing bed rest.

A fifth worker had once suffered from gall bladder trouble. During the Oranur period, she felt sick in the region of the gall bladder.

A sixth worker had suffered from slight pains in the upper epigastrium years ago. He suffered gravely from exactly this same symptom during Oranur.

A seventh worker, whom I knew well from orgone therapy, had suffered from biopathic fatigue. He reacted during Oranur with severe malaise, weakness, and even a corresponding blood picture. He had to be disconnected from Oranur work completely.

The other workers had reacted only in a general manner, such as malaise, headaches, and brief spells of weakness.

These symptoms had no relation whatsoever to the small (one mg.) NR source. They appeared, in the absence of any NR source, to be due to the presence of an OR system which had been in touch with even small amounts of NR. We know from many years of work with OR, that, in cancer cases, for instance, OR energy would effect exactly the region or organ which had become diseased. This is in itself a major bio-energetic puzzle, not easy to solve.

The importance of these observations is obvious. They opened up the prospect of possible future therapeutic use of OR: *OR could be driven to high activity by NR in desirable amounts, according to the kind and severity of the symptoms to be treated.* This appeared as a major route to be followed in further investigations of Oranur. Elaboration of proper dosage seemed the most crucial task. But little doubt could be maintained about the therapeutic promises of Oranur, in spite of the severe reactions we all had suffered. Not only did all workers return to good health after a few weeks; more, they felt particularly well, strong and active, after Oranur was disrupted. We all had the distinct impression that those who had participated at close range in the experiment, had developed a certain *immunity*, as it were, to the Oranur

effects. They no longer reacted as severely when one milligram of radium was brought into the highly charged atmosphere for measurement at the GM counter. They were now able to stop the malaise by "airing" in the open fresh air. The reactions were less severe and did not persist as they had done in the beginning.

During the first two weeks after January 5, 1951, shocklike reactions, swinging back and forth from paleness to "hot shivers" were common to most of us, while later on we all developed splendid color in our faces; people who usually were inclined to paleness, became pink or tanned; eyes inclined to dullness became lustrous and shining. I, personally, who had gone through a similar bio-energetic storm in 1939 when the SAPA bion radiation was discovered, and was more familiar with details of behavior and appearance, felt very vigorous; I needed little sleep, worked much and without effort, better than usual, and I felt a peculiar pleasantness in moving my limbs. Also, I began to develop the ability to work with NR in a highly charged OR atmosphere without any appreciably uncomfortable reactions at all, whereas only two weeks before, the same small amount of NR in a highly charged OR atmosphere was capable of rendering me helpless and disturbed me deeply.

Therefore, the idea of IMMUNIZATION to NR effects, as it were, was no longer strange and no longer contradicted so sharply what we had actually gone through. It appeared that our biosystems had not only adjusted themselves to the high-pitched OR reactions, but even that we could tolerate much more and far better than we could have otherwise.

The great difference between our bio-energetic state in the beginning of the experiment and three weeks later was clearly shown by way of contrast, when some physicians newly arrived from New York, reacted to the presence of a tiny amount (microgram) of NR in a highly charged OR atmosphere, with severe malaise, and even, in one case, with loss of balance. We, on the other hand, who had become adjusted to Oranur, worked easily and efficiently while the two newcomers nearly fainted. These physicians understood instantly what we were talking about. They suggested subjecting everyone who, in a habitual manner, doubted the facts of orgonomy to exactly the same experience. We all agreed that this should be done, if possible.

Overirradiation experiments with mice are being conducted and will be continued until clarity has been obtained as to the possible immunization effects and the dangers involved.

On the basis of what has just been stated, I propose that the following possibility be carefully considered:

Should further experimentation corroborate my observation of what I called "*immunization*" by Oranur against NR radiation effect, we would have obtained a most powerful weapon against radiation sickness. Thought through to its last consequence, it would perhaps be possible to immunize the whole population against NR effects in the following manner. In single, careful steps, the Oranur immunization could be built up by letting people use OR accumulators which had been excited to higher energy levels by small amounts, in micrograms only, of some kind of NR—radium, uranium, radioisotopes, pitchblende, etc.

Through carefully measured progression from low to high Oranur charges, a much higher level of bio-energy functioning could be achieved, and an atomic energy blast would possibly not have the widespread damaging effects upon populations at some distance from the blast as it now threatens to have.

This was at that time, of course, only a proposition based on a few observations, which may well have turned out to be unworkable. We were not aware of the *deadly* quality in Oranur, the now so-called DOR effect, which seems, from what we have learned from our experimental mice, to act in the direction of blood disintegration through dehydration, deformation of RBCs and inner suffocation.

Nearly everything still remains to be investigated and established on a broad and safe basis. This report only points to certain directions; it does not claim final results. Even the slightest hope in a positive direction should not go unmentioned. It may well harbor some answers to the menace of atomic warfare. And as long as we are willing and ready to control our actions and opinions sharply, no harm can come of it.

At this point, the following summary conclusions can be made with surety:

1. NR radiation excites OR energy into high-pitched activity. This is in agreement with the previous experience of many years—that all electromagnetic energy is different from and antagonistic to OR energy.
2. The bio-energetic (orgonotic) systems of the workers who had come into close contact with the area of experimentation were severely affected by the high-pitched orgonotic excitation in the atmosphere.
3. Overirradiation with Oranur can cause severe sickness of the autonomic nervous system and the blood system, to the extent of death.
4. The irritation of OR by NR, even in minimal amounts, seems exorbitant.

OR runs wild, as it were. The NR effect on OR has in its subjective aspects the taint of death. *The organismic OR rebels against NR, as if it were NR itself, i.e., deadly.* The otherwise benign OR splits off a deadly branch (DOR), as it were, similar to the development of a lightning from the orgonotic brightness of a sunny day.

5. Since it is the atmospheric Oranur and not NR which causes the sickness, there is *no possibility of protecting oneself, for OR as well as Oranur penetrates everything and cannot be shielded off by any amount of lead bricks, aprons or masks.*

6. The deadly OR effects (DOR) act in a direction observable in leukemia: destruction of the RBC-producing systems, bone, marrow, etc.

7. The Oranur project as a whole appeared doomed if no other than a deadly change of OR is contained in the NR + OR reaction. However, there are other possibilities of great importance entailed in NR + OR:

a. The *health* qualities of Oranur will be obtainable only by careful dosage. If someone had discovered water for the first time in his life while exposed to deathly thirst in a desert, and had immediately poured gallons of water into his stomach, he certainly would have died from the otherwise life-saving element. OR from now on could be stimulated to any *desirable* amount of beneficial Oranur activity simply by a careful regulation of the dose of NR put into the health-giving OR accumulator for a period of time sufficient to stimulate the OR into Oranur reaction.

b. There must be a dividing line separating the beneficial from the *harmful state of excitation* in OR energy for each organism.

8. The theoretical assumption that in the atomic explosion the *atmospheric* OR plays some important role, could not be entirely discarded. The atomic "pile," constructed as it is of metallic (plutonium) and nonmetallic (graphite) material, most likely constitutes a special type of OR accumulation. The chain reaction could thus be due, in some part at least, to OR action, induced by URANIUM influence. These are questions of theory for further practical experimentation, no more than guesses of some probability.

9. Upon thorough clarification of all functions observed so far, it became clear that the death quality in OR which had revealed itself so drastically and had stunned the research staff of The Wilhelm Reich Foundation, fell in line with several bio-energetic phenomena, well-known for a long time:

a. The *health-positive* PA bions become excited and luminate strongly when they are brought into contact with the deadly T-bacilli. PA bions are

able to kill T-bacilli, but in this process some of the PA bions themselves lose their healing qualities and degenerate into harmful T-bodies.

b. Highly charged RBCs are capable of attacking cancer tissue, of immobilizing cancer cells and causing their T-disintegration. However, in this process, the healthy RBCs themselves lose their bio-energy charge and disintegrate into T-bodies.

c. It is a well-known and common thing that a healthy, upright, honest man while fighting evil and death, may himself change and develop the qualities of exactly the same evil that he is fighting with all his vigor. It is equally well known that love easily, through frustration, turns into bitter hatred, its exact opposite.

There is a deeply moving quality in these functional identities of such far-apart and various realms of nature. One cannot withstand the impact of this basic unity which pervades all being as one single law: Love, while fighting hate, degenerates into hate, as PA bions fighting T-bacilli, themselves degenerate into T-bodies, and as life-giving atmospheric orgone energy turns into the killer, lightning; thus, also, OR changes into DOR while fighting NR.

The creative possibilities in these antithetical functions are endless. They deserve full devotion on the part of man in learning the appropriate means of using the good against the evil without turning good into evil itself. Thus, also, the moral, social implications of the first Oranur experiment are important enough to have warranted the great risk taken in the performance of the experiment.

Atmospheric Oranur Chain Reaction

The need to prepare for elaborate routine health measures in handling liquid radioisotopes had become obsolete. There were no means for protection against an atmospheric energy running amok under the irritation exerted by nuclear energy. We had already sent an application to Oak Ridge for admission of one physician to a course on safety measures against NR radiation. It was withdrawn and a second application, ready to be dispatched, was withheld, too.

At the time of these events, I had no knowledge of the atomic explosions in Nevada which were to be carried out some time later. Neither could I possibly have predicted an increase in the background count in the eastern USA and in Canada. Such a thought could not even have occurred to me in

connection with our Oranur experimentation. But I was stunned when on February 3, *three weeks later*, the *New York Times* reported an unusually high background count found from Rochester, New York, to Canada *during the last week of January*. Several workers at Orgonon who had participated in the Oranur experiment had the same idea independently: DID OUR ORANUR EXPERIMENT CAUSE THE HIGH COUNT IN THE EASTERN USA?

In order to approach an answer to this question, several points need clarification:

1. The background count at Orgonon had been high: twice to three times the normal of between 20-30 cpm, i.e., 60-90 cpm all through the Oranur experiment. It returned to the normal 20-30 cpm only after the dismantling of all arrangements for OR energy concentration in all research buildings. It returned on a high scale (50-70 cpm) immediately if only a small one-cubic-foot shooter was reassembled, *without the presence of any NR source*. It dropped again when the arrangement was removed. Further, some OR accumulators that had merely been near an OR accumulator which had been in use with Oranur, developed highly radiating Oranur effects.

2. Some physicists at the AEC had suggested that the high counts in the East were due to atomic energy blasts which had taken place in Nevada between January 27 and February 3, 1951. However natural such an explanation seemed to be, we had serious doubts. We had felt responsible for possible chain reactions in the atmospheric energy around Orgonon long before the atomic blasts occurred. We had also, upon realization of the severity and extent of the Oranur reaction far outside the laboratory building, worried about what might happen to the village four miles away.

The area in which the unusually high count had been reported, formed a circle of from 300 to 600 miles around Orgonon as an approximate center. Whether the radioactivity had reached far out into the Atlantic ocean, nobody can tell. But it had reached, according to our assumption, some 600 miles southwest and farther into eastern Canada. The increase in background count had been reported on February 3, 1951, i.e., three weeks after the strongest Oranur reaction had occurred. If we assume that the Oranur effects had traveled 600 to 700 miles to the west in 21 days, *against* the general west-east direction of the OR energy envelope, the speed had been some 30 to 35 miles per day, or slightly less than $1\frac{1}{4}$ miles per hour. This seemed entirely within the limits of actual possibilities.

On the other hand, if we assumed that the higher background count in the eastern USA was *not* due to Oranur but was caused by the atomic explosions in Nevada, the following inconsistencies were at hand:

a. The first atomic explosions had occurred *one week before* the high count was reported in the East. However, the latter had already been observed for several days *before* February 3, 1951, i.e., two to three days after the first explosion.

b. The increased radioactivity in the atmosphere at Rochester, New York, was found in snow that had fallen; it was found there only after the snow had been melted. Thus radioactivity had supposedly traveled the 2300 miles (!) from the Los Vegas area in Nevada to the East in only two or three days, or with a speed of about 1200 miles per day, 50 miles per hour, i.e., with the speed of a whirling hurricane, on clear, windless days, i.e., faster than an average hurricane which progresses forward at a rate of only 10-12 miles per hour. According to our weather charts, the last week in January had been mostly sunny and calm, with no major storms. Obscure as all these things may be, and open to doubt as our guesses surely are, no stone must be left unturned to determine whether the high radioactivity in the atmosphere in the eastern USA during the week of January 26 was due to the atomic blast in Nevada *or* to the Oranur experiment in Maine, that began on December 28, 1950.

c. The increase of atmospheric radioactivity had been noticed *only in the East*. From Rochester, New York, to Los Vegas, Nevada, with the exception of the immediate vicinity of the latter, nothing unusual had been noticed. Is it possible that the radioactive "cloud" traveled with the speed of a major storm over 2300 miles, leaving no trace until it reached the eastern border states, only then manifesting itself in high counts? I believe such an interpretation is far less acceptable than the other one—that Oranur was responsible for the increased atmospheric activity.

d. All reports so far accessible on atomic explosions stress the fact that the high radioactivity lasts only a few seconds, that it reaches only a few miles beyond point zero; and I have heard of no effect as far as 2300 miles, *with an untouched area of some 1700 miles between the blast and the location of increased radioactivity*. On the other hand, some reports from Bikini have it that living organisms remained highly radioactive for years after the explosion in Bikini.

e. Last but not least, a basic consideration which is to be taken into account,

and which we should get used to slowly but surely, is, again: *The scope of OR energy in intensity as well as extensity, is to the scope of atomic energy in one or even ten pounds of fissionable material, as is infinity to a grain of sand.* One will most likely miss this crucial bird's-eye view if one does not detach oneself from the atomic and electronic hypothesis of the constitution of the universe, at least long enough to compare OR with NR.

Events Since February 6, 1951, at Orgonon

On February 6, 1951, a careful check had been carried through in several widely separated places at and around Orgonon. It was found that the observatory building was highly active, with from 80 to 120 cpm or 2×10^{-2} MR/H in the experimental hall. No NR material was present in the hall. The tiny amount of NR material which had arrived and had been measured on February 3 at 13h, had been removed several hundred yards away from any building and habitation. Several organomic blood tests carried through that same day, showed a high degree of overirradiation in myself, in a physician who had taken care of the experimental mice, and in another physician who had ceased working at Orgonon due to Oranur sickness two weeks before. The only NR material that had remained within the confines of the observatory, was a well-shielded scintilloscope for the observation of alpha particles containing an amount of radium of a fraction of a microgram. It was situated in a one-cubic-foot OR charger lined with 26 gauge metal. No other NR material was placed at that time in any OR charger, nor was any such material closer than 200 feet from any OR charger. The two milligrams of radium, within lead shielding, were still placed half-a-mile away from any building; the *experimental* milligram of radium was taken out of the 10-fold small charger. The scintilloscope was removed from the hall to an unused porch on the second floor OUTSIDE THE TWO-FOOT ROCK AND CEMENT WALLS OF THE OBSERVATORY.

The results of the checkup of background count on February 6 were as follows:

The newly built OR charger, inside	30 to 40 cpm
The newly built OR charger, outside	30 to 50 cpm
The 20x OR accumulator within the charger	100 down to 30 to 40 cpm (initial discharge)

The metal-lined box containing the 2 microgr.

CO-60 + the scintillation test material	50 to 60 cpm
Dr. S. Tropp's home in Rangeley, 4 mi. away	25 to 35 cpm
The Orgone Institute Press office, Rangeley	35 to 40 cpm
The Country Club road some 2 miles away	30 to 50 cpm
The new road leading to the radium	30 to 50 cpm
The charger containing the shielded radium, close by	20,000 cpm
The charger containing the shielded radium, 100 cm. dist.	1500 to 2000 cpm
The charger containing the shielded radium, 300 cm. dist.	200 to 300 cpm
Student laboratory, outside	40 cpm
Student laboratory, inside (still unusable, May, 1951)	40 cpm
The inside of the OR room	30 to 50 cpm

All Oranur experimentation was intentionally stopped for a period of several weeks in order to carry through all the necessary blood tests. The workers were again ordered to stop working in the students' laboratory where the initial Oranur experimentation had been done, beginning January 5. We were waiting for the clearing of the laboratory. Some work was transferred to the hall of the observatory.

To stop the experiment completely was definitely out of the question. To continue, considering the severe bio-energetic reactions on the part of the workers, was equally impossible. Thus, we found ourselves in a difficult dilemma.

To put the two micrograms of CO-60 into a newly built, remote OR charger, was most tempting. Consideration of the possible effect on the atmosphere held us back. With no atomic blasts in the offing, such an experiment would definitely and irrevocably have decided the question as to whether or not the high counts in the Eastern USA and in Canada had been caused by the blast in Nevada 2300 miles away.

During the afternoon of the sixth of February, 1951, the cpm in the observatory hall came down to 30 to 40 again and continued to be low.

Oranur Results in Mice

Shortly before we had started the Oranur experiment, we had begun to investigate leukemia. At the same time, different types of experimental mice were kept for various purposes. When the Oranur experiment began, those mice which were not to be exposed to Oranur were transferred to a small wooden cabin 100 feet away from the main building. The mice which were treated by OR were transferred to the bathroom within the same building. The bathroom is separated from the main hall by a wall of cement sheets on one side and by an empty open hall on the other side. The two remaining sides are toward the free open space.

We had prepared for the Oranur experiment proper a set of forty healthy mice freshly ordered from the breeder. All of them were treated with OR several weeks before the NR experiment started, in accordance with our original plan to test the efficacy of NR- on OR-treated mice. All of these carefully laid plans were completely overthrown by the actual events. We did not inject any fluid radioactive isotopes. In its place, we exposed a first test group of four mice to a naked radium needle three times for half-an-hour each. Two of these mice had been treated with OR beforehand, and all four of them were treated with OR after NR exposure.

As it turned out, however, all these minute, elaborate details lost their significance with the tremendous impact of the Oranur experiment. It did not matter at all whether we had or had not treated mice prophylactically; neither did it matter whether or not we treated them afterwards with pure OR for half-an-hour or an hour. We soon had to realize that our former habits of careful timing of OR irradiation in terms of minutes had become meaningless, just as the elaborate health protection devices used in the atomic energy project had become meaningless. Our previous arrangements were to the Oranur action effects as would be the fiddling around with a small spark-producing induction coil to a lightning in the sky during a hurricane. The discrepancies between what we had been used to and what we now went through, were quite awesome. Nobody present during the Oranur experiment but had experienced deep fear.

We also had been running some parallel series of cancer experiments with mice and some test groups for various bion and Experiment XX products. To make it brief, all these clinical and experimental differences were wiped

cleanly off the table, and it made no difference whatsoever as to what group the special mouse had belonged. The Oranur effects were everywhere the same, and the mice all showed the same symptoms upon death.

Neither did it make any great difference whether the different groups had been kept within the bathroom of the laboratory or within the cabin 100 feet outside. Oranur had penetrated many hundreds of yards far outside the laboratory building. However, it was quite clear from the appearance of the mice, that those which had been kept continuously in the experimental hall during the Oranur work had suffered most. The common symptoms of Oranur sickness were:

Immobilization to various degrees; rough fur; cold perspiration; total body contraction; cyanotic tails, noses, lips, ear lobes; tremendous scratching and restlessness before the onset of immobilization; severe thirst, which corresponded to the findings in the biopsies—dry tissues and dehydrated blood. It seemed significant that mice offspring died faster and sooner than the adult mice. It also seemed important that originally bio-energetically weakened organisms, like the offspring of cancer mice, died at a faster rate than healthy mice. But on the whole, *all* the mice in the vicinity had suffered gravely. In some, pure OR treatment seemed to help. Also, in some human beings, OR energy application seemed to alleviate the distressing symptoms. On the other hand, most of the workers who had participated fully in Oranur work, passed through a period of disliking to use the OR accumulator.

It was striking that this intolerance extended even to such small accumulating devices as a simple metal-lined box or an 8-inch-square accumulator used to measure temperature differences.

Sunday, February 11, 1951

One assistant, who took care of the experimental mice that day, came up in the morning from the lower laboratory with some thirty mice which had died within the last twelve hours, i.e., since the last observation the day before. Among them were mice which had remained in the experimental hall all through the Oranur experiment, some leukemia mice which had been in the bathroom during that same period, many offspring of cancer mice which had been treated with OR, and several healthy mice which had been removed to the small wooden mouse cabin some 100 feet away from the students' laboratory.

This mass death gave all of us a terrible shock. These mice had doubtless

died en masse in consequence of the Oranur experiment. We did not understand why so many had died that same day.

The autopsy of these mice (we worked all through that Sunday), revealed one single pathological picture, no matter whether the respective group of mice belonged to the leukemia, the Oranur or the Ca group. These symptoms, common to all of the mice, were the following:

1. Pneumonia in the hemorrhagic or organizational stage.
2. A severe fibrinous exudate covering the pleural cavity in every single mouse fully, and in some mice extending over the abdomen toward the pelvis. The pelvic subcutis and the genital, as well as the perineum, were affected in *all* mice. This type of exudate was well known to us from many previous autopsies of mice who had died from strong T-bacilli injections.
3. Postmortal, greenish T-discoloration of the subcutis.
4. Severely distended veins (V. porta and V. cava), including carotid vein. Severely distended auricles, blackish blood in the veins.
5. Purple discoloration of the genital organs, with severe distention of seminal vesicle or ovarian tubes.
6. Grayish or cyanotic, hardened, somewhat screwshaped tails in all mice.
7. Cyanotic ear lobes, toes and lips.
8. In the blood picture of all dead or freshly-killed mice, no matter of what origin, were deformed RBCs of the same shape as those found in leukemia mice during our work on leukemia in early December. In some mice, but not in all, a high incidence of white cells.
9. T-cultures, positive.
10. In some Oranur mice, a highly enlarged spleen, up to four times its normal size.
11. A striking *dryness* of the peritoneum, and an apparent *deficiency of fluid* in the blood system. (We all had suffered gravely from sore and dry throats during the Oranur experiment.)

I omit here other, atypical findings. It was necessary to restrict this report to the most general characterization. Detailed elaboration over a long period of time will prove crucial. However, how should we continue with these essential research efforts if the workers themselves would be endangered by the very conditions necessary for the job?

Survey on Mice Affected by Oranur—March 26, 1951

I. *Forty healthy mice* ordered in December 1950, scheduled for injection with Isotope P-32, were treated daily beforehand with (*preventive*) OR irradiation until

January 5, 1951. These mice were kept within the experimental hall. Fourteen of these 40 mice died during the experiment; 26 mice were still alive but gravely ill with Oranur sickness at this date.

II. Total of experimental mice present at beginning of the Oranur experiment: 286. Fifty-seven of these 286 mice died during the Oranur experiment from Oranur sickness. Twelve in severe distress were killed for the purpose of fresh autopsy material. The remaining 217 mice have been gravely affected by Oranur sickness; all are ill to various degrees.

III. Offspring of cancer mice were especially affected by Oranur. Of 23 mice in this group, none had seemed to be affected during the first few days; however, thereafter all 23 mice died spontaneously with the symptoms of Oranur sickness.

IV. *However, of 40 mice treated by Dr. S. Tropp with abundant overirradiation two to three months before the Oranur experiment, none died during or after the experiment until this date (May 1951). We had the impression that chronic overirradiation with OR energy in bearable amounts induced the organism to adjust to the higher energy level and thus, possibly, made survival possible.*

V. Of 42 leukemia mice which had been treated with OR energy, 16 died spontaneously and two were killed for autopsy shortly before death. The remaining 26 mice are ill with Oranur sickness. Of 34 *untreated* leukemia control mice, 30 were alive but ill.

Why had dozens of mice died, all with the same symptoms, on that black Sunday? We worked all day long at the autopsy table and at the microscope to find out. Let us summarize the pertinent observations which might provide an answer:

1. All the dead mice had belonged to experimental groups which had in common a *weak bio-energy* level. Conclusion: LOW BIO-ENERGY ENHANCES ORANUR DEATH.

2. High levels of Life Energy provide enough supplementary OR energy to step in when NR has depleted the available resources in the organism: PROPHYLACTIC HIGH CHARGING OF ORGANISMS WILL LESSEN THE EFFECTS OF ORANUR MUCH MORE EFFICIENTLY THAN APPLICATION *after radiation illness strikes*.

3. On February 11, there had been a very murky, foggy, though not humid (40-50% relative humidity) night and day. This had apparently lowered and thus weakened the atmospheric OR energy. There was, accordingly, *less fresh OR supply from the air*; the animals had to draw energy from their own tissue charges, and this, again, enhanced the mass death. Similarly in the common cold, bad weather will lower the atmospheric OR tension and thus, indirectly, weaken the bio-energy supply of living organisms.

4. Evasive human nature does away with important matters glibly. Why not simply explain the mass death of mice by pneumonia acquired during bad weather in a wooden cabin in sub-zero weather? I myself had thought of this. However, the facts did not permit of such an easy escape from a severe responsibility: Mice had died during the Oranur experiment, before and after the 13th of February, during sunny, warm weather. Formerly, the mice had been in that wooden cabin, heated to 60-70 degrees F. though it was 25 degrees below zero outside, *without* dying. Upon special investigation, it was established that the caretaker had taken good care of the stove that cold night. And, finally, the symptoms we found in the dead mice went far beyond a simple pneumonia. Pneumonia was among the *final* causes of death only in some mice, not in all. Besides, we all had been sick with Oranur symptoms to a certain degree on and off in the best of weather. Accordingly, there was no escape from the conclusion that weakened organisms had succumbed to an additional strain.

With the knowledge and demonstration of a concrete, measurable, usable life energy in the living organism and in the atmosphere, such superficial and evasive statements as that this or that one has died from "air germs" or "virus X," never seen, never demonstrated, never practically handled, are no longer acceptable. There *is* something in the living organism that is acted upon by "air germs" and by "virus X"; this "something" reacts to noxious influences. There *are* such things as higher production of white blood cells (wherefrom? the air?), congestion toward the diseased region (WHAT moves? ions? salts? chemicals?), shifting heat, concentration here, thinning there (WHAT IS ORGANISMIC HEAT?), convulsions, fascicular fibrillations, and (personally observed in the experiment) fibrillations in the peritoneum even after the heart had stopped beating. The "something," which congests toward a diseased part of the body, which creates heat and keeps its level constantly higher than the temperature of the environment, which shifts within the organism from place to place irrespective of any nerves and membranous boundaries, which twitches and convulses as in the orgasm, is the organismic orgone energy, the LIFE ENERGY. The factual interrelations have become too numerous and too clear to be overlooked much longer. Without the knowledge of this concrete life energy, not a single feature in the course of the Oranur processes is understandable. *With it*, on the other hand, we can follow the events intelligently and proficiently.

We were at times astonished at being witness to the logic with which old

observations, disconnected functions, and even tentative assumptions fell into line and made most minute functions understandable. Thus it was when overirradiated RBCs at first appeared gleaming bright and after a few minutes became bluer; they had returned, in the process of loss of energy, to the physiological level of energy, a fact which needs must remain incomprehensible to any other than the organomic approach. Or, the other fact, that with a stronger degree of deterioration, the RBCs would form into shapes which were exactly like those found in leukemia mice weeks before the Oranur work began. This at once linked up comprehensibly radiation sickness and leukemia. It also made comprehensible why and how leukemia, rather than the slower process of cancerous shrinking, is so prevalent in infancy and puberty: LEUKEMIA, TOO, SEEMED TO BE ROOTED IN AN OVERCHARGE OF THE RED CELL SYSTEM. All this remained to be elaborated in detail on a rich basis of observations and experiments, yet to be harvested.

A vast vista opened up on the realm of disposition to disease. But, in the midst of it all, there was ample reason to worry. After the removal of all NR material from the observatory, only a scintilloscope for the observation of alpha particles had remained, a negligible amount which in its shielding, can safely be carried around in one's pocket. But even this tiny amount was sufficient to cause a DOR reaction in the total building, to such an extent that my wife and my son, 7 years old, developed severe symptoms of blood disintegration and had to be evacuated. The blood symptomatology deserves to be dealt with extensively and in a separate context. Here, it should only be emphasized that every single blood picture which showed enough deterioration to cause serious worry, had some features in common with blood leukemia. For years, we had been used to seeing one to three white cells in one field of blood in saline solution at a magnification of 3 to 400. In these pictures of deterioration, we saw more—four to eight white cells in one field.

In leukemia we had observed a delicate granulated structure within the RBCs in the dark field. Now, we could see in some RBCs the same granulation which, to our view, means T-degeneration, in other words, putrid decay. Some of the positive blood cultures confirmed this point of view, as they always do in advanced cancer biopathies.

In most leukemia mice we had observed as signs of organotic overirradiation, that *red* centers in the RBCs (instead of bright blue centers) developed long before the development of full-blown leukemia with glandular in-

volvement. This condition was now clearly observable in the blood of all workers who had participated in the Oranur experiment.

Health Measures and Evacuation of Diseased Workers

At the peak of the Oranur effects, it seemed impossible to achieve anything useful for the protection of the personnel against the raging fury of the uncontrollable Oranur effects. Most of the workers used to leave Orgonon around five o'clock in the afternoon and did not return until the morning of the following day. They had some sixteen hours respite from the continuous effects of Oranur. Others, among them myself, my family and the caretaker who lives at Orgonon, had no chance of getting such periodic relief and intermittent recovery. It turned out that *originally strong organisms did not react severely, whereas organisms which had somehow been weakened BEFORE Oranur had started, developed strong reactions even if they lived away from Orgonon*. I myself never felt the need for bed rest, though I was often tired. But my boy had fallen seriously ill after he had developed a common cold due to wetting his feet while playing in the snow. In spite of the fact that I had evacuated all NR material which functioned as an irritant trigger for the Oranur reaction, the pressure in the air at the observatory continued to be high and oppressive if the windows were kept closed for as little as fifteen or thirty minutes, with the background cpm climbing to 60-70. And to keep the windows open continuously in near-zero temperature was difficult.

Complications arose when the child began to develop slight weakness in the legs, shooting pains, and an inclination to immobility even in respiration. Such symptoms were usually easily removed by use of the OR blankets which we had built in the process of preparing for an Oranur field service. But, now these same OR blankets also acted as sources of Oranur action. This we had overlooked during the first few days. The child became more ill. He was pale, at times to the point of livid discoloration; his palms were wet with cold perspiration, a sure sign of sympatheticotonic contraction; he felt malaise continuously, was uncomfortable, and there seemed to be nothing we could do about it. Since prolonged airing of the building did not remove the effects, we could not hope to cope with the situation with airing alone. He was transferred into another part of the house where the DOR effects seemed less strong; it helped some, but not enough. The blood test showed severe overirradiation of the RBCs, an increase in the number of white cells, and, to

our distress, a few signs of leukemic deterioration in the blood corpuscles. Dr. Simeon J. Tropp, who lives in Rangeley, urged us to evacuate the child to his home. I had hesitated to suggest such a measure, since I was not sure at all whether an organism once affected with Oranur would not affect other organisms. The mice which had died en masse had shown clear signs of strong radiation themselves, and had a very bad odor. Also, my own palms had increased their bio-energetic activity manifoldly. Finally, I consented. The child recovered slightly after a few hours at Dr. Tropp's home, but the following day he still suffered from spells of weakness.

Also, the child's mother, Ilse Ollendorff, had developed severe Oranur sickness as evidenced by a highly suspicious blood picture. She, too, was pale and slightly livid in her face. She was evacuated from Orgonon the following day and began to recover soon thereafter. At this time, all other persons were ordered to stay away from Orgonon.

But all this was an unsatisfactory solution of our problem. The technical assistant who had stopped working already during the second week of Oranur, was still suffering from Oranur sickness, though he did not come to Orgonon any longer. The OR sickness lingered on for weeks, however. At irregular intervals, he would slump into weakness and come out of it again, slowly. His blood picture improved unequivocally. The red centers disappeared from the RBCs; the type of disintegration switched more and more toward the normal bionous picture; he was no longer pale but became tanned. He was not readmitted to the Oranur work for reasons of health. We could not take any risks with other people's lives as long as we did not know the ultimate *outcome* of the Oranur sickness.

All through this period, we felt, on the basis of our constant, steady contact with Oranur as well as with the workers in it, *that something very crucial with respect to a future weapon of health had happened*; we waited patiently for further developments. One incident a few days later shocked us into keen awareness of the ferocity of the force we were dealing with.

A Close Call for One Physician

We slowly began to understand the *specific* reactions of the various workers to the Oranur effects, and we learned better how to read the signs as the days passed by. However, this knowledge was not rooted well enough to have enabled us to judge the danger to one special physician in advance. This physician had suffered since her puberty, due to a severe emotional upheaval

she had gone through, from a *bradycardia* of around 50 pulse rate. After she had gone through psychiatric orgone treatment two years previously, the bradycardia had improved to around a pulse rate of 70 per minute. She also had suffered for many years from an inability to cry fully. "Swallowing" the emotion of crying was one of her major biopathic symptoms. I had been well aware of the possible connection between this emotional block and the bradycardia:

"Swallowing of crying" *actually* is carried through by swallowing in the esophagus; a pressure is exerted upon the organs of the chest and the diaphragm by a constant "pulling in" of the lower organs of the mouth and throat. Since the vagus nerve, acting as a "depressor" nerve on the heart, runs downward from the base of the brain, through the medulla oblongata and along the esophagus and the trachea, the constant pressure exerted upon these organs most likely affected the vagus depressor nerve indirectly, and thus had caused the chronic bradycardia. Accordingly, this physician had suffered off and on from spells of weakness (of the vagotonic type), and during her orgone therapy had on two or three occasions actually felt as if she "would stop moving entirely." This was known to me as well as to another medical organomist who had handled her case. But, somehow, in the rush of the Oranur work, and due to the amazing incredibility of what went on, the specific Oranur effect did not, in our minds, connect up with this physician's specific biopathic structure, and we let her, a most eager physician and research worker, go on attending the mice, working in the bacteriological department, etc. She had not shown any severe reactions up to the day when she collapsed and, nearly passed away completely. This happened in the following manner:

On February 19, 1951, at around 11h, while I was working in my library, this physician came into the room slightly wavering and very pale, with a livid discoloration around her mouth and chin. She was visibly in shock, frightened and in severe distress. She told me that she had just cleaned out one metal-lined cabinet in the laboratory. In order to get things out, she had to reach deeply into the cabinet with her arms. She "smelled" something like Oranur, and in order to make sure, had put her head into the cabinet. Thereupon it had "hit her like a wall." She was losing her balance and was brought up to the observatory by car by another physician.

I took her out onto an open porch to get fresh air. She paled more and more, and then began to complain of cessation of vision and hearing. I could

see, at the same time, the change in her eyes. Her pulse was barely palpable, she continued to grow paler, the pulse rate was about 46 per minute. We put her to bed and began applying stimulants. The heartbeat slowed and weakened further, to a most dangerous degree. Her paleness did not seem to budge at first, but after some thirty minutes began to alternate with hot flushes. She was encouraged to keep talking all the time. At times, after a very strong expansion, visible in the reddening of her cheeks, a more severe contraction would set in; several times with cyanotic lips and lividity in cheeks and both arms. I kept stimulating her with cognac, strong coffee, talking to her and joking with her. Several times her eyes lost contact and seemed to "break." At this moment, a strong stimulus or repeated request to look at me would prevent the cessation of functioning. For the period of one whole hour, it was difficult to find her pulse. We kept attending her, and had to shout at her on several occasions to keep her breathing going. One could clearly see when she threatened to give up, and when she expanded again. Her arms and hands were limp and cold, as were her feet. Tactile sensations were nil or numb. A warm water bottle was put on her solaris region. I did not dare to apply OR energy, as I would surely have done otherwise. Also, all OR devices were out of the building. For two hours, we kept rubbing her cheeks, neck, heart region and arms with ice-cold towels. This seemed to help a great deal.

On one special instant, she seemed to fail to speak. There was no doubt about the involvement of the medulla oblongata and the thalamic region. The alteration between severe slowing-down and expansion of the life apparatus continued, with the latter slowly gaining the upperhand.

Finally, after some two hours, she began to recover. She regained her balance of autonomic functioning. She dictated the following protocol herself soon thereafter:

February 19, 1951; 12:30 P.M.

Protocol on, M.D.

I was perfectly all right on the morning of February 19, 1951. I spent twenty minutes inside the students' laboratory, aware of stuffiness there due to the many accumulators around, and I opened all the doors and windows. Then I looked for other sources of DOR or accumulators that had not been disassembled, and I found a one-fold, old accumulator in the back portion of the laboratory in which glassware had been stored. This accumulator had not been

opened during the past five weeks except for a moment on one or two occasions. This accumulator stood along the wall representing the outer wall of the metal OR room. I very quickly removed all the contents onto a shelf, just putting my arms inside, and when I had finished, *I tested the accumulator with my head which is my most sensitive area. I put my head inside for a moment, and felt suddenly as if hit with a sledgehammer on my head.* I felt a heavy pressure and dizzy sensation, and I knew I had to go out immediately. There was a progressive increase of the following symptoms over the next five minutes: I began to feel more and more dizzy and my total body became weak. I felt as if I did not belong to myself, as if I could not feel whether my legs were moving or whether I had control over my legs. There was a tremendous effort to move my arms and legs. I felt as if all movements were slow, and as if I had to hold myself up against gravity. I felt very heavy. By the time we reached the observatory, I felt as though I were two people, as in anesthesia, and had to tell myself what to do, such as to take the snowshoes off, etc. I began to feel fear, which increased until it was the most severe death anxiety that I have ever experienced. This was due to the following sensations:

A sense of total stoppage, localized in my brain, bandlike around the ocular segment and in my arms. Also, weakness, and dissociation of the rest of my body. I was semi-conscious, could not see clearly, there was a buzzing in my ears, and I could not hear clearly. I found it difficult to swallow, my pulse was very weak and slow, between 45 and 48. I had a hard time breathing, and I had to support myself against the wall because I was so dizzy. At this point, my external appearance was that of incipient shock with livid skin color, expression of anxiety, especially in the eyes. I felt as if I were going to die, just simply stop. My memory is very cloudy as to the events from the time I came up to the observatory to the time I lay down in bed. I have never fainted in my life. I did not feel nausea.

I lay down in bed, the room was aired, and my head and extremities were rubbed with wet cold towels. The recovery took almost one hour and occurred in waves. Episodes of anxiety occurred about three times. First of all, the anxiety disappeared when I was reassured and I noticed that I was getting better, and I was not afraid of dying any more.

My pulse was feeble and remained between 48 and 50 for an hour. It then became fuller and stronger. The arms felt heavy, the motion was slow, skin sensation was dull and asymmetric. One recurrence gave severe head pressure and dullness down to the neck, with difficulty in breathing and dull tongue. When that passed, there remained a band-like pressure around the head. After-

ward, my face began to tingle and lighten, and there were sensations of waves around the base of the brain.

Two hours later there was still slight dizziness on sitting up. The stoppage of OR function was replaced by extreme warmth, tingling and clarity. At that time, the pulse was between 60 and 64. At the age of five, I had suffered from a severe diphtheria with severe bulbar symptoms and paralysis of legs.

Four hours later, pulse was 64 and heart action was normal. What had actually happened was apparently this: When she had put her head into the *unventilated* metal-lined cabinet, DOR had hit her hard at her weakest spot in a *specific* manner: It affected the vagus and respiration center in the medulla oblongata. This weak spot had been established for the first time in her life when some 21 years ago she had suffered from post-diphtherial affliction with a slight paralysis of her arms and legs, and slight impairment of her bulbar functioning. Thus, a syndrome of deadly symptoms had slumbered unnoticed for nearly two decades, only to be sought out, as it were, and reactivated by DOR in such a dangerous manner.

The OR energy had, as usual, attacked the weakest spot in a specific manner. Here, I believe, a great hope for powerful treatment of severe diseases is contained. We can safely assume that, with further detailed experimentation with Oranur, it will be possible to direct the healing power of OR energy at any weak link in the totality of organismic functioning, with the OR energy finding its way to the diseased organ or system. The dangerous character of some of these reactions should not deter us. In applying chemotherapy or shock treatment, we endanger the life of the patient to a higher degree, just as we do with anesthesia and major operations, *WITHOUT* being able to direct the healing agent in the organism. Now, the specific autonomic, selective power of the OR energy, combined with a well-worked out, carefully applied dosage, would enable us to get at every spot in the organism therapeutically, and, most likely, also in every disease.

This last sentence requires careful scrutiny from the standpoint of what "BACKGROUND OF DISEASE" or "DISPOSITION" actually means or represents. There can no longer be any doubt, since we are already experienced in handling LIFE ENERGY (bio-energy), that the disposition to disease is becoming palpable in the form of certain describable and manageable organotic functions and dysfunctions. I shall reserve a first attempt to discuss these implications theoretically, for a future paper. The Oranur experiment has yielded *too* rich a

harvest in this respect to be discussed now. It will take some time to gather the harvest from the field of operation and to bring home all that is worth preserving for future use and study.

Interruption of the Oranur Experiment

During the latter part of February 1951, the workers at Orgonon lived in a suspense which became unbearable when the severe Oranur attack nearly killed the physician who had been in charge of the laboratory mice. The dilemma, with its pressure of contradictory decisions to be made right away, caused some confusion. We had to warn the health authorities of the USA of the danger which seemed to threaten all of us and possibly also large sectors of the Eastern USA if we had continued the Oranur experiment on a larger scale. We also notified them that because of the danger we had decided to interrupt the Oranur experiment.

Let me now summarize briefly the measures taken toward this end:

1. No one was permitted to work in the vicinity of the original Oranur action for periods longer than a few minutes at a time.

2. All OR accumulating devices were completely dismantled and the panels ("layers") were put away in such a manner that no two panels ever faced each other. Parallel arrangement of two OR layers is sufficient to create a strong OR energy field.

3. The OR metal-lined room was completely disassembled. The sheet metal was torn off the walls, the ceiling and the floor, and taken out to air.

4. Since water absorbs OR, it was assumed that it would also absorb Oranur; accordingly, the walls of the hall and the accumulators were washed with water and soap, abundantly.

5. Since airing alleviates the OR effects, frequent and extensive airing were employed wherever such effects had been heavy.

6. All workers were advised to dismantle their OR accumulators in their homes for the time being, to take much fresh air and to sleep with wide open windows.

7. Several workers and one child were evacuated from the observatory building for several days and did not return until a few days after the dismantling of all OR accumulating devices.

8. All NR material was put half a mile away, enclosed in a safe with heavy four-inch walls of steel and cement; this, of course, was not done because the NR material was dangerous, but because it excited OR into

Oranur action. We had to assume on the basis of many subjective as well as objective observations that the whole region of the 280 acreage at Orgonon continuously possessed a much higher level of OR than any other region, due to the continuous OR work that had been carried on there for many years. Also, the presence of many accumulating devices and the presence of a highly charged OR room had to be taken seriously.

9. Last but not least, it was decided to take a rest from all experimentation for several months. This was necessary in order to arrange the facts and observations without the impact of *new* facts, and to permit the workers to recuperate. The AEC was informed to this effect.

10. The background counts in the observatory came down from 50-80 cpm to an average of 30-40 cpm after these measures had been taken. However, the walls of the OR room were still "glowing," even after dismantling of their metal lining, as late as during May 1951.

A test in complete darkness showed, as late as March 26, several weeks after the OR energy accumulators had been dismantled, that the visual impressions, were not blue-gray, as is usual, but red to purple, a sure sign of high-pitched OR energy activity.

Many practical issues had to be settled before the basic natural-scientific implications of Oranur could be approached. One of the most acute problems to be solved was how to explain all this to the security agencies of the USA. *Oranur had revealed a deadly quality.* This quality in the hands of unscrupulous, malignant men, would only add confusion to the already overstrained social atmosphere we are living in. On the other hand, to keep the result secret appeared no longer possible. Knowledge of the Oranur effects had gone around too far. Many among us felt that telling it all to everybody would be the surest way to safety for the world. Then, at least, there would be *serious*, responsible workers who would *work out the medical efficiency in Oranur to the good of everybody*. It was regrettable that in some cases the healing effects would only be obtained in a deadly, dangerous manner, but this could not be helped by anyone.

While this turmoil kept us busy day and night, while we tended our sick, made blood test after blood test, examined everything we could to the best of our knowledge, worrying what murderous men of politics would or could do with our labors, we began to discern bright sunlight among the dark clouds:

After a few days had passed since the deadly attack suffered by the physician mentioned before, she began to recover in a most hopeful manner. She still felt dizzy, "as if floating or losing balance"; she still felt "dulled" at the base of her brain, but her eyes were sparkling as never before; she looked better than ever before, was fully alive on a higher level of energy functioning. Another physician who had reacted severely with paleness and slight jaundice, was now tanned and looked vigorous. Another worker who used to suffer from occasional dullness in her eyes was bright and sparkling with life. The boy who had so strangely fallen ill was, after his return to the observatory building, in full, brilliant health. I myself felt more active and alive than ever. I did not need much sleep, the ideas and arrangements flew freely and fully. I felt vigorous and imbued with great zest.

Gradually it became clearer that Oranur could, in the hands of peaceful people, turn into one of the greatest healing powers humanity has ever possessed: *Properly dosaged, well applied and carefully controlled, it would drive to the surface and possibly cure even latent diseases. It may even possibly immunize the population against NR effects all over the planet and thus wring from the hands of the evil-spirited ones the murder weapon they now command. These possibilities are definitely there. We know that Oranur had accomplished what atomic energy research so very eagerly had tried to reach and had so prematurely promised:* THE MEDICAL USE OF COSMIC ENERGY.

Thus, here we were, with the most powerful healing power humanity had ever known in our hands; but rendered impotent by the emotional plague in many places of society. The situation grew more and more complicated and dangerous, to people at large as well as to ourselves as the responsible workers in Oranur experimentation.

State of Affairs as of the End of March 1951: Fifteen Weeks after Oranur Started

1. The students' laboratory, in which the Oranur experiment was conducted, was still unusable despite dismantling of the OR energy metal room in the beginning of March. It was again put into tentative operation on March 26. It was still glowing on April 8 and work in it had to be stopped again on April 14.²

² Today (August 1951) the laboratory is still radiating, but is usable again. The health of the workers is regularly checked through bi-weekly organomic examinations. A separate report on Oranur biophysical reactions after April 1951 will be published in a future article.

2. All other OR accumulating devices without exception are being kept dismantled and separated from inhabited buildings. Only one new OR charger, which is located singly in the open air, is still assembled. It has never been used for Oranur production, but it houses a 20-fold Oranur-affected charger.

3. It is still impossible to reassemble any of the OR accumulators which had been in use before January 5, 1951. They are highly active and drive the background counts to two to four times the usual rate, 100 and more cpm.

4. Most workers who had participated in Oranur have returned to normal health. But occasionally, certain symptoms such as malaise, nausea, fatigue and overirradiated RBCs recur if they come in touch with devices employed in Oranur.

5. It has been noticed by some workers that their cars are "active" after having been close to *dismantled* Oranur-affected accumulators in the same garage.

6. Every second week, blood tests are done on the workers. The difference between the alive blood picture of persons affected with Oranur, and the blood of newcomers is marked. Full and proper evaluation is not yet possible. No leukemic tendencies in the blood pictures have been noticed during the last two to three weeks.

7. The buildings are still active with Oranur effects. Lack of proper ventilation drives the Geiger counts high.

8. In general, the workers are all well. Single persons complain about occasional recurrence of symptoms they had had earlier in life. This points to a *diagnostic possibility in Oranur*.

9. Repeating the Oranur experiment is out of the question at present for lack of sufficient funds and facilities. Also, the health of the workers must be taken into serious consideration. It is doubtful that they would stand another steep Oranur impact. We are forced to wait and see when and how we can get at Oranur again, next time better prepared, and equipped with more experience.

10. While, during the whole duration of Oranur, all workers developed an increased aversion against using their OR energy accumulator, lately the need for OR irradiation has returned in most of them. Some workers who had not had a cold or other trouble for many years on account of regular use of the OR energy accumulator, now have again begun to develop slight sniffles in bad weather, and the need for OR has returned.

11. Oranur-affected shooters, which must be kept outside any inhabited building, are most effective in combating a slight cold when manifested locally in the nose and sinuses. A few minutes irradiation have helped to stop the discharge.

All these new experiences need to be retested and to be worked out on a much larger scale. This will take years and much money.

The details and the consequences of the First Oranur Experiment are, of course, still mostly unclear. It may require years and great funds to collect and arrange theoretically what has actually been set into motion by the dramatic clash between OR and NR. As mentioned before on several occasions, working with Oranur is fraught with danger to the experimenting personnel, and no protection against the deadly overirradiation exists, except careful dosage. The health protection devices which were elaborated in connection with work on atomic energy, are not applicable since OR as well as Oranur penetrates everything. This constitutes a major, at present unsurmountable obstacle in the way toward detailed elaboration of the problems involved. Since the Oranur experiment has been stopped, early in February 1951, and after Reich Blood Tests showed that all workers had slowly returned to normal functioning, several attempts were made to test the situation: Did the DOR effect disappear or not? How soon, if at all, would it vanish from the affected Oranur devices? Or would the Oranur action go on indefinitely? Nobody could tell then or can tell now.

However, we tried to test the situation by bringing back into the observatory building one or two small, one-cubic-foot sized OR "shooters" which had been affected by Oranur. We repeated this procedure several times, and every single time the background count went up to around 80 cpm and to 0.02 MR/R or more when the Oranur-affected devices were present for as short a while as only one hour. These effects disappeared again soon after the Oranur accumulator had been removed into the open air, with the background count coming down to as low as 30, and the MR/H to about 0.008.

One evening, a small shooter was brought into a bedroom in order to treat a cut in a finger. It was forgotten there, and during the night the person who slept in that room woke up with severe dryness in the throat and severe thirst; also with a feeling that oxygen was lacking in the air. The shooter was immediately removed, and the symptoms of distress disappeared.

At the time of the writing of these lines, in the middle of April 1951, the large students' laboratory where the first Oranur experiment had been con-

ducted in the metal-lined and highly charged orgone energy room, was still unusable. This in spite of the fact that the sheet metal has been removed from the walls, the ceiling and the floor, i.e., the mechanism of accumulation having been disassembled. The cement board walls are still slightly "glowing" and some workers suffer distress when they work in the hall. Others feel comfortable while working at the restoration of the OR energy room. They are ordered to work only an hour or two at a stretch, and then to "air out." It is not at all certain whether this building will be fully restored to its original function, or, if so, when.

The physician who had nearly died when she had put her head into an Oranur-affected cabinet has recovered completely. The "flu epidemic" which raged through New England during this period, and affected nearly every single home, left Orgonon untouched. No one at Orgonon came down with anything near the degree of influenza suffered in the near-by village where it put people to bed en masse and for weeks on end.

Blood tests were carried on every second week with every single worker who had participated in the Oranur experimentation. The red centers in the RBCs, sure sign of overirradiation, had disappeared entirely. The OR energy frames of the RBCs were still "blurred," as we came to call this particular appearance, and the picture of the RBCs was still clearly distinct from the picture of the blood in people who came from New York or Philadelphia to Orgonon. These problems will be dealt with extensively elsewhere; however, they had to be mentioned briefly in this context.

Xray Effects and Oranur Sickness

It will be necessary to separate the medical aspects of Oranur from the physical effects and to devote a special paper to this all important subject. The harvest of medical experience was too rich and is still too confused to be dealt with at this point. However, it appears essential to mention a few facts concerning the effects of *Xrays* on OR energy already in this report in order to prevent unnecessary harm to people working with both.

The following incident may be well suited to highlight the point in question.

At the end of April, I was asked by one of our medical orgonomists for help in his own behalf. He lived and worked in New York, 500 miles away from Orgonon and Oranur. He had not been at Orgonon except for a brief,

one day visit during December 1950. He had not been in contact with any of the devices or experimental arrangements which were used in connection with Oranur. When he arrived at Orgonon he appeared quite ill on the first impression. His face was livid, discolored in a bad way; the eyes were inflamed. He had felt nauseated for more than two months. His strength seemed to fail, and he suffered from constant fatigue, great thirst, weakness, malaise and a severe pressure in the diaphragmatic segment. Upon careful organomic examination, no apparent cause for the severe discomfort could be found. I knew this physician well from the training he had gone through with me several years before. I expected to find some armoring block in the diaphragmatic segment which would account for the severity of his status. I could, however, find no impairment of his bio-energetic motility. He was soft all over his body; no blocks were distinguishable. The case constituted a riddle.

During the further exploration, it turned out that he had constructed several OR energy blankets in connection with the anti-nuclear civil defense field service for which he was preparing himself and his staff in his private medical office.

These OR energy blankets had never been at Orgonon, and also, they had never come in touch with any Oranur-affected material. This only complicated the riddle. Was it possible that the OR energy blankets which were built with wire mesh instead of with sheet metal, produced a different, noxious type of OR radiation? This seemed unlikely. After further inquiry, it was found that *an operating Xray machine was located several rooms away from his office in another physician's office*. This answered the problem. *He had suffered all the time from Oranur effects*. The clinical symptoms were the same as those we had seen so dramatically at Orgonon. A blood test was performed immediately and it corroborated this conclusion: His blood showed an increase in white cells, highly overcharged RBCs and the typical picture of leukemia-like end-products of RBC disintegration.

He was advised to remove immediately upon return, all OR accumulating devices, to air his quarters abundantly, to drink much water and to take frequent, prolonged baths.

It is obvious that the Xrays had had the same effect upon the concentrated OR energy atmosphere in his office as the radium at Orgonon.

Several years ago, in the early 1940s, I had gone through, without having

been aware of what was happening, a similar situation. I had had an Xray machine in my office in Forest Hills which was mainly used for study of the diaphragmatic immobilization in patients and for photography of the OR energy fields of different setups. During that time, I had felt weak, often nauseated, thirsty and generally fatigued. The Xray machine was later sold and now I understand why I had begun to feel better after its removal. The building in Forest Hills had been overcharged with OR energy for many years.

I had gone through the Oranur effects without having been aware of it, and was immunized against the effects in the Oranur experiment of 1951. I had suffered least among the workers.

We assume with some certainty that the *well-known damage inflicted upon patients by Xray treatment are true, full-fledged Oranur effects in the first stage*. I had always strenuously objected to simultaneous OR energy and Xray treatment in cases of cancer. This was no more than one of those guesses which are empirically right. I had often seen OR-treated cancer patients decline more rapidly when at the same time they took Xray treatments. But now this is quite clearly understandable: The OR energy treatment increases the energy charge and the reaction to Xrays is strong. Xrays always damage the blood system and cause malaise as well as general decline, also without OR. *It is the organismic OR energy which reacts to the Xray therapy with Oranur effects*. This conclusion is quite safe now, though it might disturb the Xray therapist. However, the organomist has become used over decades to disturbing many people in many ways. This is inevitable with any type of new basic knowledge.

In concluding this brief report, I would like to warn against using or living in high OR energy concentration if any kind of Xray, radium or similar radiation work is being done in the same building. It is necessary that all physicians using OR energy treatment with their patients make sure that OR and NR are not brought near each other.

The important consequences of these interconnections for the understanding of disease after atomic blasts as at Hiroshima, of the peculiar radioactivity in maritime life, as it has been discovered years after the Bikini explosion, the ill effects upon people working with NR energy in the vicinity of steel wool, etc., should be regarded with care and further study should be devoted to all situations which are similar to Oranur setups.

From the Record: April 12—April 30, 1951

We met with a new startling surprise on April 12, 1951; it was due to our own reluctance to accept fully, without hesitation, the theoretical consequences of basic orgonomy. As so often before, I had, while reaching out into the unknown, still anchored myself in the prevalent ideas about the particular realm of knowledge. For instance, long after the discovery of the bio-energy in energy vesicles in 1936, I still presented the emotional bio-energetic functions at the skin's surface in terms of "bio-electricity" (1937). This had to be corrected later in order to make further progress possible. In a similar manner, I adhered to the accepted notions on nuclear radiation when I separated the NR sources from the OR energy concentration. The reader may remember that I had put away the two milligrams of radium into a *safe* which was located in an empty building about 1200 feet away from the students' experimental laboratory, each milligram of Ra within its one-half inch lead container. The safe which housed the containers has a wall of steel and concrete of about *four inches thickness*. According to the nuclear theory of radiation, lead and steel plus concrete of altogether some five inches thickness should have been perfectly sufficient to shield the activity of two milligrams of radium and a few micrograms of other nuclear sources. This seemed to be the case in accordance with the accepted notion of nuclear radiation, and I no longer worried about the far-away, heavily shielded nuclear material. I should repeat again that the danger was not thought of as due to these small amounts of NR but as due to its triggering effects on concentrated OR energy. There were no OR accumulating arrangements in the summer dwelling except: **THE STEEL CONCRETE SAFE ITSELF**. This I had overlooked, and thus I committed a grave mistake, which under slightly different conditions could have caused much harm. *The safe itself which housed the NR source acted as an OR energy accumulator.*

This we learned on April 12, 1951, when, after the snow had melted away on the road, we went down to the empty building with our GM survey meter and discovered that the Oranur experiment had actually gone on all the while since February. The following table provides a survey of the Oranur effects as measured that same and the following day with Tracerlab SU-5 Beta Gamma Survey Meter.

PLACE OF MONITORING	CPM IV. 12th	MR/H	CPM IV. 13th	MR/H	DISTANCE FROM SAFE, CONTAINING NR SOURCE SHIELDED 1/2 INCH LEAD
At main road	60-80	0.004	70		600-700 feet
Road	60	60		400-500 "
Road at turn	60-80	0.02	60-80		100 "
Road close to building	100	0.02			40 "
Main entrance			50		50 " ????
Maid's room	800 !!		1000 !!		300 cm.
Room with safe			6000 !!		200 cm.
AT SAFE WALL		5-10 !!	10-20,000 !	3-4 !	1 cm. from wall, 30 cm. from source inside
Safe			600		100 cm.
Safe			100		1000 cm. outside building

This result was shocking. The counts at the caretaker's cabin 700 feet away were around 40 cpm, i.e., normal for Orgonon.

It was not comprehensible why the count at the road, 100 to 700 feet away, was so much higher than the count at the main entrance, only 30 feet away. However, 20,000 cpm at the wall of the steel concrete safe seemed quite exorbitant.

One physician, who was with me, and I myself felt the Oranur effects right away, strongly: malaise, pressure, etc. The physician did not look well on the second day. We were afraid to open the safe, since we had experienced the accident with the physician who had put her head into an Oranur device. To simply dump the whole safe into the lake did not seem advisable, since the Oranur activity would most likely have affected the lake. To bury it in the ground seemed equally impossible since the OR energy from the soil would, to our notion, have continued to react. The building itself seemed to have become unusable for the summer. We could not carry the responsibility all alone. It was imperative to get help from the administration in Washington and Augusta, Me. Later, our caretaker told us that he had felt pain in his chest when four weeks ago he had gone to get some foodstuff from the freezer which was located in that building 30 feet away from the shielded source.

On April 13, we had put several mice of different types (Ca, Lk, healthy mice and newborn ones) into the room which harbored the safe. The mice were kept close to the safe. These mice were reported to be well on April 14. The following day, April 15, a Sunday, another careful check was carried out in the region. Here are the results of the monitoring:

MONITORING OF SAFE CONTAINING TWO MILLIGRAMS OF RADIUM, SHIELDED, AT LOWER HOUSE ON APRIL 15, 1951

	CPM	MR/H
1. AT SAFE: 1 cm.	20,000 at bottom, 5,000 at top	10-20
100 cm.	1000	0.4
1000 cm.	150-200	0.04
5000 cm.	60-80, 400 CPM, GM tube without shielding	0.16
2. Adjoining maid's room:	200	0.02
3. ROAD: 200 feet		0.016
240 feet		0.02 (near H ₂ O)
4. AT BADGER ROAD:	60	0.012
30 meters	60-80	0.02
40 meters	60-80	0.018
50 meters	400, GM tube without shielding!!	0.016
60 meters		"
70 meters		"
80 meters		"
100 meters		"

Between 50 meters and toward cabin: 60-80 CPM.

Without shield at 30 meters from cabin: 200 CPM.

Mouse box monitored afterward in students' lab: 40-50 CPM.

20,000 CPM and 10-20 MR/H at the outside wall of the safe, steel and concrete four inches thick, from a source some 30 to 50 cm. away inside the safe and two milligrams of radium, each shielded with ½ inch lead, seemed quite enormous. Also, 400 CPM 50 meters or 150 feet away in the open air, measured with the tube taken out from its shielding, seemed enormous.

It was only the fact that the mice had remained healthy after 56 hours close to this safe which made us stop and think. WERE WE HERE DEALING WITH NR ACTIVITY AT ALL? HAD OR ENERGY PERHAPS DONE ITS JOB OF KILLING THE NR COMPLETELY? How otherwise could the good health status of the mice be explained?

The thought that we had possibly reached our original goal of Oranur experimentation, went like an illumination through our minds. Perhaps . . . Possibly . . . If this would withstand the most severe tests in the future, we were obviously dealing with several phases in the Oranur process:

FIRST PHASE:

NR affects OR at first in a most damaging manner. The organismic and atmospheric OR energy reacts to sudden, unexpected NR action with prostration, decline, helplessness, as it were, psychologically speaking.

SECOND PHASE:

OR energy, after the first blow by NR has been suffered, and if it was overcome, FIGHTS BACK ferociously. It goes mad, runs berserk, as it were. It becomes a killer itself, attempting to kill the irritating NR. In this struggle it itself deteriorates into a killer of the organism which it governs: RADIATION SICKNESS, followed by death or some chronic destructive ailment, as for instance leukemia. The blood system is the most sensitive part of the organism in this respect.

THIRD PHASE:

IF OR ENERGY HAS THE OPPORTUNITY TO KEEP FIGHTING THE NR IRRITATION; IF IT CAN OBTAIN FURTHER SUPPLY AND REPLACEMENT OF FRESH ATMOSPHERIC OR ENERGY SUFFICIENT ENOUGH TO KEEP THE UPPER HAND, IT WILL FINALLY SUCCEED IN RENDERING NR RADIATION HARMLESS. *It will replace the noxious* SECONDARY ACTIVITY OF THE NR BY PENETRATION OF THE NR MATTER, AND WILL PUT IT AT ITS OWN SERVICE. WHAT WE ARE DEALING WITH HERE IN THIS THIRD PHASE IS NO LONGER NR BUT OR ENERGY WITHIN THE FORMERLY NOXIOUS MATERIAL. IN THIS FORM, THE PROPERTIES OF THE CHANGED NR MATERIAL WILL SHOW ALL SIGNS OF OR ENERGY: PENETRATION OF ALL WALLS NO MATTER OF WHAT KIND OR THICKNESS, HIGH COUNTS, BUT NO ILL EFFECTS UPON ORGANISMS.

This is, apparently, what we had been dealing with all through the years when small samples of NR sources were first irritating the OR energy and finally were changed into innocent though highly active material which had lost the power of "ionization" and of harming living tissues.

It was in this third phase that we felt quite well, even in the vicinity of an activity of 10 MR/H; that the mice were untouched, and that we felt Oranur only very slightly. On April 23, 1951, twelve days after they were put to the test, all mice were still all right.

But such IMMUNITY to Oranur, most likely required having gone through and suffered the life-dangerous phases One and Two. The organism is a

highly adjustable functional unit. If it is not knocked out right away during the first two phases; if it is given a chance, time and fresh OR supply, to adapt its own OR reactions to NR activity, it will fight back vigorously in the end and not suffer any longer from NR or secondary radiation.

This now appeared as a solid basis for further procedures toward the *original* goal of the Oranur project, i.e., *immunization against atomic bomb effects*. The concrete practical accomplishment of this task appears still far away; however, the way toward it was clearly designed and marked. The main pioneering job had been done; the main danger signals had been recognized: Oranur phase One and Two; the main symptoms in these intermediary steps were in the open. Behind phase One and Two, there was clearly outlined *phase Three*, the impotence of NR and the victory of OR energy.

The job was basically done. The rest of it was now up to the people and their representatives, the health agencies, the AEC, the national administration, the UN, the medical and physical sciences.

Let us consider carefully what had happened, by comparing a few results which, taken each separately do not make sense, but put together like pieces in a puzzle, reveal the secret behind it all:

The measurement of the activity near the closed safe was high, more than 10 MR/H and 20,000 to 30,000 cpm, coming *apparently* from a source of only two lead-shielded radium needles of one milligram each, and a few micrograms of other nuclear material, through four inches of heavy steel and concrete. On the basis of this finding, one should have expected that the source itself, measured *naked, without any shielding, at only one centimeter distance with an approximately ten times more sensitive counter tube* would yield a correspondingly much higher count.

I opened the safe myself, using a wet mask over my mouth and nose, and a long-handling tongs in removing the source from the safe. Before actually taking out the radium, I measured the activity in the inner space of about 40 x 40 x 50 centimeters. The counts were so high that the GM survey meter needle raced toward the highest scale and beyond it. There were far more than 20 MR/H and far above 100,000 cpm at a distance of about 40 to 50 cm. from the shielded source *within* the safe. I removed the NR material to the outside several meters away and measured again inside. The activity sank nearly immediately to approximately 50% above the normal count of 30-50 cpm. Any doubting physicist, being present at this performance could certainly have triumphantly said, "I told you so. Your Oranur is just so much

of a hoax. NR cannot possibly be changed by anything. Give up. . . . The reason for the high activity outside the safe was the NR source . . ."

To all common sense he would have appeared to be right. The high count on the *inside* actually disappeared soon after the removal of the NR source. Still, he could not have answered the question as to how it was possible that through $\frac{1}{2}$ inch lead and 4 inches of concrete and steel, the counts were still as high as they were, in MR/H only half of what they were within the safe, 40 cm. away from the shielded *ONE mg. of radium*.

All the following will teach us is that common sense alone is not good enough; that one cannot judge such a basic function from the standpoint of the atomic theory; that one has finally to start thinking in *cosmic* terms if one wants to comprehend Oranur.

We raced the NR material by car up to the observatory on the hill. It was removed from its shielding and measured immediately with the large 4096 Tracerlab Autoscaler, at 1200 volts and with a counter tube of a mica window thickness of 2.3 mg./cm.² as against the SU-5 Survey Meter and a tube of 30 mg./cm.² wall thickness. Here are the results, synoptically:

SHIELDING	COUNTS	
	MR/H	CPM
1. SHIELDED: $\frac{1}{2}$ " lead, 4" concrete and steel DISTANCE: approx. 40 cm. outside safe GM TUBE: wall thickness 30 mg./cm. ²	10+	20,000++
2. SHIELDED: $\frac{1}{2}$ " lead DISTANCE: 30-40 cm. WITHIN safe GM TUBE: wall thickness 30 mg./cm. ²	20+++	100,000+++
3. SHIELDING: NONE. NEEDLE NAKED TUBE THICKNESS (MICA WINDOW), 2.3 mg./cm. ² 4096 Autoscaler (Tracerlab)	DISTANCE ONE cm. 100 cm.	 30,000 to 35,000 approx. 3,000

Thus, to the amazement of everybody present and to the detriment of all well-set theories about NR radiation, THE SAME NR SOURCE WHICH ALLEGEDLY COULD MAKE THE GM COUNTER RACE UPWARD THROUGH LEAD SHIELDING AND AT FORTY CENTIMETERS DISTANCE, TO A HUNDRED THOUSAND PLUS CPM WAS NOT CAPA-

BLE OF YIELDING MORE THAN AROUND THIRTY THOUSAND CPM NAKED AT A FORTIETH OF THE DISTANCE AND WITH A TUBE AT LEAST TEN TIMES MORE SENSITIVE.

WE HAD ACHIEVED OUR RESULT: THE RESULT WAS THERE.

The problem was what it was, then, if it was NOT the NR source, that had made the GM counter race so high outside and inside the safe. It could not be anything else than the ATMOSPHERIC OR ENERGY WHICH SURROUNDED THE SHIELDED SOURCE AND THE SAFE AS WELL AS THE BUILDING HOUSING THE SAFE AS FAR AS 600 FEET UP TOWARD THE ROAD.

I put all the NR material into the great charger and into the 20x OR accumulator. There it remained until the following day late in the afternoon when I had to take it out again because of a new severe reaction.

Several days later the two milligrams of radium in their shielding were taken up to the Orgone Energy Observatory, where they were measured, both naked and with shielding at the GM Autoscaler. The results are summarized in the following chart:

MEASUREMENTS OF TWO NEEDLES OF ORANUR RADIUM (one mg. each), IN SHIELDING AND NAKED, AT GM AUTOSCALER, APRIL 28, 1951, 3 P.M.

All measurements at one cm. distance. Each measurement average of several measurements.

Material	Scale	With		Time in sec.	CPM
		Shielding	Naked		
1. Ra 1 (one mg. untreated)	4096	+		0.8	307,200
2. Ra 2 (one mg. OR-treated)	4096	+	..	1.05	245,760
3. Ra 2	256		+	0.4	43,000
4. Ra 2	4096		+	2.8	81,920
5. Ra 1	4096	..	+	8.3	28,877
6. Ra 1	4096	+		0.8	307,200
7. Ra 2	4096	+	..	0.8	307,200
8. Ra 2	4096		+	3.0	81,920
9. Shielding alone	64			3.15	1,280
10. Microgram Ra—OR-treated 5 yrs.	4096			0.8	307,200
11. Watch, one month owned	4096			10.0	24,576
12. Watch, 2 yrs. owned	4096			10.0	24,576
13. Calibration after measurements	256			4.15	60

Before proceeding further, let us again review the facts in their inter-relations, AND *not* SINGLY:

FIRST: *The naked NR material gave a much lower count (ONE TENTH) than the same material enclosed in heavy lead shielding.*

SECOND: *The ten times higher counts in the atmosphere around the shielded NR material is a function of the OR energy fighting against NR.*

THIRD: *As soon as the interaction between OR and NR is stopped, the high OR activity vanishes and sinks down to the normal atmospheric level.*

FOURTH: *OR energy alone does not react severely unless irritated by NR.*

The Oranur reaction was again severe immediately after the NR material was put into the big charger *without the safe*. The counts were as high as 2000 cpm on the outside of the charger. The air became heavy again and we felt the typical Oranur symptoms (malaise, nausea, pressure) which we had NOT FELT so severely previously near the safe. This gave us another clue for further procedures, thus:

Apparently, *when the NR material was within the heavy steel and concrete safe, the OR energy which can penetrate everything could easily get INTO the safe whereas the NR activity could NOT get OUT of the safe*. Thus the chances in the fight of OR against NR were shifted to the advantage of OR *against* NR. On the other hand, when NR material was not sufficiently shielded, it had an even chance to irritate and to trigger OR energy into DOR action. This was the reason why we had not felt malaise of a severe nature in the vicinity of the safe, whereas we felt it right away severely in the vicinity of the charger. Now it seemed clear that in order to reduce the DOR effect, one had to put the NR material into heavy shielding and thus confined, into the charger. OR would get at NR, but not NR at OR. We decided right away to build a housing for the safe to put the NR material into the safe again and to put the safe, containing NR, in the vicinity of the charger. This would secure the Oranur effect without the DOR element IF we were on the right track of reasoning.

The further elaboration of this problem must wait until the *second* Oranur series of experimentation can be carried out.

In the end a control experiment with a peculiar result deserves to be mentioned:

We ordered a third mg. of radium from New York. We had it tested before it was brought up to Orgonon. The results of the measurements taken in a radiation laboratory in New York were for this one mg. of radium:

Naked . . . Ca. 16,000 cpm

Within $\frac{1}{2}$ inch lead shielding . . . ca. 7,000 cpm

We measured the same source in thick lead shielding *immediately* upon its arrival at Orgonon: The result was ca. 300,000 cpm with the GM Autoscaler and ca. 100,000 cpm with the SU-5 Survey Meter. Does the Oranur effect act instantly raising the counts five- to twenty-fold? Only further work will answer this problem.

However, the conclusion appears safe: *It is the OR energy in the atmosphere, surrounding the NR material, which reacts at the GM counter. It is the organismic OR energy within living bodies which continues to react to NR material for months and even years* (bio-energetic radioactivity; "radiation sickness").

6. Outlook

We all felt that we had gone through some awful, deadly dangerous experience which we could not quite fully grasp, which had thrown us into some great depth, a heretofore well-hidden domain of cosmic functioning. In spite of the many clear-cut physical manifestations, observed and measured with exact instruments, and in spite of our deep disinclination toward any kind of metaphysical thinking, we could not help being impressed by the *psychological* implications of these experiences. It is much too early to go into detail here. However, we wish to convey some degree of realization of the fact that the first Oranur experiment not only had confirmed the basic antithesis of OR and NR, as I had predicted many years ago; it had brought into sharper focus many seemingly insignificant assumptions regarding cosmic orgone energy functions such as, for example, its “meaningful” behavior, which distinguished it from any kind of purely mechanical functioning such as electricity or magnetism. We are fully aware of the danger of mystical misinterpretation entering the scene at this point. Yet, if millions of people have developed and lived in metaphysical beliefs for millennia, had believed in a “Prana” and such, there must be something in it. And this truth seemed urgently to want to reveal itself to us:

IF MYSTICISM AND METAPHYSICS ARE BASED ON AN IRRATIONAL APPREHENSION OF THE COSMIC ENERGY WITHIN AND WITHOUT THE ORGANISM, IT SHOULD BE EXPECTED THAT THIS ENERGY IN ITS *truly physical* MANIFESTATIONS WOULD SHOW FUNCTIONS WHICH ARE AKIN TO OR THE VERY BASIS OF ALL FUNCTIONS ALLIED WITH *life* AND *emotions*.

This fact was not new to us. We had observed the preformative stages of psychic functions in the realm of merely physical OR functions for many years, and though quite logically fitting into the framework of our work on Life Energy, these similarities had kept amazing us. For instance, the contraction of the OR energy in freezing bion water; a freezing animal behaves exactly the same way. Or, the fluid, *functional*, non-mechanical type of

behavior of all, but all, OR functions such as the spontaneous discharge of OR-charged electroscopes, or the fluctuating, yet lawful behavior of the organotic temperature difference in connection with the equally fluid, non-mechanical, yet lawful weather changes; or the fusion of primitive bions, which so clearly demonstrated the physical nature and basis of the fusion in copulation; or the lifelike, "meaningful," "playful" movements of small energy vesicles to be seen under high magnification, and many other similar phenomena which have one thing in common: They are qualitatively akin to higher functions of the living and the mind.

It is clear why an observer of these basic functions of nature, who is not properly trained in the knowledge of the bio-energetic emotions, would surely miss the point and would not understand what he is seeing. On the other hand, the bio-energetically well-trained observer, who by his professional daily activities is used to seeing and judging emotional movements and bio-energetic expressions and to reading their meaning without a word spoken on the part of the patient, will readily, and often even before understanding the physical functions, grasp the "meaning" of these microscopic organotic phenomena. In the mechanistic technician of physics, the observation of the physical functions of nature split off from the emotional manifestations as "physics" *here* and "mysticism" or "religiousness" *there*. On the other hand, in the well-trained organomic observer, these two modes of experiencing nature, otherwise so much opposed to each other, are united into one single picture. Here the *physical* does not exclude or contradict the *meaningful*, nor the quantitative the qualitative. We are aware that these matters are of a deep natural-philosophic significance. *The sharp boundary lines between physics and what is called "metaphysics" have broken down.* The metaphysical intuition has a physical basis: "GOD" and "ETHER" are ONE. When a theoretically well-trained organomist, i.e., trained *physically* as well as bio-energetically, which is rare indeed, reads of the many attempts at a reconciliation between the *physical* world picture which governs thought in *Western* Civilization, and the *mystical*, "aesthetic" world picture which governs the *Eastern* world; when he follows the attempts to reconcile the Objective in Western science and the Subjective in Eastern religious philosophy, he must, inevitably, see before his eyes the behavior of bions, of an electroscopic charge, of a frozen bion water preparation with its contracted yellow core from which later living plasmatic flakes will derive, and he will

be awed by the unity of *physical action* and *emotional meaningfulness* in the Oranur effects.

Newton and Goethe are, with their respective physical world pictures, no longer as much antipodes as they used to be. Their points of view can and will be reconciled. The *scientist* and the *artist* are no longer keepers of two disparate, unmixable worlds, as they still seem to be. Intellect and intuition are no longer irreconcilable opposites in scientific work. As a matter of fact, they have never been so in basic natural research.

The reader understands well what we are driving at here:

ALL BOUNDARIES BETWEEN SCIENCE AND RELIGION, SCIENCE AND ART, OBJECTIVE AND SUBJECTIVE, QUANTITY AND QUALITY, PHYSICS AND PSYCHOLOGY, ASTRONOMY AND RELIGION, GOD AND ETHER, ARE IRREVOCABLY BREAKING DOWN, BEING REPLACED BY A CONCEPTION OF THE BASIC UNITY, A BASIC CFP OF ALL NATURE WHICH BRANCHES OUT INTO THE VARIOUS KINDS OF HUMAN EXPERIENCE.

This does not mean, of course, that the distinctions entirely cease to exist. On the contrary, in the light of the functional identity between *man* and *animal*, *orgastic* longing and *cosmic* longing, God and Ether, etc., the specific *differences* emerge the more sharply, and to the good of rational discrimination.

We learned more dealing with this basic change in the modes of thinking: ORGONOMY IS NOT MERELY A BRANCH OF NATURAL SCIENCE, NOR IS IT A MERE ARTISTIC PROCEDURE, NOR PSYCHOLOGY ALONE, NOR BIOLOGY ALONE. IT IS, TRULY, IN FULL ACCORDANCE WITH ITS OBJECT OF INQUIRY, *a body of knowledge which deals with the basic law of nature.*

From the cosmic OR energy ocean all other functions emerge through variation. This makes *identity* and *variability* compatible with each other. With the breakdown of all sharp, mechanical distinctions, of necessity a new view upon our cosmic existence emerges. This is already true, although we may still not know exactly how to go about it all.

To return: Also, NR radiation, as a *secondary* natural function, once emerged through differentiation, from OR energy functions. Now, we experienced not only the antithesis between OR and NR; we also experienced, in a deadly manner, that OR itself can go wild with "rage" as we are accustomed to calling it. We all had the impression during that period, that we "had somehow provoked the otherwise benign OR energy and turned it into a wild beast."

A Frank Discussion

This conclusion is a very serious one, involving matters pertaining to the very health and security of people in general. Therefore, blunt language and avoidance of any circumlocution are imperative.

Before entering the subject in question, I would like to alleviate some of the possible hesitancies which might obstruct a frank discussion of this work. My sharp theoretical and practical formulations on biopsychiatric aspects of public health should not stand in the way, since they are already at least partially incorporated in present-day teachings all over the world. My past affiliations with the revolutionary movement in Europe of some twenty years ago should not stand in the way since for more than eighteen years I have had no political affiliations whatsoever. I have never been active in the **POLITICAL** sense of the word, but I have kept myself well-informed on every feature of the plague of dictatorship, black as well as red. I have fought dictatorship of any and every kind factually since the very early beginning of my career; and I have particularly fought every sneaking evildoer, no matter in what party, as early as 1931, with all my vigor and knowledge, long before anyone really knew what it was all about; also long before the recognition of the USSR government by the USA. I have not the slightest intention of forcing any of my scientific beliefs upon any nation or any part of it; and I believe myself to be the only one today who *really knows* where the dangers connected with orgonomic teachings are to be watched out for. My belief, based on rich experience, is that if there is any hope of ever emerging from the present-day social chaos into the bright light of peaceful social living—and to my mind there *is* great hope—its factual, powerful roots are harbored by the alive, forward-looking forces that are at work everywhere in the world. Only a very few responsible people are fully aware today that an old, tired, bound-up world is breaking down, and that a new, hopeful, young world is slowly and painfully being born. The current *biosexual revolution*, now in progress over the past thirty years, constitutes its core.

Hoping to have eliminated this obstacle to a free exchange of opinion, I proceed to the main point: The Oranur experiment has, without or even against our intentions, reached proportions which threaten not only to get out of control here at Orgonon (at present, May 1951), but which particularly endanger the security of the USA in case its government should further delay to take these affairs seriously and to direct them to the benefit of the country.

To sum up: The Oranur experiment has so far revealed grave implications; their scope and revolutionary character are nobody's fault or intent. The factual evidence and the theoretical framework of the results are much too involved to be brought forth at this point. I have, for security reasons, not published anything about the immediate practical and theoretical background of Oranur for many years, since about 1947; I had sensed that what might happen was what actually did happen.

[*Note inserted in galley proof, Sept. 12, 1951:* The following summary reflects in its pessimistic aspects the severe situation as of about April 1951, when the Oranur Experiment was still exerting its frightening influence upon the workers of Orgonon. The frightening events were partially due to the fact that we went into this experiment entirely unprepared for its scope and danger, a disadvantage which from now on is not operative.

I would like to mitigate greatly the pessimistic impression that especially points 1, 6, 7 and 8 in the following may make on the reader. It is also necessary to eliminate the fear that a new murder weapon has been created by a scientist and that the deadliness of Oranur far outweighs its positive life-serving functions. During the five months following the conclusion of this first report, much of the pessimistic outlook was far overshadowed by new observations which left no doubt as to the *life-positive* medical and biological results of Oranur. These results appear tremendous at present and will require a long period of time for careful scrutiny. I feel justified in stating that under the condition of proper handling of Oranur all the dangers mentioned below can be eliminated, and that the life-positive effects on man, animals, and vegetation seem secured. The reason why I leave the original text as of April 1951 unchanged is to render a completely true picture of our emotional and biological reactions to the first run of the Experiment, reactions which doubtlessly will occur in nearly everyone who attempts to experiment with Oranur for the first time. A second, additional report about the outweighing positive effects of Oranur is already in preparation.]

1. By putting only one milligram of radioactive nuclear material into a highly concentrated OR energy atmosphere (in a twenty-fold OR energy charger or a room charged through years of work with OR energy), a change takes place in the atmospheric energy which beyond any doubt has the qualities of a *slow but enduring chain reaction*. This reaction of OR energy to nuclear energy is dangerous to life if it transcends certain limits of intensity or duration.

2. *There is no protection whatsoever against OR energy running wild when irritated by NR radiation, since OR energy penetrates everything, including lead and brick or stone walls of any thickness.* The present-day safety measures, as employed by the Atomic Energy project, are not effective against Oranur.

3. Once the Oranur effects take place, they travel through the air as if infesting, chainlike, one area after another. Here at Orgonon, such infestation has been found as far away as two miles from the place of the original effect. Only 1 mg. of NR within a 20x OR charger has been used. The possible effects of 1 gram NR in a 500x OR charger are unpredictable and would, I am afraid, be disastrous.

4. It is most likely, and even imperative to assume that quite ordinary materials such as rock, metal, and especially material arrangements which have the faculty of accumulating OR energy, continue to be active long after the originally triggering NR material has been removed. This *resembles induced* radioactivity. It is at present hard to tell whether or not the rock actually disintegrates. But it undoubtedly is active and continues to be so. This effect developed quite unexpectedly and unintentionally when we started to test the influence of OR energy (five to ten times concentration) upon one mg. of radium. This activity is merely a sharp increase of normal, natural activities.

5. Structures which are capable of accumulating atmospheric OR energy, such as steel wool, metal filing cabinets or simple metal-lined boxes, become active even if they have not been directly influenced by NR radiation; it is sufficient that they come into contact with a directly affected orgone energy accumulator.

6. A criminal hater of mankind, or a political enemy, if he knew about this, and *if the USA did NOT know about or did NOT study these effects*, could easily drop activated Oranur devices, looking like simple metal-lined boxes; these could infest a whole region, if not a whole continent.

7. According to what we have learned over a period of only four months' observation and experimentation, people would fall sick due to the Oranur-infested atmosphere. Each person falling ill would react according to his or her specific disease or disposition to disease. This effect is due to the *selective* bio-energetic effect of OR energy which attacks specifically the diseased part in the organism, at first driving the symptoms to higher acuity and then:

8. CURING THEM IF PROPERLY AND CONSCIENTIOUSLY APPLIED. However, un-

controlled, unsupervised, and especially if used with malignant intent, such infestation of the atmosphere would surely kill or at least immobilize many people. If as little as one microgram of radioactive nuclear material were left continuously in a 50- or even a 20-fold orgone energy charger, the result could be disastrous.

9. In order to illustrate the intensity and extensity of the Oranur effects: Buildings which have been freed of any kind of radioactive material, and in addition, from which every single OR energy accumulating device has been removed, still drive the background counts as high as 80 or 100 cpm if regular ventilation is neglected for only half-a-day. On the other hand, fresh air removes the effects and reduces the activity to a normal of around 25 to 40 cpm.

10. There can be little doubt as to the fact that atmospheric OR energy plays a major if not a decisive role in the dynamics of an atomic pile reaction, to judge from what has so far been disclosed in the unrestricted literature. A careful experimental study of these dynamics appears now to be of crucial, if not life-securing importance in the present state of social affairs.

11. *I did not work with fission and I did not produce fission during the Oranur experimentation.* It is not sure that fission actually takes place in infested material, but this might possibly be the case. Therefore, I prefer, in the interest of the great medical potentialities of OR energy research, in the interest of the people and for my personal security to report these things, and to urge emphatically that all red tape be cut through in order to look into these processes on a scale appropriate to their scope, dangers and hopes. Fulllest clarity and having the cards in the open, above the table, are now crucial obligations: *IF FISSION OF ORDINARY MATERIAL OCCURS, ITS DISCLOSURE WAS INCIDENTAL TO AN EXPERIMENT WHICH STARTED WITH AN ENTIRELY DIFFERENT GOAL IN MIND.*

12. The gravity of the situation is further increased by the fact that the Oranur functions most probably are apt to overthrow many cherished beliefs of today's nuclear physics. Most of this is still in the dark, but the outlines are already clearly visible. I shall mention only a very few of the consequences:

a. *The atomic "particle" theory of the basic structure of the universe no longer holds water.* The primordial OR energy ocean (formerly called "ether") *exists* and is *mass-free*. Inert as well as heavy mass arise from mass-free energy through certain functional processes already known to orgonomic research in some detail.

b. Exactly at the point where the atomic theory dips into the *PRE-atomic* functions of nature, into the realm of so-called "material waves" (a wrong, misleading expression), into the realm of the "wave particles" (again misleading), into the realm of electrons consisting of waves only, into the impossibility of determining at the same time position and momentum of an electron, the "law of merely statistical probability," etc., etc., the functional theory of orgonomy sets in. These primordial, *pre-atomic* problems are impregnable to methods of mechanistic or materialistic thinking. They divulge logical intelligibility only if approached *functionally*, i.e., *orgonomically*. The facts, observations and theoretical deductions have kept piling up for many years in a clear enough fashion to warrant the assumption that the whole electronic theory *as far as it pertains to cosmic, PRIMORDIAL functions*, will be replaced by a *functional theory of the basic functions of the universe*. These matters are naturally very serious and require intelligent, unprejudiced, open-minded, courageous efforts to clear the field of misconceptions, inertia in thinking, wrongly applied theories, etc. In addition, many reputations are at stake and personal feelings will be hurt.

c. For several years now, OR energy has yielded up to 25,000 impulses per SECOND in tubes evacuated and freed of any kind of gas down to 0.5 micron pressure. Thus, the ionization theory, which is based upon the assumption that it is the "ionization effect" exerted upon the "*gas*" particles in the counter tubes by the impinging radiation "particles" has become undermined. NO GAS-FILLING IS NEEDED TO OBTAIN ORGONOTIC GEIGER EFFECTS. OR energy luminesces and acts in a clear-cut quantum manner in high vacuum. It depends only on atmospheric weather changes and such cosmic influences as, for instance, sunspot cycles. The greater the *frequency* in the orgonotic quantum action, the more does *continuity* or *linear* action replace the former.

13. OUTLOOK ON MEDICAL POSSIBILITIES: Medical Oranur effects are *powerful* as well as *dangerous*. They *attack and bring to the foreground the specific disease characteristic of the individual*. In this process, if tampered with ignorantly, the sick may die prematurely. However, the fact itself, that a medically active agent has been found which *searches out the specific syndrome and its organismic location*, is highly promising. The application of Oranur would be not by injections or other mechanical devices, but simply by *exposing the sick organism gradually and cautiously to the necessary dose of Oranur*.

14. Since NR activates OR and changes it to Oranur, Oranur continues,

chainlike, to affect other OR devices; an initial trigger effect would be sufficient to start a chain of Oranur activity, as said before. We would have, then, to distinguish OR accumulators which had *not* been triggered by NR; they would be applied as heretofore, for total, regular, preventive irradiation, treatment of wounds, burns, etc. However, Oranur devices could not be kept in any inhabited building and would have to be handled with the greatest of care, since they, in contradistinction to simple OR accumulators, are potentially dangerous. Apart from individual treatments with Oranur, the new possibility offers itself, *to affect whole regions simply by powerful Oranur arrangements and thus to fight epidemics, mass diseases, and possibly NR radiation sickness EN MASSE in a preventive manner.* The latter possibility will, of course, require much detailed elaboration and strict legal precautions. This task is far beyond our financial scope and our obligation.

Thus the short-range importance of Oranur. However, from a long-range view, the effects of Oranur upon human *emotional* reactions are of infinitely greater importance. Here, as things look at present, we may well be prepared for great events.

A government of nations, bent on abolishing the threat of atomic warfare, on securing peace in the world and bringing health and happiness to people EVERYWHERE, could do untold good. Cosmic energy could finally serve useful purposes, since *slowness* of chain reaction and *medical efficiency* have been found in *the cosmic primordial forces*. Such humane efforts would command respect and secure the deep confidence of people in our endeavors everywhere. No single man or organization could accomplish this end; only allied social institutions could do it—from the nursery school to the institute of higher learning, from the professional organization to the military Pentagon in every land.

APPENDIX

Technical Setup of the Oranur Experiment

I. A HIGHLY CHARGED OR ENERGY ATMOSPHERE

Any building, no matter of what construction, will serve as a housing of the Oranur experiment, provided it is continuously kept at a higher level of organotic charge than an ordinary building (3 to 10 times concentration). Such high level of OR energy charge can easily be obtained by *continuous* presence of several ordinary 3 to 10-layer OR energy accumulators, or, still more efficiently, by the presence of a special "Orgone Energy Room" containing one or two 20× OR energy accumulators. The presence and degree of high OR energy charge is determined, apart from the unmistakable subjective sensations, by *electroscopic* measurements of the spontaneous discharge ("natural leak") within the room, within the 20 × OR energy accumulator and in the open air. The higher the OR charge in the measured space, the slower will be the discharge rate, the *OP* (Orgonotic Potential), as compared with the rate of discharge in the open air. It should not, on the average, be less than 3 times that in the open air; preferably up to 10 times higher.

II. THE "OR ENERGY ROOM"

The "OR Energy Room" can be a common room or hall of about 15 feet square. The *inside* of the wall should be lined with *sheet metal* of iron or *steel* (NO copper or aluminum should be used since these metals are dangerous to health!!!). Between the inner iron metal lining and the outer walls, a layer of ordinary glassfiber insulation should be placed. This increases the effectiveness of the accumulation.

The OR accumulation will operate immediately after the assembly of the metal-lined walls. However, it will not be strong enough. Several weeks are required for an OR room to "soak" up enough atmospheric OR energy to reach a fairly constant and high level of activity. The activity varies with the weather, diminishing to near zero in bad, rainy weather, and increasing many fold in dry, sunny weather. The heat, due to OR radiation, can easily be felt by holding the palm some 4 to 10 centimeters away from the inner metal lining.

The OR room should be made light-tight in order to make possible the

observation of OR energy in the dark. Such visual observation is a strict requirement for every student of physical orgonomy. A well-built OR energy room should, after 15 to 30 minutes' accommodation of the eyes, appear bluish gray, AND NOT BLACK. After about one-half to one hour the room should appear brighter than in the beginning, and flashes of whitish, yellowish light streaks should be visible, clearly and unmistakably (only in clear weather and at higher altitudes). Later on, countless tiny *violet* sparks like pin points should be seen everywhere, especially at the walls and the ceiling. The latter observation is not accessible to every observer right in the beginning.

In spite of ventilation, it should *not* be possible to the average observer to stay in this room without interruption for more than about two hours, without feeling discomfort. The signal to get out of the OR energy room is the appearance of red or purple patches of light.

III. THE OR ENERGY ACCUMULATOR

See description of construction in the pamphlet, *THE ORGONE ENERGY ACCUMULATOR—ITS SCIENTIFIC AND MEDICAL USE*, Orgone Institute Press, 1951.

IV. HOW TO ACHIEVE THE ORANUR EFFECT

Any kind of mechanical energy is capable of exciting the OR energy to greater activity: simple heat, sparks from an induction coil, friction, etc. The Oranur effect differs from other excitations of OR by its fierceness and its dangerous character. ONE MILLICURIE of any source of nuclear radiation (radium, pitchblende, uranium) will be sufficient to act as a trigger to change OR into ORANUR activity. The quantity of this effect can be directed to some degree by the amount of NR activity put into the OR room or by timing the exposure. EVERYONE IS STRICTLY WARNED AGAINST USING AN OR ACCUMULATOR WHILE AN NR SOURCE OF THE STRENGTH OF A MILLICURIE OR AN XRAY MACHINE IS LOCATED WITHIN THE OR ENERGY FIELD. The longer the trigger effect is allowed to act upon the OR atmosphere, and the more OR accumulating devices that are present, the stronger will be the effects. Stronger effects will also result with regular repetition of the trigger action. In a highly concentrated Oranur atmosphere, the presence of even as little as a microgram or less of any NR source for even as little as a few minutes will suffice to produce severe effects. *Only freshly obtained NR sources are effective.* NR material which has been exposed to OR for a long period of time (years) will have no effect, since it itself has been influenced and changed by OR energy.

V. THE TYPICAL SYMPTOMS OF ORANUR SICKNESS

These symptoms are: malaise; nausea; pressure in head, chest, etc.; cramps and twitching in muscles and other organs; hot and cold shivers; fatigue; return of old or latent disease symptoms; pathological blood picture; increase of white cells; inflammation of the conjunctivae; dryness of throat; severe thirst.

Atypical, but dangerous symptoms are: fainting spells; chronic fatigue; provocation of deadly symptoms (block of respiratory center); leukemic change in the blood picture with prolonged exposure; pneumonia, pleuritis; inner bleedings.

Other symptoms are likely to turn up with further observations.

VI. CURE OF ORANUR SICKNESS:

Much fresh air; periodic, ample ventilation of rooms; removal of all Oranur and OR devices; cold water compresses on inflamed eyes; drinking water; prolonged baths; avoidance of further exposure; control by organomic Reich Blood Tests; regular orgasmic discharge of surplus bio-energy. The latter is possibly quite essential as a counter measure against the overcharge.

VII. The final outcome of Oranur sickness cannot at present be predicted.

VIII. The road to the preventive, therapeutic and diagnostic use of cosmic OR energy in its ORANUR form has been built. The consequences for medicine and biology are as yet incalculable.

Historical Record of Information Given Regarding Oranur

<i>From</i>	<i>To</i>	<i>By and Date</i>	<i>About</i>
1. Orgone Institute Research Labs (OIRL)	Director, Office of Technical Advisers, Atomic Energy Commission (AEC), NYC	Personal meeting of representatives (April 30, 1948)	GM effect of OR and vacor phenomena. AEC representative states OR fundamental natural-scientific research outside scope of AEC.
2. Chief, Public Information Bureau, AEC, NYC	OIRL	Letter (May 26, 1948)	Publication of GM effect of OR not restricted.

<i>From</i>	<i>To</i>	<i>By and Date</i>	<i>About</i>
3. Orgone Institute	Chairman, AEC, Washington, D.C.	Letter (July 22, 1948)	Public responsibility regarding motor force in OR. Danger of misuse by totalitarian powers.
4. OIRL	Director, Office of Technical Advisers, AEC, NYC	Letter (Sept. 9, 1948)	Motor effect in OR. Obtaining of spinner motor models.
5. Director, Office of Technical Advisers, AEC, NYC	OIRL	Letter (Sept. 17, 1948)	<i>AEC interested in fundamental research such as that in OR, but cannot help or support research outside scope of AEC act.</i>
6. Orgone Institute	Medical Directors, OIRL	Letter (Oct. 5, 1948)	Relationship of OR to NR. Need for public responsibility and support. Importance of factual results greater than legalistic separation of OR as outside scope of AEC.
7. OIRL	Director, Office of Technical Advisers	Letter (Oct. 21, 1948)	Relationship of OR to NR. Need for money to carry on research.
8. Director, Office of Technical Advisers, AEC	OIRL	Letter (Nov. 2, 1948)	OR outside scope of AEC.
9. Orgone Institute	Chief, Patent Branch, AEC, Wash., D.C.	Letter (Nov. 8, 1948)	Documents concerning OR reaction at GM. 10,000 impulses per second with vacor tube at GM Autoscaler.
10. Chief, Patent Branch, AEC	Orgone Institute	Letter (Nov. 23, 1948)	OR research does not relate to present activities of AEC.
11. Orgone Institute	Board of Trustees, The Wilhelm Reich Foundation (WRF)	Letter (Sept. 6, 1950)	Medical effects of OR. Hope that OR can counteract NR.
12. Legal Adviser, WRF	Commissioner, AEC	Letter (Sept. 18, 1950)	Transmission of Sept. 6, 1950 letter from Orgone Institute.
13. Chief, Medical Branch, AEC, Wash., D.C.	Legal Adviser, WRF	Letter (Sept. 29, 1950)	Must know more about nature of OR. No one in AEC Medical Branch able to pass judgment on OR.

<i>From</i>	<i>To</i>	<i>By and Date</i>	<i>About</i>
14. OIRL	Radioisotopes (RI) Branch, AEC, Oak Ridge, Tenn.	Telegram (Dec. 4, 1950)	Application for radioisotopes.
15. OIRL	Tracerlab, Inc., Boston, Mass.	Letter (Dec. 4, 1950)	Procurement of radio cobalt. Standard CPM for radio cobalt.
16. OIRL	Tracerlab	Letter (Dec. 4, 1950)	Ordering of tongs, lead container and film badges.
17. Orgone Institute	Director, Orgone Energy Clinic, Forest Hills, N.Y.	Letter (Dec. 4, 1950)	Plans for Oranur Experimentation.
18. RI Branch, AEC	OIRL	Letter (Dec. 6, 1950)	Application for radioisotopes.
19. WRF	Important Civil Defense, State and Federal Agencies	Mimeographed Bulletin (Dec. 1950)	Layout of Oranur Experiment. (<i>Orgone Energy Emergency Bulletin</i>) (OEEB).
20. RI Branch, AEC	OIRL	Letter (Dec. 15, 1950)	Procurement of radioisotopes.
21. Orgone Institute	The President of the United States	Letter (Dec. 19, 1950)	Oranur Project.
22. Director, Orgone Energy Clinic	New Jersey Congressman	Letter (Dec. 28, 1950)	Oranur Project.
23. New Jersey Congressman	Director, Orgone Energy Clinic	Letter (Jan. 1, 1951)	Oranur Project.
24. New Jersey Congressman	Surgeon General, U.S. Public Health Service	Letter (Jan. 1, 1951)	Oranur Project.
25. Tracerlab	OIRL	Letter (Jan. 1, 1951)	Procurement of radio cobalt.
26. OIRL	RI Branch, AEC	Letter (Jan. 2, 1951)	Training of OIRL personnel in NR safety measures.
27. Canadian Radium and Uranium Corp., NYC	OIRL	Letter (Jan. 3, 1951)	Order of two mgs. radium.
28. New Jersey Congressman	Director, Orgone Energy Clinic	Letter (Jan. 5, 1951)	Surgeon General familiar with Oranur Project.
29. Tracerlab	OIRL	Letter (Jan. 5, 1951)	Impossible to give standard CMP for radio cobalt.

<i>From</i>	<i>To</i>	<i>By and Date</i>	<i>About</i>
30. WRF	Important Civil Defense, State and Federal Officials, Libraries, Hospitals, etc. (Approx. 700)	Printed oEEB (Jan. 5, 1951)	Oranur Project.
31. RI Branch, AEC	OIRL	Letter (Jan. 8, 1951)	Training of Oranur personnel in handling NR material.
32. Industrial Hygiene Branch, AEC, NYC	OIRL	Letter (Jan. 8, 1951)	Protective respirator.
33. University of California Library	WRF	Letter (Jan. 10, 1951)	Receipt of oEEB.
34. Chief, Radiology Branch, AEC, Wash., D.C.	Brigadier General, U.S. Army	Letter (Jan. 15, 1951)	Oranur Project.
35. Brig. General	Orgone Energy Clinic, Forest Hills	Letter (Jan. 17, 1951)	Oranur Project.
36. Orgone Institute	Directors, Orgone Energy Clinic	Letter (Jan. 22, 1951)	Proposed conference with Medical Chief, AEC, apropos Oranur.
37. Director, N.Y. State Civil Defense Commission	Medical Orgonomist	Letter (Jan. 24, 1951)	Receipt of oEEB.
38. Directors, Orgone Energy Clinic	Medical Chief, AEC	Personal Conference (Jan. 26, 1951)	Oranur Project. Effect of NR on OR.
39. General Manager, AEC, Wash., D.C.	U.S. Senator from New York	Letter (Feb. 2, 1951) (Letter forwarded to the Orgone Institute)	Possible use of OR energy against effects of radioactivity called to the attention of the AEC on several occasions.
40. Directors, Orgone Energy Clinic	Orgone Institute	Letter (Feb. 3, 1951)	Conference of January 26 with representative of AEC.

<i>From</i>	<i>To</i>	<i>By and Date</i>	<i>About</i>
41. Orgone Institute	Director, Orgone Energy Clinic	Telephone (Feb. 13, 1951)	Seriousness of situation at Orgonon; mice dying, high count in East.
42. Directors, Orgone Energy Clinic	Medical Branch, AEC and Surgeon General	Telegram (Feb. 14, 1951)	Urgent that responsible physicist and public health officer be dispatched to Orgonon. Possible danger to community.
43. OIRL	Medical Branch, AEC, Surgeon General and State Health Officer, Augusta, Me.	Telegram (Feb. 16, 1951)	Immediate danger at Orgonon and in community curbed.
44. Orgone Institute	Medical Orgonomist, Oslo, Norway	Telegram (Feb. 19, 1951)	Warning against trying to treat radiation sickness with OR at present experimental stage.
45. RI Branch, AEC	OIRL	Letter (Feb. 23, 1951)	Potential hazards connected with use of P-32 in view of DOR reaction.
46. OIRL	RI Branch, AEC	Letter (March 6, 1951)	Interruption of Oranur experiment. Danger of political misuse of Oranur.
47. RI Branch, AEC	OIRL	Letter (March 13, 1951)	Interruption of Oranur Experiment. Cooperation in the future.
48. Orgone Institute	Dept. of Health and Welfare, Augusta, Me.	Telephone (April 13, 1951)	Reaction of Oranur at safe. Possible public health hazard.
49. Dept. of Health and Welfare, Augusta, Me.	Public Health Service, Wash., D.C.	Telegram (April 13, 1951)	Reaction of Oranur at safe. Possible public health hazard.
50. Dept. of Health and Welfare, Augusta, Me.	OIRL	Letter (April 26, 1951)	Public Health Service, Wash., D.C., states no public health hazard exists and CPM at safe not unusual.
51. OIRL	Dept. of Health and Welfare, Augusta, Me.	Letter (April 26, 1951)	Further measurements of Oranur at safe and at GM autoscaler. Contradictions with classical findings. Danger of political misuse of Oranur.

<i>From</i>	<i>To</i>	<i>By and Date</i>	<i>About</i>
52. WRF	The President's Office, and AEC	Letter (Sept. 11, 1951) and galley proof of "The Oranur Experiment: First Report." <i>Orgone Energy Bulletin</i> , Oct., 1951	Whether President's Office regards publication of "The Oranur Report" and distribution abroad as dangerous to the interest of the USA, despite earlier statement by AEC that OR energy research is basic research and <i>not</i> restricted.
53. AEC	WRF	Letter (Sept. 24, 1951)	Oranur <i>not</i> classified.

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Unless otherwise stated, all books and periodicals are published by and available from the Orgone Institute Press, publishing house of the Wilhelm Reich Foundation. Address: P.O. Box 153, Rangeley, Me.

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