# THE GENERATION OF PHOTONS FROM THE PRIMARY FIELD

## I. Properties of the Primary Field

A. The primary field (PF) consists of two sets of field lines on 2 - D planes that are always at right angles to each other in space.

B. PF field lines carry monopolar electric and magnetic charges, designated "N+" and "S-." The "+" and "-" electric charges can have any value, but are stable at the charge level of the quarks and antiquarks, or one-third of the Coulomb charge. The values of the magnetic charges (N and S) are not known, but are assumed to act in a manner similar to those of the electric charges. The existence of magnetic charges indicates a need for an additional fundamental (Maxwellian) equation of electromagnetism, one that like the equation that relates the magnitude of the electric field to the magnitude of the electric charge, relates the magnitude of the magnetic field to that of the magnetic charge.

1. Since there are 2 sets of lines, there are 2 planes. Their interaction, therefore, produces the 4 dimensions of space defined since Einstein and relativity: (x, y, z, ct), where the fourth dimension (ct) is the product of the speed of light and time.

2. Interactions between the 2 - D primary field planes and the 3 - D of Newtonian space cannot occur, as the time required for a charged particle to traverse a plane with zero thickness is zero, and the charges in the planes cannot be detected in zero time. Interactions between the field planes and 4 - D space can occur, but only under relativistic conditions. (Technically these could occur at any velocity, but practically, only can be detected at particle velocities that approach the speed of light.)

C. The velocities of the PF monopole line sets are: N+ = c; S- = c +- $\sqrt{c}$.

1. Of the 4 - D of known space (x, y, z, ct), 2 are derived from each primary field line set. For matter with "+" charge nucleons, the "N+" lines provide "x" and " ct" and the "S-" lines "y" and "z" of the space it exists within. This is reversed for antimatter with its "-" charge antinucleons. The velocity of "+" matter is limited to the upper velocity of the "N+" field lines, or "c." The upper velocity of "-" antimatter is limited to the velocity of the "S-" field lines, or "c +- $\sqrt{c}$."

D. The line sets have the property of density, a factor that determines whether they occur as electromagnetic energy or as matter.

E. The line sets are programmed in binary sequences where the charges are either "on" and "off." When the 2 line sets interact, the 2 binary charge systems merge into a trinary charge system. This property of the field translates into the property of phase in electromagnetic waves.

## II. Photon Generation in the Primary Field

We now look at the enclosed diagrams, which portray the dynamics of the primary field. There are 3 pages of diagrams, 2 pages with 5 diagrams are labeled "1a - 1f." One page with 2 diagrams labeled "3 and 4."

In the page with diagrams 3 and 4, diagram 3 shows two opposing vortexes with waves connecting the monopoles (M) at the bottom ends of each vortex. The vortexes are produced when primary field lines (N+ and S-) are drained from their original 2 - D planes. The vortexes are "dimensional condensers" that move field lines from a potentially multidimensional condition int eh primary field, to the 4 - D of known space. Vortexes have the property of rotation, designated LH (left hand) or RH (right hand). Although rotational direction is relative, the "N+" vortex is considered as being RH, and the "S-" vortex LH.

The field lines are concentrated into monopolar regions in space that coincide with the regions of the magnetic poles of spinning particles (electrons, protons, etc.). At a certain density the monopoles connect through arcing that generates an electric wave with "E+" and "E-" charges. These propagate to the Plank distance, where they generate an "xy" pair of primary particles. (The Theosophist Leadbeater called these particles "anus," a Sanscrit word meaning "ultimate physical object.)

The Newtonian principle of action-reaction occurs upon the production of the "xy" particle pair, and the magnetic monopole charges associated with these particles move opposite to the primary wave, generating a magnetic dipole field. The lines of this field are described as "$B_N$" and "$B_S$" in Diagram 3.

Primary field lines remain at right angles until they are transformed into electromagnetic field lines. In Diagram 4, the monopole lines at right angles are projected to a common location in space, where they form a field that translates between the monopole and dipole magnetic fields. This is referred to as the "crossed field," or the "primary grid."

It is now necessary to look at Diagrams 1a - 1f. Diagram 1a shows the crossed field of the primary grid with its right angle line sets (N+ and S-). When single lines in this grid rotate back and forth through an angle of 225 degrees (a phase of $1.25\pi$ ) they generate the photon grid shown in Diagram 1d.

Diagrams 1b and 1c show one of the prominent dynamic

features of the primary field monopoles. They inject field lines into particles and waves through a back and forth rocking motion. If boson or photon waves are produced, the 4 monopole components (N, S, +, -) are all injected into the emerging wave form. When particles are produced, only the electric field components (+,-) are injected, while the magnetic components (N, S) are reflected back out into 4 - D space, a process shown in Diagram 3.

The general rules for the injection process that converts the primary field grid into the photon-boson grid are:

1. Electric charges retain the same rotational direction (RH or LH) as their vortexes, while magnetic charges take on the rotation of their opposite vortexes.
2. The starting point for the rotation of the "N+" field is along its original horizontal line direction, and the starting point for the "S-" field is likewise along its original vertical line (Diagrams 1b and 1c). In the diagrams, "A" is the amplitude (energy) of the primary wave generated from the vortexes and primary field. It takes the form of a sine wave with a phase of 225 degrees. When this energy is transferred to the photon grid, it is transformed into photon energy.

## III. Properties of grid generated photons

The right angle relationship between magnetic and electric fields originates in the photon grid. In the primary field grid, electric charges occur at right angles to one another, as do magnetic charges. But when these charges are reconfigured into those of the photon grid, the prevailing right angle relationship emerges.

The "N+" primary field has one of its dimensions converted into the relativistic dimension defined as "ct." The time factor (t) of this expression, when converted into its inverse, defines the photon's frequency. The remaining speed of light factor can then be expressed in terms of the two permanent properties of the ether, permittivity and permeability, this according to:

$$c = (\varepsilon\mu)^{-\frac{1}{2}} \quad .$$

The propagation of photons from the photon grid occurs in one of 2 directions in the space they are moving through. If the "ct" dimensional factor is derived from the "N+" monopole, it occurs in one direction, and if the time factor is derived from the "S-" monopole, it occurs it the opposite direction. The photon, then, either propagates forward or backward through time.

## IV. Light Harmonics

The numerical relationships between the waves in the primary

grid field, and those of its generated photons, are harmonic in nature. By this is meant they conform (approximately) to the numerical ratios of the individual frequencies (notes) in the musical scale. These ratios can be calculated from known mathematical equations.

The last diagram in the sequence, Diagram 1f, shows how the rotation of the primary field grid projects photons into the 3rd dimension. The primary grid is produced by merging both primary fields (N+ and S-) into a single plane, which is then transformed into the 2 - D plane that defines the magnetic and electric field vectors of the photon and boson. Because the grid is produced by the merging of two 2 - D planes, the photons that emerge from it are only able to propagate through 4th dimensional (Einsteinian) space at velocities close to the speed of light. This is generally confirmed from observation, as photons propagate at light speed in a vacuum, and slightly below it through dense (transparent) media.

When photons are produced from the photon grid, the 2nd dimension of the primary field grid is projected to create a 3rd dimension. This is shown in Diagram 1f. The photons that are produced in this process are circularly polarized, with an exact phase relationship between their initial source in the primary grid and their final source in the photon grid. The mathematics used to calculate the phase relationships is the Pythagorean theorem. In the diagram, the primary circle (defined by its radius "r") is projected into a cylinder with length "L." If the cylinder is flattened out into a rectangle, the length of the rectangle's diagonal line (X) is the length of the photon's spiral path. The following assumptions are then made about the parameters of this vibrating system.

Assume that: 1. The primary field vibrates with a frequency as segments of the "N+" and "S-" field lines rotate as radii of the circles in the primary grid (Diagrams 1b and 1c).
2. The wavelength of the circular vibration is the circumference of the circle ©: C = $2\pi$ r.
3. The phase relationship between the primary vibration and the secondary vibration (photon) is "5/4."
4. The path length of the photon (X in Diagram 1f) is the phase ratio times the circumference (primary wavelength):
X = (1.25)C = $2.5\pi$ r.

The projected distance (wavelength) of the photon (L) is some numerical ratio greater than the radius (or diameter) of the circle. "L" can be calculated by using the Pythagorean theorem:

$$X^2 - C^2 = L^2 \qquad L^2 = 2.25\pi^2 r^2$$ ; Let $\pi$ r = 1, then:

The numerical ratios between the primary field circular

wavelength ($2\pi$ , where: r = 1) and the photon's spiral wavelength ($1.5\pi$ ) are either "3/4" or "4/3" (the inverse).

In addition to defining the wavelengths of photons projected from the primary field grid, they also define 2 commonly occurring musical intervals.