Three

Three		Three
	••	

Keely

"On the one hand Keely talks about musical intervals - on the other hand he mixes in references to the orders of matter and energy, volume and divisions of chords. Which is which and when? To me, the above does NOT refer solely to musical chords. I've said this before. But instead represents a wider view of order, dynamics and structure. For instance if we view the nine strings of the CEG chord as three sets of three vibrating on 1, 2 and 3 octaves we get the possibility of the first third of the WHOLE NINE STRING CHORD being octave one, the second third being octave two and the third third as octave **three** of this nine string chord. The nine string chord is seen to be composed by thirds of the whole. These represent the molecular, atomic and etheric realms or levels of the matter and energy scheme being **three** major thirds of the whole of nature. Therefore the first third is the enharmonic (earthy earth; i.e.; terrestrial) the second represents the harmonic sixths (Russell's fulcrum?), and the third third represents the infinite ninths (celestial). Rotation is the result of a conflict between the first third (terrestrial) and the third third or ninths (celestial) as given above. I've included below quotes from Keely on his rotating sphere. If you've read Russell you will see DIRECT correlations between the two men expressing the SAME concept of rotation occurring in this manner - and ONLY in this manner. If you have not read Russell you may not see this. This being the case the CEG chord is the centralizing chord to the center while the B?DG chord is the dispersive chord - each chord representing the in and out FLOWING STREAMS to and from the center. Keep in mind the dynasphere represents a faithful micro/macrocosm of the universal forces. The 24 resonators, tuned to musical thirds, placed in eight triplets around the Ring of Resonation are coincident to each of the three-sided corners of the cube of celestial dispersion realm while the second ring of resonation inside the sphere are tuned to B? keynote of the earth or spherizing element in nature." [Dale Pond See Dynasphere, clustered thirds]

"Science admits that nature works with dual force, though at rest she is a unit. "Nature is one eternal cycle." Keely's discoveries prove that the doctrine of the Trinity should be set down as an established canon of science the Trinity of force. All nature's sympathetic streams - cerebellic, gravital, electric and magnetic - are made up of triple currents. The ancients understood this dogma in a far deeper sense than modern theology has construed it. The great and universal Trinity of cause, motion and matter - or of will, thought and manifestation - was known to the Rosicrucians as prima materia. Paracelsus states that each of these **three** is also the other two; for, as nothing can possibly exist without cause, matter and energy - that is, spirit, matter and soul (the ultimate cause of existence being that it exists), we may therefore look upon all forms of activity as being the action of the universal or Divine will operating upon and through the ether, as the skilled artificer uses his tools to accomplish his designs; making the comparison in all reverence." [Bloomfield-Moore, More Science]

"All vibrations that are negative in their character as toward destroying the harmonic relations that exist between the magnetic current and its coincident polar, to carry out the simile, close up the aperture whereby illumination (or transfer) is continuously conducted.

The thirds, on the subdivision of the one hundred and twenty-eight thousand four hundred vibrations, represent the negative antagonism, whereby this peculiar condition is brought about, viz., forty-two thousand eight hundred on the positive; the same on the negative and on the neutral, as associated with the sympathetic negative transmitter.

The keeper is first placed on the magnet, which has an attachment whereby a transmitter can be centrally associated with it; the other terminal having **three** connections that can be attached to this medium. The impulse is given simultaneously to the **three** leads after setting the instrument to represent forty-two thousand eight hundred vibrations on the harmonic, the same on the enharmonic and on the diatonic.

If this impulse is given properly, the neutralization will take place within fifteen seconds." [The Operation of the Vibratory Circuit]

"Electricity is the result of **three** differentiated sympathetic flows, combining the celestial and terrestrial flows by an order of assimilation negatively attractive in its character. It is one of Nature's efforts to restore attractive differentiation. In analyzing this **triple union** in its vibratory philosophy, I find the highest order of perfection in this assimilative action of Nature. The whole condition is atomic, and is the introductory one which has an affinity for terrestrial centers, uniting magnetically with the Polar stream, in other words, uniting with the Polar stream by neutral affinity. The magnetic or electric forces of the earth are thus kept in stable equilibrium by this **triune force**, and the chords of this force may be expressed as:

1st.: The Dominant 2nd.: The Harmonic 3rd.: The Enharmonic. [WHAT IS ELECTRICITY]

Professor Daniel Brinton

"The rhythmic relations in which force acts are everywhere, under all conditions, and at all times, the same. They are found experimentally to be universally expressible by the mathematical relations of **thirds**.

"These threefold relations may be expressed with regard to their results as,

I. Assimilative (Concentration, Gravitation)II. Individualizing (Radiation, Entropy)III. Dominant or Resultant

"From these **three actions** are derived the **three** fundamental LAWS OF BEING:

I. Law of Assimilation: every individualized object assimilates itself to all other objects.

II. Law of Individualization: every such object tends to assimilate all other objects to itself.

III. Law of the Dominant: every such object is such by virtue of the higher or dominant force which controls these (above) two tendencies. [14.09 - Brintons Laws of Being]

Russell

"Thus the One Light of God's knowing extended to the two of His thinking, pulsed as the **three** of all creating things, the One centering the two, the two extended from the One; the Spirit; the Father-Mother polarity of Light; the **Trinity** centering the shaft of Creations' seeming, fulcrum of its heartbeat, all ONE." [Walter Russell, The Secret of Light, page 99]

"The sexless Father-Mother Creator is One. His extended sex-conditioned, male and female bodies are the completion of His Trinity.

Rest and action are **three**. Space and matter are **three**. Equilibrium and motion are **three**. Dimensions and pressures are **three**. The **heartbeat** of the universe, and yours, are **three**. Likewise, its breathings and yours, its temperatures and yours, and all things else of the universe, and you, are **three**." [Russell, Atomic Suicide, Chapter 5 - Prelude - The Transormation of Man]

"The swinging of the pendulum is **three**, as the spectrum and the fulcrum and lever, also, are **three**.

"The cathode is one - but its extended pairs of anodes in the electric current of man, and of space, adds up to **three**.

"*Silence* is one - but sound springs from silence when its divided moving pair collide - so sound is **three**, and its vibrations in sequences of rest and action, are also **three**.

"God is ONE in all CAUSE - but in all EFFECT He is **three**. And all that are **three** are nine - for all that are **three** are multiplied by **three** in this visible cube dominated universe of **three** dimensions." [Atomic Suicide, Chapter 5, Prelude, The Transformation of Man, part 1 of 2]

Ramsay

"The number 3 is the creative power in music, producing fifths, but it is under the control of the Octave prime the number 2. It is the supreme octave which forms a boundary by making twelve fifths and seven octaves unite in one note. Within this horizon lies the musical system in its **threefoldness** - major (sharped), minor (flatted) and chromatic (accented)." [Scientific Basis and Build of Music, page 35]

dividing itself by 2 or 3 or 5, etc., up through the whole geometrical series of numbers, not keeping fixed at one thing; but while the whole length is vibrating the fundamental partial, it keeps shifting the still nodes along its length, and sometimes longer and sometimes shorter segments are sounding the other partials which clothe the chief sound. It has been commonly said that "a musical sound is composed of three sounds," for every ear is capable of hearing these **three**, and with a little attention a few more than these; but many will be startled when told that there are twenty-five sounds in that sound. Eighteen of them are simply the octaves of the other seven, all of these seven except one having one or more octaves in the sound. Four of the seven also are very feeble, the one which has no octave being the feeblest of all. Two of the other **three** are so distinctly audible along with the chief partial that they gave rise to the saying we have quoted about a musical sound being composed of three sounds.¹ If the three most pronounced partials were equally developed in one sound, it could not be called one sound - it would decidedly be a *chord*; and when in the system they do become developed, they form a chord; but in the one sound they, the partials, having fewer and fewer octaves to strengthen them, fade away in the perspective of sound. The sharp seventh, which in the developed system has only one place, not coming into existence until the sixth octave of the genesis, is by far the feeblest of all the partials, and Nature did well to appoint it so. These harmonics are also sometimes called "overtones," because they are higher than the fundamental one, which is the sound among the sounds, as the Bible is the book among books. [Scientific Basis and Build of Music, page 59]

The Permanence in Music of the Numbers **Three** and Twelve CHAPTER X. BRIEF DESULTORY MEMORANDA.

Had D. C. Ramsay lived to weld together his findings in musical science, there would have been fewer, it any, of these desultory notes. The Editor, in endeavoring to arrange his materials so as to give sequence and fullness to them as far as possible, has thought it better to allow these fragments to appear thus as Brevia, than to intertwine them with even the kindred studies of another to any great extent, feeling assured that the light Ramsay has let in upon musical science will lead the way probably to further findings, and certainly to more perfect settings of what, being found, is here set forth in a first edition of his works. [Scientific Basis and Build of Music, page 74]

BREVIA.

There are very few things in music which have not change written upon them. TWELVE and **THREE**, however, are stable. There is nothing that will disturb the propriety of the circle of twelve fifths, as in the tempered system of music; for, although the mathematical-intonation indulges in thirteen keys, the thirteenth is simply the first of a new cycle of twelve. The working model of three fifths is that which possesses musical life-powers; and these life-powers go with it wherever it goes, and they go with nothing else. [Scientific Basis and Build of Music, page 74]

The *intervening chord between the Diatonic and Chromatic systems*, B, D, F. - This chord, which has suffered expatriation from the society of perfect chords, is nevertheless as perfect in its own place and way as any. From its peculiar relation to both major and minor, and to both diatonic and chromatic things, it is a specially interesting triad. F, which is the genetic root of all, and distinctively the root of major subdominant, has here come to the top by the prime 2. D, here in the middle, is diatonically the top of the major dominant, and the root

of the minor subdominant; and on account of its self-duality, the most interesting note of all; begotten in the great genesis by the prime 3. B, the last-begotten in the diatonic genesis, top of the diatonic minor, middle of the dominant major, and begotten by the prime 5, is here the *quasi* root of this triad, which in view of all this is a remarkable summation of things. This B, D, F is the *mors janua vitae* in music, for it is in a manner the death of diatonic chords, being neither a perfect major nor a perfect minor chord; yet it is the birth and life of the chromatic phase of music. In attracting and assimilating to itself the elements by which it becomes a full chromatic chord, it gives the minor dominant the G# which we so often see in use, and never see explained; and it gives the major subdominant a corresponding A?, less frequently used. It is quite clear that this chromatic chord in either its major phase as B, D, F, A?, or its minor phase as G#, B, D, F, is as natural and legitimate in music as anything else; and like the diatonic chords, major and minor, it is one of **three**, exactly like itself, into which the octave of semitones is perfectly divided. [Scientific Basis and Build of Music, page 101]

When Leonhard Euler, the distinguished mathematician of the eighteenth century, wrote his essay on a New Theory of Music, Fuss remarks - "It has no great success, as it contained too much geometry for musicians, and too much music for geometers." There was a reason which Fuss was not seemingly able to observe, namely, that while it had hold of some very precious musical truth it also put forth some error, and error is always a hindrance to true progress. Euler did good service, however. In his letters to a German Princess on his theory of music he showed the true use of the mathematical primes 2, 3, and 5, but debarred the use of 7, saying, "Were we to introduce the number 7, the tones of an octave would be increased." It was wise in the great mathematician to hold his hand from adding other notes. It is always dangerous to offer strange fire on the altar. He very clearly set forth that while 2 has an unlimited use in producing Octaves, 3 must be limited to its use 3 times in producing *Fifths*. This was right, for in producing a fourth *Fifth* it is not a *Fifth* for the scale. But Euler erred in attempting to generate the *semitonic scale* of 12 notes by the use of the power of 5 a second time on the original materials. It produces F# right enough; for D27 by 5 gives 135, which is the number for F#. D27 is the note by which F# is produced, because D is right for this process in its unaltered condition. But when Euler proceeds further to use the prime 5 on the middles, A, E, and B, and F#, in their original and unaltered state, he quite errs, and produces all the sharpened notes too low. C# for the key of D is not got by applying 5 to A40, as it is in its birthplace; A40 has already been altered for the key of G by a *comma*, and is A40 1/2 before it is used for producing its third; it is A40 1/2 that, multiplied by 5, gives C#202 1/2, not C200, as Euler makes C#. Things are in the same condition with E before G# is wanted for the key of A. G# is found by 5 applied to E; not E in its original and unaltered state, E30; but as already raised a comma for the key of D, E30 3/8; so G# is not 300, as Euler has it, but 303 3/4. Euler next, by the same erroneous methods, proceeds to generate D# from B45, its birthplace number; but before D# is wanted for the key of E, B has been raised a comma, and is no longer B45, but B45 9/16, and this multiplied by 5 gives D#227 13/16, not D225, as Euler gives it. The last semitone which he generates to complete his 12 semitones is B?; that is A#, properly speaking, for this series, and he generates it from F#135; but this already altered note, before A# is wanted for the key of B, has been again raised a comma [Scientific Basis and Build of Music, page 107]

PLATE IX.

CLASSIFICATION OF INTERVALS.

There are 42 intervals exclusive of the octave interval with ratio 1:2. There are seven seconds of **three magnitudes**, so determined in the genesis of notes - two in the ratio of 15:16; two, 9:10; and **three**, 8:9. There are seven corresponding sevenths - two in the ratio of 8:15; two, 5:9; and **three**. 9:16. There are seven thirds one in the ratio of 27:32; **three**, 5:6; and **three**, 4:5; and there are seven corresponding sixths - **three** in the [Scientific Basis and Build of Music, page 109]

Hughes

The twelve major scales

-The term key-note employed in the ordinary sense of the musician

-The twelve key-notes, with the six notes of each as they veer round in trinities, are written in musical clef, and

the scales added

-The reversal of the four and three of the key-note and its trinities in the seven of its scale

-The twelve keys follow each other seven times through seven octaves linked into the lower and higher series -Keys mingled

-The modulating of scales, the eleventh notes rising to higher keys, 26 [Harmonies of Tones and Colours, Table of Contents2 - Harmonies]

The **three** lowest of the six tones are complementary pairs with the key-note and its two highest tones. Observe the curious order in which the tones sound, avoiding consecutive fifths. First, we have the key-note and its root, or fellow; next A; then D and its root; and then E, whose root, A, has already sounded between the first and the second pair. B, the fourth and central tone in depth, sounds seventh, and, finding no fellow within the compass of the harmony developing it, is isolated. Observe also how closely a key-note and its kindred tones are linked into each other. The Primaries spring from the key-notes, the Secondaries from the Primaries; the first pair comprises a key-note and a tone of the Primaries, the other two pairs have each a tone of the Primaries and a tone of the Secondaries. The key-note, after giving out its tones in trinities, or [Harmonies of Tones and Colours, Diagram II - The Twelve Keynotes1, page 23]

The twelve key-notes, with the six notes of each as they veer round in trinities, are again written in musical clef, and the scales added. The key-note leads the scale, and, after striking the two next highest notes of the seven of the harmony, goes forward, with its four lowest, an octave higher. The seven of each harmony have been traced as the **three** lowest, thus meeting the **three** highest in **three** pairs, the fourth note being isolated. Notwithstanding the curious reversal of the **three** and four of the scale, the **three lowest pair** with the **three** highest, and the fourth with its octave. The four pairs are written at the end of each line, and it will be seen how exactly they all agree in their mode of development. Keys with sharps and keys with flats are all mingled in twelve successive notes. If we strike the twelve scales ascending as they follow each other, each thirteenth note being octave of the first note of the twelve that have developed, and first of the rising series, the seventh time the scales gradually rise into the higher series of seven octaves beyond the power of the instrument. Descending is ascending reversed. After the seven and octave of a scale have been sounded ascending, the ear seems to lead to the descending; but ten notes of any scale may be struck without the necessity of modulation; at the seventh note we find that the eleventh note in the progression of harmonics rises to meet the seventh. For instance, B, the seventh note in the scale of C, must have F#. This point will be fully entered into when examining the meeting of fifths. To trace the scale of C veering round as an example for all, we may begin with C in Diagram II., and go forward with F, G, A, and B an octave higher. If the twelve scales were traced veering round, they would be found to correspond with the twelve as written in musical clef. [Harmonies of Tones and Colours, Diagram IV - The Development of the Twelve Major Scales, page 26a]

The following table shows the regularity of each seven of the twelve key-notes ascending by fifths, and the use of the two poles is again seen. The key-notes and their trinities are closely linked into each other, the **three** highest notes of the lower fifth key becoming the **three** lowest of the higher fifth key, and the four lowest becoming the four highest in an octave higher. The twelve keys, rising in each note a tone higher and descending a tone lower, cause the meetings by fifths. Having examined the table, we may strike the keys by fifths as written in the musical clef, beginning with the lowest C in [Harmonies of Tones and Colours, Diagram VII - The Modulating Gamut of the Twelve Keys1, page 29]

In the development of the key-notes, the sharp or flat is written to each note, but not to the keys. The reversal of the **three** and four notes of each seven of the twelve key-notes and their trinities meeting by fifths having been traced, we will now examine the twelve scales meeting by fifths, and the results arising from the reversal of the **three** and four notes of each fifth lower scale in the fifth higher. Take as an example the scale of C: C D E F G A B, and that of G: G A B C D E F#. The four lowest notes of the seven of C are the four highest, an octave higher, in G; F, the central and isolated note of the seven of C, having risen a tone higher than the octave in the scale of G. The twelve scales thus modulate into each other by fifths, which sound the same harmonies as the key-notes and their **trinities**. Refer to the twelve scales written in musical clef ascending by fifths, and strike them,

beginning at the lowest C in the bass clef; this scale sounds no intermediate tones, but these must be struck as required for all the scales to run on in fifths. After striking the seven notes of C, if we fall back **three**, and repeat them with the next four notes of the seven; or strike the seven and octave of C, and fall back four, repeating them and striking the next four, the four last notes of each scale will be found to be always in the harmony of the four first of the fifth higher scale. When the twelve scales ascending have been thus gained, as we trace them also on the table, they may be struck descending by following them as written in musical clef upwards, and [Harmonies of Tones and Colours, Diagram VII - The Modulating Gamut of the Twelve Keys2, page 30]

Let us first examine the meeting of the key-notes and their trinities in musical clef; the isolated fourths rising through the progression of the twelve now meet, seven and seven pairing. We must notice how closely they are linked into each other, the **three** highest notes of the lower seven being the **three** lowest of the higher seven an octave higher, and the four lowest becoming the four highest an octave higher; we descend by following the keys as written in musical clef upwards. [Harmonies of Tones and Colours, Diagram XIV - The Modulating Gamut of the Twelve Minor Keys by Fifths1, page 39]

ChatGPT reviews the ideas of trinity, three, triple and triune concepts in science and alchemy [Dale Pond, ChatGPT 12/9/24]: https://chatgpt.com/share/67575e8a-0ea0-800d-afdd-c03b8e3c3132

See Also

12.03 - Russell scale divisions correspond to Keelys three-way division of currents 12.05 - Three Main Parts of a Wave 12.07 - Keelys Thirds Sixths and Ninths 13.06 - Triple Currents of Electricity 13.11 - Triple Currents and Streams 13.38 - Theory of the Induction of Sympathetic Chords to Excite Rotation by Vibraphonic Trajection to and from Centers of Neutrality on Revolving Globe 14.02 - Three Six and Nine - The Principles of Creation 14.13 - Full Harmonic Chord 14.35 - Teslas 3 6 and 9 14.36 - Triple Equations

AI Interpretations of SVP

1.11 - Ultimate Constituents of Matter

- 15.18 Keelys Process for Liberating Ether from Water multiple mentions in this article
- 16.28 Keelys Free Electrical Energy Machine
- **16.29 Triple Currents of Electricity**

19.02 - Theory of the Induction of Sympathetic Chords to Excite Rotation

- 369
- 4.1 Triple Vectors
- 4.2 Triple Vectors and Rotation
- 4.3 Three Planes and Six Directions
- 4.5 Triple Rotary or Vortex Motions
- 4.9 Triple Contractive Motions
- 6.10 Nineness of Cubes
- 7B.02 Three Forces in Harmony
- 7B.04 Triplets Form Larger Units of Unity
- 7B.05 Rotating Triplets
- 9.25 Keplers Three Laws

Atom atomic triplet atomic triplets **Clustered Thirds** common chord common root of three chords continuity **Diatonic Scale Ring DISINTEGRATION OF MATTER - THREE SYSTEMS Divine Trinity Dynasphere Dynaspheric Force Envelope** Figure 10.05 - Three Orthogonal Planes where Six Gyroscopic Vortices Converge Figure 13.08 - Triple Streams of Electricity Figure 13.23 - Three Actuators on Shaft and Black and White Coatings Figure 14.03 - A section from one of Keelys charts showing his generous use of Triplets Figure 14.12 - Triple Equations to Represent a Single Sympathetic Event Figure 16.09 - Triple Streams of Electricity Figure 19.16 - Keelys Levitation Experiment Showing Three Glass Jars with Weights Figure 2.1.5 - Russells Rings forming Spheres from Three Pairs of Reflecting Mirrors Figure 2.10 - Triple Dual Vectors - In Rotary Motion Figure 3.7 - Accumulating to Center on Three Planes Figure 4.1 - Triple Cardinal Directions Vectors or Dimensions Figure 4.11 - Six Planes and Three Shafts Coincide to Produce Spheres Figure 4.13 - Triplet Originations and Centralizations of Matter Figure 4.14 - Feynmans Triplet Structures of the Proton and Neutron Figure 4.3 - Single Mode Electric Vector Generating Circular Motion also Shown within Triple Vectors **Figure 4.4 - Triple Vectors in Orthogonal Motions Figure 4.6 - Triple Vectors in Motion on Triple Planes** Figure 4.7 - Triple Planes and Polar Vectors of Motion Figure 4.8 - Triple Polar Rotations In and Out Figure 5.4 - Vortex and Gyroscopic Motion on One Plane then on three forming Sphere Figure 5.7 - Vortices on Three Planes 90 Degrees to Each Other **Figure 6.14 - Triple Three Cubes Figure 6.4 - Triple Interior Planes** Figure 6.5 - Triple Planes - May Underlay some Sacred Geometry or Religious Concepts Figure 6.6 - Russells Multiple Views of Tripleness Figure 7.11 - Russells Vacuum becoming Matter on Three Vectors Figure 7.13 - Keelys Chart showing how Molecules are made of three Atoms Figure 7.3 - Step 3 - Sphere Forms Orthogonally Triple Compressing Shell Layers **Figure 7.6 - Keelys Triune Morphology** Figure 7B.05 - Triplet Forming a Unity Figure 7B.06 - Rotating Triplets Animation Figure 7B.09 - Feynmans Triplet Structure of Photon Figure 7B.15 - Triple Planes relative to Center **Figure 9.8 - Triple Centers** first combination of the three primary ratios **Focalizing Neutral Concentrator Keelys Mechanical Inventions and Instruments KEELYS THREE SYSTEMS - Snell Keelys Three Systems**

Law of Continuity **MECHANICAL INVENTIONS AND INSTRUMENTS** molecule **Musical Triplet** nine magnetic mirrors nine octave harp nine octaves of tones nine string chord nine zeros ninety degrees one sound contains three different sounds order of threes Part 04 - Rotation on Three Planes **Part 05 - Three Rotating Planes Become Spheres** power of three **Power of Three Ramsay - Music's Seal - The Number Three Ramsay - PLATE XVI - System of the Three Primitive Chromatic Chords** Ramsay - The Chromatic System, like the Diatonic, Threefold Ramsay - The Great Chord of Chords, the Three-in-One17 Ramsay - The Great Chord of Chords, the Three-in-One18 **Ramsay - Three Chromatic Chords** resonating sphere **Rhythmic Balanced Interchange** second combination of the three primary ratios second comparison and combination of the three primary ratios series of twelve **Subdominant** sympathetic triple stream Table 12.01 - The Divine Trinity Table 13.02 - Vibratory and Oscillatory Triple Force Functions Table 14.01 - All phrases in HyperVibes containing the term thirds third combination of the three primary ratios third comparison and combination of the three primary ratios This Three Dimensional Cube Universe of Nine three chords of the Diatonic Scale three chords of the musical system major three chords of the musical system minor three chords of three notes three chords three combinations of the three primary ratios three currents three different causes three differentiated sympathetic flows three fifths Three in One **Three Laws of Being** Three Main Parts of a Wave three mathematical primes three mirror planes of zero curvature three notes three octaves

three phases of action three poles three primary centers three primary ratios three reflecting planes of still magnetic Light three series three sympathetic streams three-times-three three times three chord Three three-dimensional dual action universe three-halves power law **Three-node transmitter Three-phase electric power** threefoldness Trexar Triad triple circuit ring **Triple Concentration** triple currents triple impulses triple inertia planes triple nodal transmitter **Triple Planes Triple Point Triple Triplet** triple union **Triple-triple Charts** triple-triple **Triplet Attraction Triplet Rotation Triplet** Triskelion triune Undulatory **Wave Field** We Now Build the Nine Equators of Cube-Sphere Wave-Fields