The Brunardot Theorem

. . . a Proof of One

epsilon, ε, equals One

The Brunardot Ellipse, E, heuristically, demonstrates
the internal structure and Triquametric motion of:
light and atoms; which underlies: universal entanglement;
nonlinearity; the source of mathematics; and more
. . . all without the "Big Bang."

Thus: light, gravity, and Cosmic inertia are defined; and, ergo
. . . Why *Reality* is as it is.

The discipline of academic physics is flawed because it is,
fundamentally, completely dependent upon metaphysics.

The logic that comprises the genesis of the
Brunardot Theorem and its special ellipsoids has been
unchallenged by academia for over 50 years.

Any straight line that intersects a different straight line begins the unraveling of all the enigmas of *Reality* . . . and beyond.

The Brunardot Theorem, when carefully analyzed,
rationalizes the enigmas of *Reality* in a manner
that is consistent with the tools of IPSO:

Individualism/Imagination, Philosophic Logic,
Scientific Method, and Observation.

The Brunardot Theorem unites the disciplines of STP:

Science, Theology, and Philosophy.

Mathematics does not
explain Nature*;*
Nature explains
***mathematics*.**

All mathematics is a function of Nature;
thus, its sublime poetry . . .

Ockham's Razor:

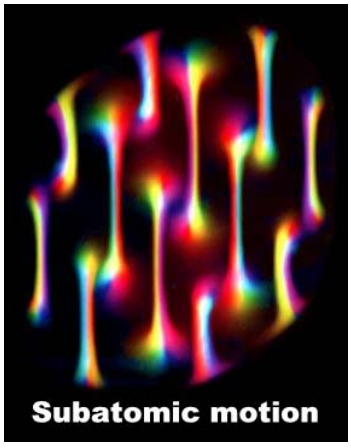
A principle of
economy of explanation
named for philosopher
William of Ockham (Occam)
(c. 1285-1350),

also called Law of Parsimony.

It holds that explanatory principles
should not be needlessly multiplied;

the simplest proof is usually the best.

Ockham's Razor
Random House Encyclopedia



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. . . a Proof of One

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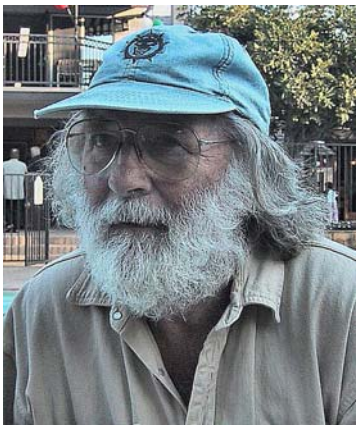


APRIL 2005

(*Please* read the Preface before reading the Manuscript)

PREFACE

This manuscript is a collector's limited distribution: May, 2005.

The intent of this manuscript is a succinct overview of general concepts, which indicate an underlying proof of mathematics by proving "One," which is relativistic, a function of seminal motion, and is system dependent. In proving "One" a relationship between elliptical and sinusoidal motion is established as an intrinsic phenomenon of said motion; thus, the classic quest of uniting quantum mechanics and general relativity is revealed; or, more simply, gravity and light are related by the unique qualities of ellipses that prove "One"; and, said ellipses are a Natural result of Triquametric motion.

The Rosetta Stone for understanding *Reality* is any ellipse when the difference between the hypotenuse and wave is designated as . . . "One."

Because of misdirection, the geometry and algebra of this manuscript may be difficult to follow for those untrained. There is some clarification, for those persons that are curious, within *Addendum Two;* however, for many mathematically challenged readers, it is suggested that the algebraic and geometric conclusions just be accepted.

It is recommended that this manuscript be read rapidly with little attention diverted to detail or an attempt to confirm statements. For many, the degree of comprehension will diminish as the page numbers increase; thus, it is best to increase reading speed as the page numbers increase. The intended audience is from Junior High School to post-doctoral. It is expected that the former will have an easier time.

There is a deliberate attempt to avoid the obfuscating argot, jargon, and advanced mathematics of conventional physics. With a little effort and instruction the gist of the thesis is in an understandable vernacular that is intended for any person with an inquiring, open mind who sincerely asks, "Why?" Some further detail is provided in the Addendums.

After the scope of the material is mentally digested, the author hopes that a more careful perusal of the manuscript will be warranted and enjoyed.

Many words and terms can not be understood as they are presented because they are neologisms, symbols, special connotations, and logic that are not fully supported herein. There are over 50 original ideas and neologisms throughout only a few pages; most of which should not be obviously apparent if the author has composed well. It should, also, be obvious to the astute reader that there has been much value placed upon simplicity, succinctness, and poetry.

This manuscript is intended as a short overview of a philosophy. After a period of professional courtesy, the overview will be available with all of the neologisms, unusual terms, and original concepts explained in a detailed glossary, essays, and chapters of a treatise entitled, "*The How and Why of Conceptualism . . . tolerance and sustainability rationalized.*"

Of course, for those with a professional or academic interest, the details of the logic will be made immediately available to those requesting specific information from the author at: Brunardot@Brunardot.com.

Please enjoy. If, after several readings, you have no questions, you did not understand what you read.

There is one Universe.
It is perpetual, in equilibrium; and,
a manifestation of the . . . Unified Concept;

also,

Science, Theology, and Philosophy
are a single discipline, which proclaims the
perpetuity and nexus of Life; such is

. . . Conceptualism.

The Brunardot Theorem

Proof of One

or, more popularly,

epsilon, ε, equals One.

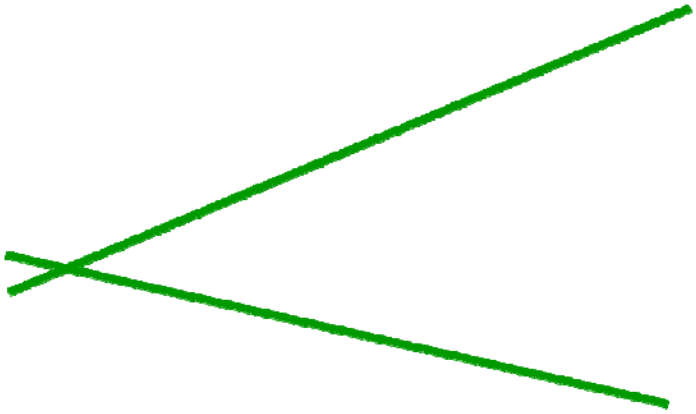
It is amazing what unusual properties
are found within *any* straight line.

Besides, of course, the fact that straight lines
do not exist beyond the mind.

There are many proofs for
the Pythagorean Theorem.

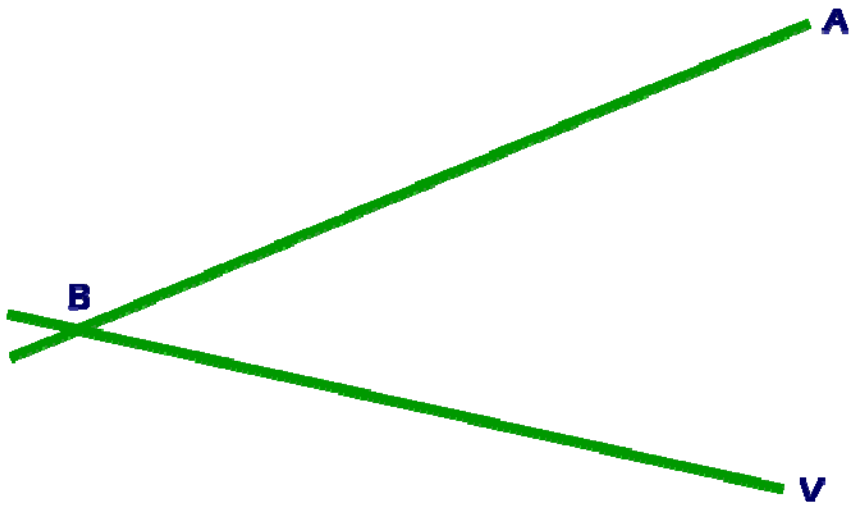
The following exercises are considered
a demonstration of:

"Why" the Pythagorean Theorem works; and, also:
"Why" the Fibonacci sequence;
"Why" Phi, the Golden Ratio;
"Why" orthogonal dimensions; "Why" Casimir forces;
"Why" the Inverse Square Law; "Why" twelve quarks;
"Why" symmetry; "Why" non-continuous phenomena;
"Why" ellipses; "Why" integers; "Why" no antimatter;
"Why" Light morphs to mass; "Why" entanglement;
and, much, much more.



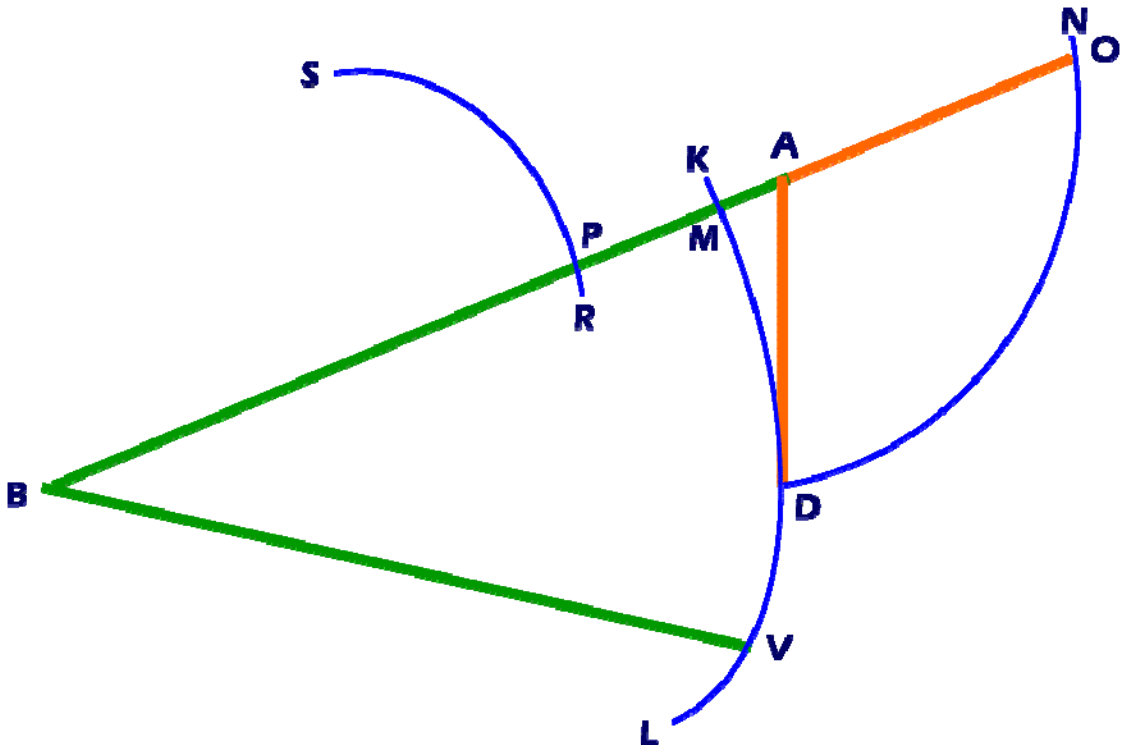
Begin with a line of *any* length.

Draw another line that
intersects the first line and is
any different length.



Label the intersection of the lines B.

Label the longest line BA and
the shortest line BV.

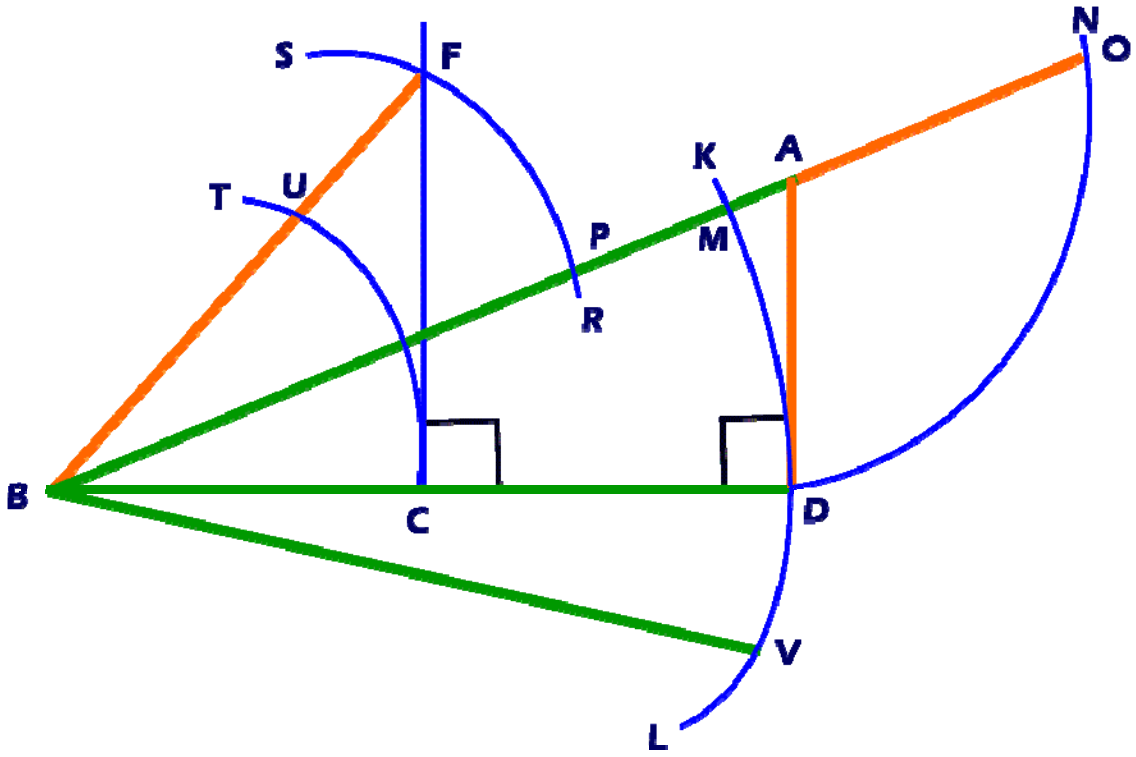


From point B
construct an arc, KL,
with radius BV
that intersects line BA
at point M.

Draw line AD tangent to arc KL.

From point A
construct an arc, DN,
with radius AD that intersects
an extension of line BA at point O.

From point B
construct an arc, RS,
with a radius such that
the arc passes through
the midpoint, P, of line BN.



Draw line BD.

At the midpoint, C, of line BD,
draw line CF perpendicular to line BD,
which intersects arc RS at point F.

Draw line BF.

From point B
construct an arc, CT,
with radius BC that intersects
line BF at point U.

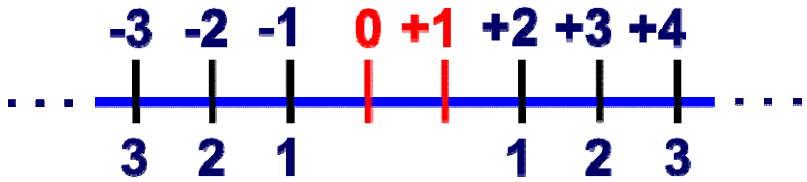
Line MA is referred to as epsilon, ε.
Let line MA equal One.

epsilon, ε, equals One.

Line UF is the square root of line BF.

The Natural function Psi, Ψ, is: $x^2 - x$.

The Natural function, Psi, Ψ, $x^2 - x$,
is found everywhere in Nature and
demonstrates the equivalence of
Brunardot pairs such as:
0 & 1, -1 & 2, -2 & 3, -3 & 4, et cetera,
ad infinitum.

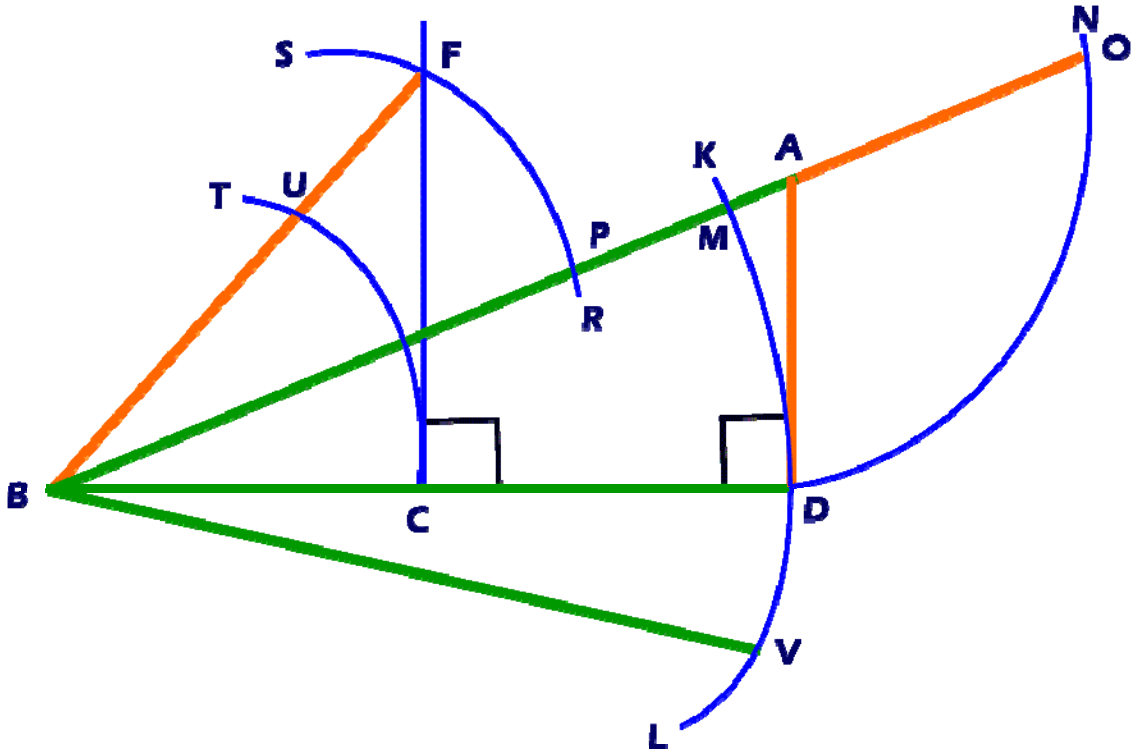


Each integer of a
Brunardot pair returns the same
Natural function value;
and, is equidistant from
Zero and plus One, respectively,
on an integer scale.

The Natural function, Psi, Ψ, $x^2 - x$,
demonstrates the Natural absence of
negative numbers and antimatter.

Zero and plus One,
which are Naturally equivalent,
represent the congruity of the
infinite and infinitesimal at *Infinity.*

Line BU is the
Natural function, Psi, Ψ, of line UF.



Line AD is

twice line UF minus epsilon, ε.

By definition,
line BA equals

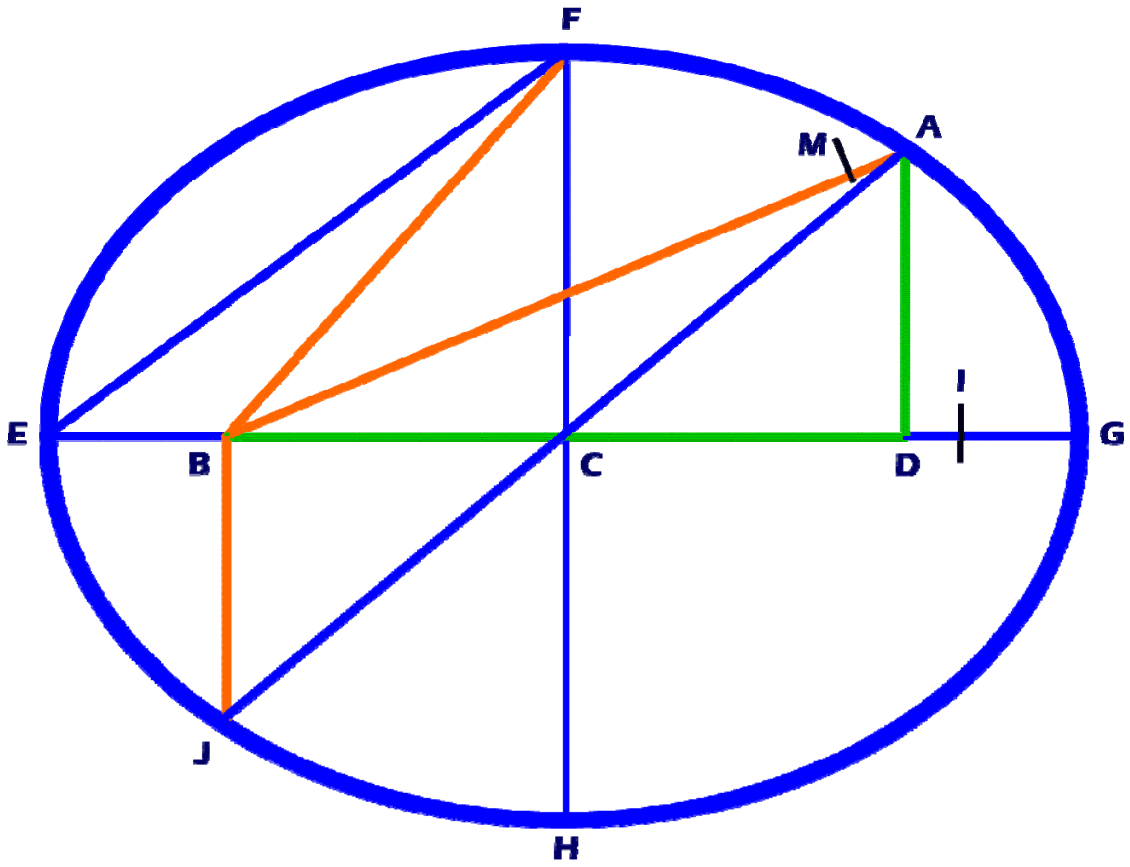
line BD plus epsilon, ε.

If line BU equals epsilon, ε, One, 1,
then, line UF equals
the Golden Ratio, Phi, Φ.

An ellipse referred to as a
Brunardot Ellipse, Epsilon, E,
can be constructed, through
points F and A, with
foci at points B and D.

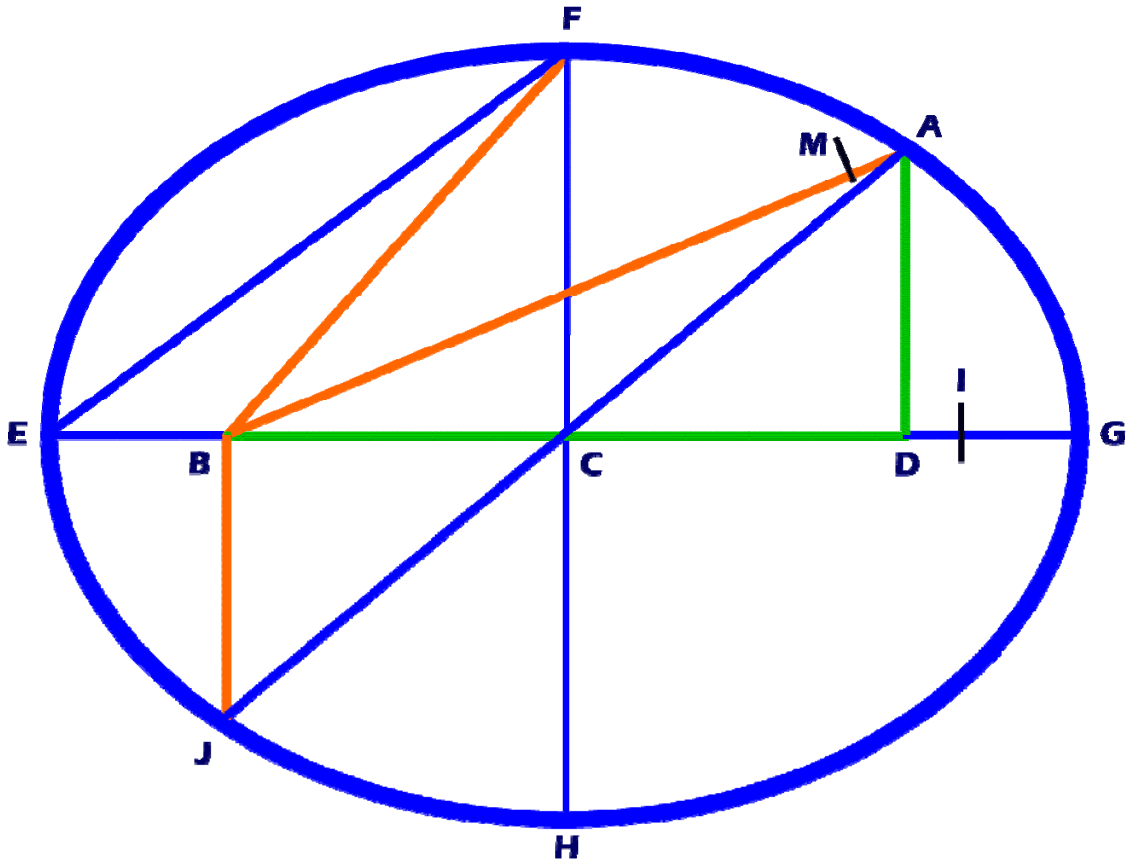
The Brunardot Ellipse, E

with legend



a amplitude C-F (p times g)	f foci B and D	p perigee E-B = D-G
A angle, elliptic ABC	g glider (2 times PT-ε)	P Pulse = any integer
c circularity = 1000L/M	h hypotenuse B-A = B-I	r radius A-D = B-J
C chord, diameter E-F	I integer	s soliton B-C = C-D
d diagonal radial C-A	L minor diameter H-F	T Time = any integer
D diagonal J-A	m major radial E-C = C-G	v vector B-F = E-C
ε epsilon, One, DI = MA	M major diameter E-G	V vector, any B-V < B-A
E Ellipse, Brunardot	o apogee E-D = B-G	w wave B-D = B-V

Draw the perigees, p, line EB and line DG.



a amplitude C-F (p times g)	f foci B and D	p perigee E-B = D-G
A angle, elliptic ABC	g glider (2 times PT-ε)	P Pulse = any integer
c circularity = 1000L/M	h hypotenuse B-A = B-I	r radius A-D = B-J
C chord, diameter E-F	I integer	s soliton B-C = C-D
d diagonal radial C-A	L minor diameter H-F	T Time = any integer
D diagonal J-A	m major radial E-C = C-G	v vector B-F = E-C
ε epsilon, One, DI = MA	M major diameter E-G	V vector, any B-V < B-A
$\mathcal{E}$ Ellipse, Brunardot	o apogee E-D = B-G	w wave B-D = B-V

Let line DI equal Line MA.

Lines: EB, BC, BF, and ED are, respectively, the perigee, p, soliton, s, vector, v, and apogee, o, of ellipse E, which are the first terms of a simple, additive, unending series referred to as: the

Brunardot Series, which is
$x,\ x^2 - x,\ x^2,\ 2x^2 - x...$

The *revised* Fibonacci sequence is
the first Brunardot Series sequence

if x equals epsilon, ε,
(1, 0, 1, 1, 2, 3, 5, 8, 13...)

If the second positive integer value
Brunardot Series sequence:
2, 2, 4, 6...
is applied to the
perigee, p, soliton, s,
vector, v, and apogee, o
of a Brunardot Ellipse, E,
the following integers, i,
are generated:
1, 2 , 3, 4, 5, 6, 7, 8,
where 1, 3, 5, 7 and 8 are, respectively,

epsilon, ε; radius, r; hypotenuse, h;
line EI (perigee plus hypotenuse); and,
the major diameter, M.

If the soliton, s, of
a Brunardot Ellipse, E, equals

epsilon, ε, One, 1,

then, the perigee, p, equals
the Golden Ratio, Phi, Φ, which is:
half the sum of :
the square root of 5 plus

epsilon, ε, One, 1.

The value of the
diameter chord, C, squared
equals the value of the
vector, v, squared
plus the value of the
major radial, m, squared (m = v)
minus the value of the
soliton, s, squared.
($C^2 = 2v^2 - s^2$)

Also:
$v = p^2$
$s = p^2 - p$;

$r = 2p - \mathcal{E}$;
$w = 2s$;

$h = w + \mathcal{E}$; and,

epsilon, $\mathcal{E}$, equals One, 1.

If the value of the perigee, p,
is *any* integer, i, then,
all shown structural lines of
a Brunardot Ellipse, E, except
the amplitude, a; diameter chord, C;
diagonal radial, d; diagonal, D;
and, minor diameter, L; are integers.

The amplitude, a, and
the minor diameter, L,
are integers when
the radius, r, is a Par1 square.

The Brunardot Ellipse, E,
heuristically represents,
two-dimensionally,
a Pulsoiding ellipsoid
that is a manifestation of
seminal motion.

The ellipsoid's Triquametric motion
reconciles
sinusoidal and elliptical motion;
and, manifests as the
solitonic resonance of
morphing Pulsoids that
evolve to Taisoids,
which are heuristic representations of
proto-atoms, "dark-matter," that are
referred to as Ultrons.

Pulsoids, also, heuristically,
describe the
internal structure of
the four states of Light
that underlie the
four congeneric realms of the
Equilibrium Theory of *Reality.*

The cyclic realms of the
Equilibrium Theory of *Reality* are:
coalescence, propagation,
compression, and dissipation,
ad infinitum.

\

The Equilibrium Theory of *Reality,*
at the very least,
is an alternative theory,
where there is none, that
rationalizes and reconciles
what the Big Bang,
black holes, relativity, and
quantum mechanics can not.

The Equilibrium Theory of *Reality*
is the salient component
that comprises the
Philosophy of Conceptualism
that unites
Science, Theology, and Philosophy
that is the cornerstone of a
peaceful, sustainable
"global village."

The significance of epsilon, $\mathcal{E}$, equals One
and the Brunardot Ellipse, E, is that
the hyper-relativistic concepts,
which were first discussed
with Philip Morrison in the spring of 1955
as the Unified Concept, are central to
Number Theory, Special Relativity,
General Relativity, Atomic Theory,
Quantum Mechanics, String Theory,
Twistor Theory, and other paradigms.

That is: epsilon, $\mathcal{E}$, equals One,
symbolically, represents
the etiology of *Reality.*

The Brunardot Theorem
predicts, rationalizes, and reconciles
many, eclectic, current enigmas;
such as:
the particle/wave duality of light;
nonlinear phenomena;
the illusion of "attraction-at-a-distance";
electrons in two places at once;
the formation of mass as twelve
manifestations of four groups of three;
the etiology of cohesive bonds
that restrain fundamental energy;
ultra, high-energy,
background radiation;
quasars and gamma-ray bursts;
"dark" matter and "dark" energy;
Casimir forces; galactic cohesion;
the Universe's apparent,
accelerating, expansion;
Cosmic inertia;
the Pioneer anomaly, and so on.

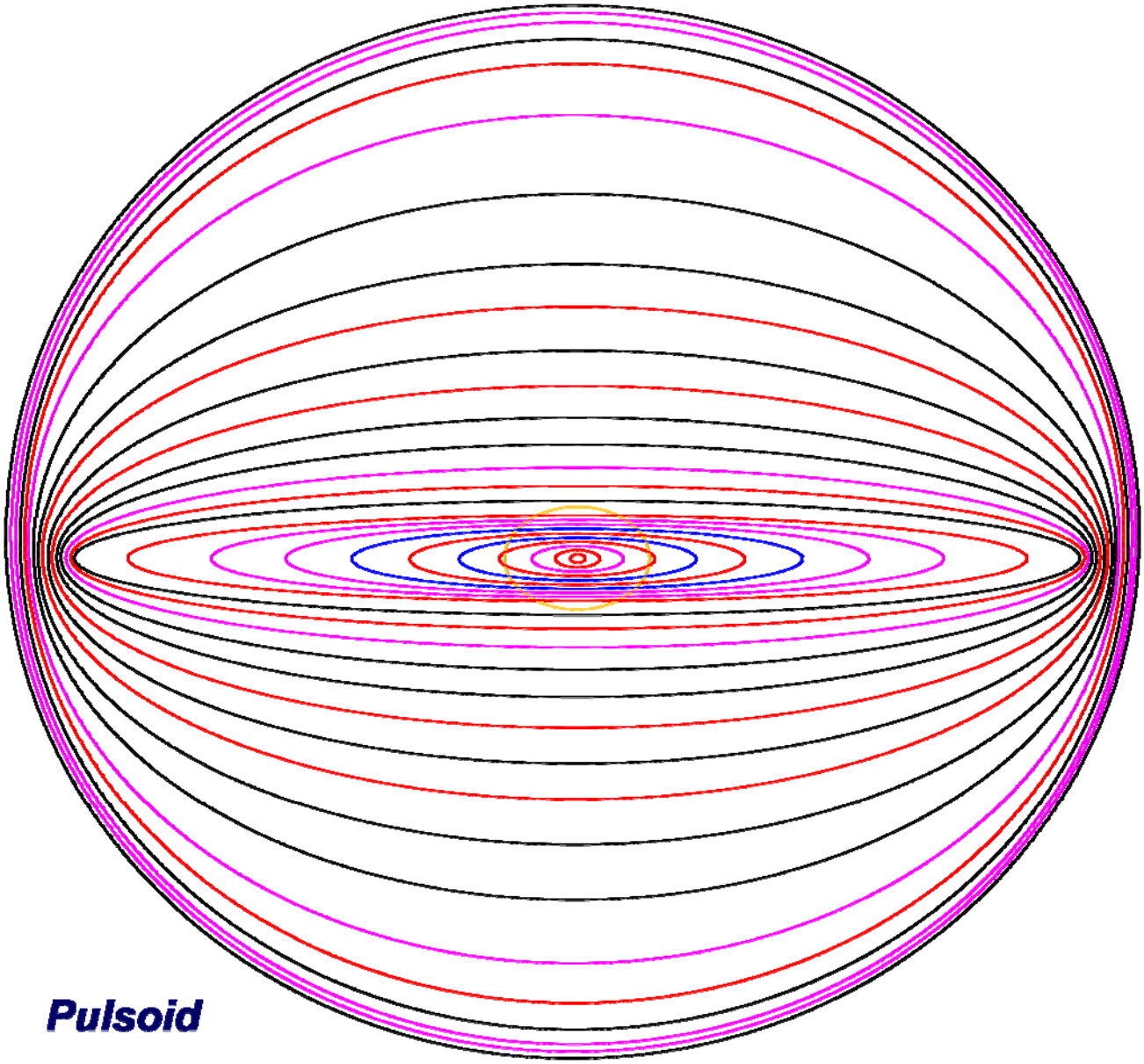
One is, fundamentally,
the difference between
two elements of a system that
establishes all the values for
the other elements of that system.

All Natural systems are,
fundamentally, solitons that are
hyper-relativistic, resonating pulses,
commonly known as polarity "charges,"
that are represented, heuristically,
by the integers of a Brunardot Ellipse, E.

/

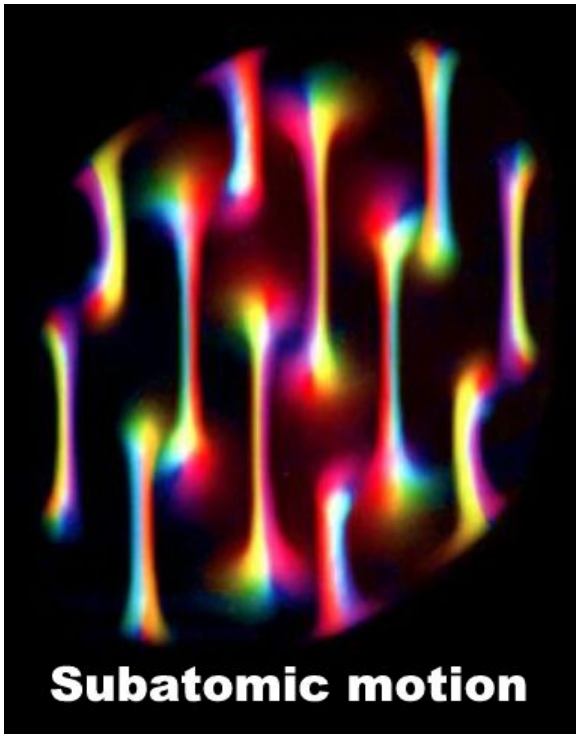
The Brunardot Theorem is credited and dedicated to:
Kurt Gödel, Albert Einstein, Philip Morrison, C. A. Bjerknes,
William of Ockham who certainly inspired
the unknown author of K.I.S.S.,
and, of course,
many other contributors.

Brunardot
April 19, 2006



Pulsoid

Addendum One, **Subatomic Particles**



The above is an actual photograph of solitonic motion within an atomic structure.

The photograph shows Utraescents, which have evolved from Oscillescents, which have evolved from Coalescents ("dark" energy), which are three of the four states of Light. Ultraescents is the term for the state of energy within Taisoids (tangent infinity spheroids); Oscillescents and Coalescents are terms for the energy within Pulsoids.

There are 12 solitons (Ultraescents), in 4 groups referred to as Phorbs, which contain three Soloids each. Each group of two Phorbs comprises a Hylotron. Two Hylotrons form an Ultron ("dark" matter), which is a proto-atom before critical compression ejects a Phorb that becomes a Light wave and an electron; thus creating an atom. Said compression, usually, occurs within a quasar or gamma-ray burst.

An Ultron, which is a Taisoid that has morphed from a Pulsoid, heuristically, can be considered as a tetrahedron that is comprised of four, interacting Phorbs that internally reflect all their composite energy (Light).

An atomic nucleus contains three Phorbs; two as the neutron and one as the proton. The fourth Phorb of the Ultron is ejected at critical compression and two of its three Soloids (solitons) become a Light wave, which waves are a state of Light referred to as Dissipents. The remaining ejected Soloid is referred to as an electron.

The pictured solitons are fundamental polarity "charges," depending upon the presence of crest or trough; the solitons are hyper-relativistic, complex, resonating oscillations; and, are, somewhat, analogous to quarks; except that, quarks have fantasy fractional charges.

Intelligent Design

Beauty . . . within our mind

Beauty is in the mind.

Those that know, always, seek
high for simplicity.
Intelligent Design
implies complexity.

Unity, the only force;
found at ***Infinity.***
Speed and phase, the only
variables needed.

When one finds Truth, there is
utmost simplicity;
it's inevitable;
there's no intelligence.

Our mind: evolution's
greatest complexity.
Furthest from creation;
it's mine; no one else's*!*

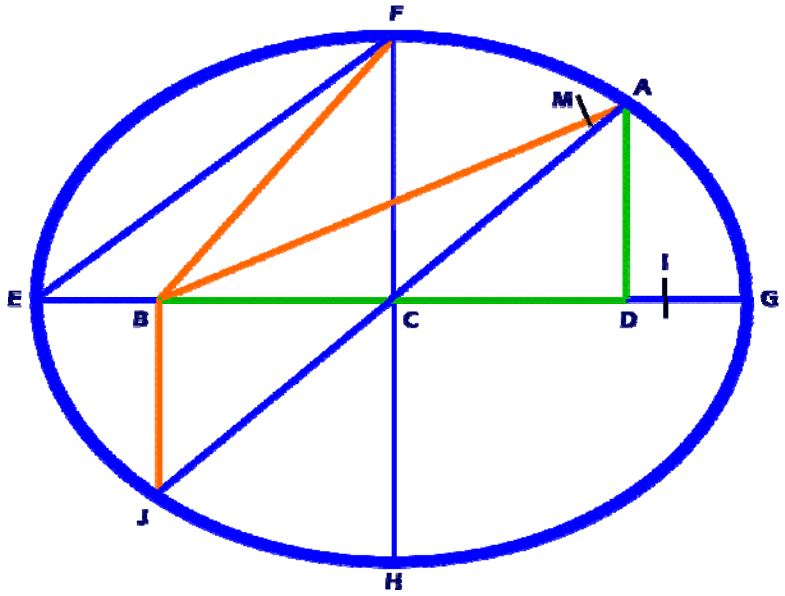
Beauty, Love; intrinsic,
harmonic interplay.
Our senses resonate
in the mind. It's not God*!*

Beauty*!* Imagination*!*
They belong to the mind.
Intelligent Design,
ours to divine. Not God's*!*

God is simplicity.

Written expressly as
ev'ryone's yuletide gift.
December 24, 1992

Addendum Two, **Brunardot Ellipses**



The Brunardot Ellipse, E

a amplitude C-F (p times g)	f foci B and D	p perigee E-B = D-G
A angle, elliptic ABC	g glider (2 times PT-ε)	P Pulse = any integer
c circularity = 1000L/M	h hypotenuse B-A = B-I	r radius A-D = B-J
C chord, diameter E-F	I integer	s soliton B-C = C-D
d diagonal radial C-A	L minor diameter H-F	T Time = any Integer
D diagonal J-A	m major radial E-C = C-G	v vector B-F = E-C
ε epsilon, One, DI = MA	M major diameter E-G	V vector, any B-V < B-A
E Ellipse, Brunardot	o apogee E-D = B-G	w wave B-D = B-V

It is not so important that the relationships of the structural parts of an ellipse are demonstrated; what is important is the question: " Why, so!?"

The proof of One is intrinsic to *any* ellipse,

which becomes a Brunardot Ellipse, E,
when the difference, represented by DI or MA,
between the hypotenuse, “h,” and the wave, “w,”
is designated as:

epsilon, ε, equals One.

If the perigee, "p," of a Brunardot Ellipse, E,
is designated as "x,"
the values of the structural parts of
any **ellipse, which can be designated as a**
Brunardot Ellipse, E, are as follows:

vector, "v," and the major radial, "m," equal x^2;
soliton, "s," equals $x^2 - x$, which is:
the Natural function, Psi, "Ψ";
radius, "r," equals $2p - \varepsilon$;
wave, "w," equals 2s;
hypotenuse, "h," equals $w + \varepsilon$;
apogee, "o," equals p + w; and,
major diameter, "M," equals 2v; or, p + o.
Also, h equals $(r^2 + \varepsilon) / 2$ and w equals $(r^2 - \varepsilon) / 2$;
thus, r^2 equals the square root of $(4hw + \varepsilon)$.

If "x" is *any* number,
the locus of the Brunardot Ellipse, E, changes accordingly;
however, most saliently, the following will never vary:

1.} epsilon, ε, equals One;

2.} the hypotenuse, "h," radius, "r," and wave, "w,"
always form a right triangle; and,

3.} the hypotenuse, "h," plus the radius, "r,"
equals two times the vector, "v,"
equals the major diameter, "M";

4.) the perigee, "p," soliton, "s," vector, "v," and
apogee, "o," are terms of a simple, additive series.

If "x" is an integer, the following are integers:
the hypotenuse, "h," major radial, "m," apogee, "o,"
perigee, "p," radius, "r," soliton, "s," vector, "v,"
wave, "w," and major diameter, "M."

If the soliton, "s," equals
epsilon, ε, One, 1,
the perigee "p," is
the Golden Ratio, Phi, "Φ."

The perigee, p," soliton, "s," vector, "v,"
and apogee, "o," are the
first four terms of
the simple, additive, unending, Brunardot Series:
$x,\ x^2 - x,\ x^2,\ 2x^2 - x,\ 3x^2 - x,\ 5x^2 - 2x,...$

If the perigee, "p," of a Brunardot Ellipse , E, is:
epsilon, ε, One, 1; then, the structural parts reflect
the Brunardot Series sequence for
plus one, which is:
the *revised* Fibonacci sequence:
1, 0, 1, 1, 2, 3, 5, 8...

The internal geometry of ellipses demonstrate the proof of One, a most fundamental concept, and many corollaries, such as the ubiquity of the Golden Ratio and the *revised* Fibonacci sequence, because ellipses, heuristically, describe Triquametric motion, which is the seminal phenomenon that comprises all the manifestations of *Reality.*

The below chart indicates some integer values of Brunardot and Pulsoidal Ellipses.

Structural values of a Brunardot Ellipse
for selected perigee values of:
1, Phi, 2, 3, 4, 5, 6, 13, and 25

Brunardot Ellipse	Formulas	Par1	Phi**	Par2	Par3	Par	Par1	Par2	Par1	Par1
perigee = p	x	1	1.618	2	3	4	5	6	13	25
soliton = s	x x - x	0	1	2	6	12	20	30	156	600
vector = v	x x	1	2.618	4	9	16	25	36	169	625
apogee = o	2 v - p	1	3.618	6	15	28	45	66	325	1225
radius = r	2 p - 1	1	2.236	3	5	7	9	11	25	49
wave = w	2s	0	2	4	12	24	40	60	312	1200
hypotenuse = h	w + 1	1	3	5	13	25	41	61	313	1201
epsilon = One	h - w	1	1	1	1	1	1	1	1	1
Rt Triangle Check	h h - w w - r r	0	0	0	0	0	0	0	0	0
amplitude = a	sqrt(v v - s s)	1	2.42	3.464	6.708	10.58	15	19.9	65	175

Legend = Brunardot Series, additive and 3rd term = square of 1st. (revised Fibonacci sequence if p = 1)
Legend = Right Triangle (An ellipse is described when hrw = right triangle)
Legend = A Brunardot Ellipse is a Pulsoidal Ellipse if the amplitude = integer. (If radius = Par1 square; or, if perigee = half x (odd integer squared + 1) the amplitude = integer.)
Par = Par definition of an integer is the remainder if divided by four. (crest, trough, etc. of cycle)
Phi** If the perigee = Golden Ratio, Phi; then, s = epsilon; v = Phi + 1; o = v + 1; r = SqRt of 5.

Hope and Inspiration

Today I found the riddle's solution
to what respective decorum, and order, there was
for Richard Feynman and Murray Gell-Mann.

The answer was found between the two,
upon their common ground, and so much more . . .
Among all that is virtual, I found *Reality.*

Today, my spirits were lifted;
as must have been those of all others
that passed by . . . and sat where I sat.

Just maybe, because of her gentle imploring,
that I can *never* forget, all will be well.
So few reflect upon fate's imperatives.

No bird ever soared without an assisting breeze,
always there, seldom seen . . . assured support.
Maybe . . . the imagination is so; who knows?

No longer, for me unknown, this face of fate.
Alert, vivacious, understanding;
likely, too little lauded . . . until now.

Written for Helen Tuck

The whole of science is nothing more than a refinement of everyday thinking.

Albert Einstein [1878-1955

If at first the idea is not absurd, then there is no hope for it.

Albert Einstein [1878-1955]

Imagination is more important than knowledge.

Albert Einstein [1878-1955]

The two don't talk physics much at home, she said.

She's interested in geometrical approaches to space and time, and he thinks algebraically.

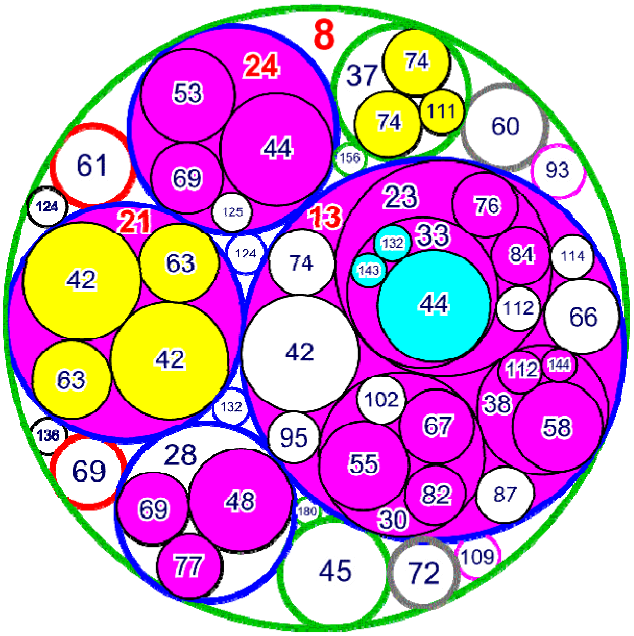
"When he starts talking about (exotic kinds of) algebras, I just think, 'Yuuuccckk.' 'A Lot of It's Guesswork' "

Patricia Schwarz
with reference to her husband John Schwarz
Los Angeles Times, November 17, 1999

Tini Circle Groups

Tini Cirt 8:5a

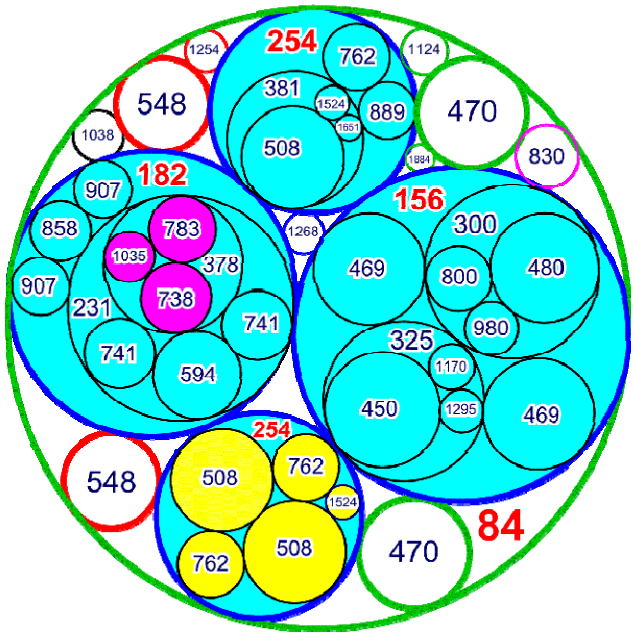
Including Tini Cirts 13:10a, 23:10a, 33:11s, 21h, 24:20a, 28:20a, 37h



Tini Circle Groups

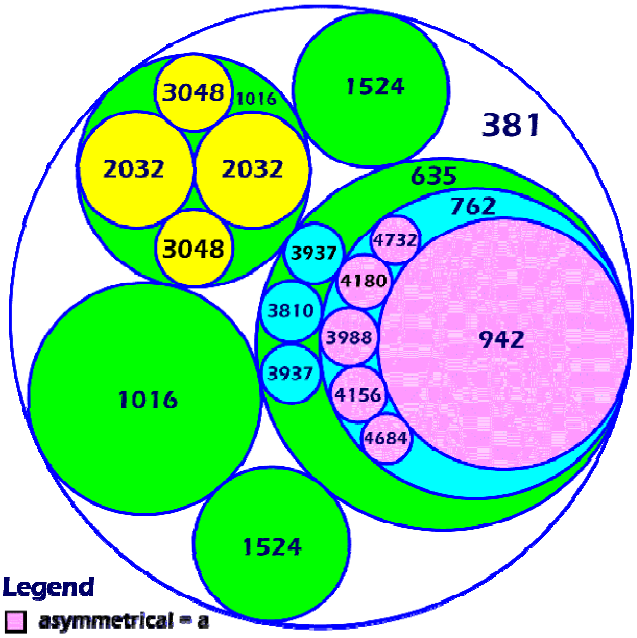
Tini Cirt 84:72s

including Tini Cirts 156:144s, 300:180s, 325:125s, 182:49s, 231:147s, 378:360a, 254:127s, 381:508s, and 254h



Tini Circle Group Types

with Legend and Tini Cirts



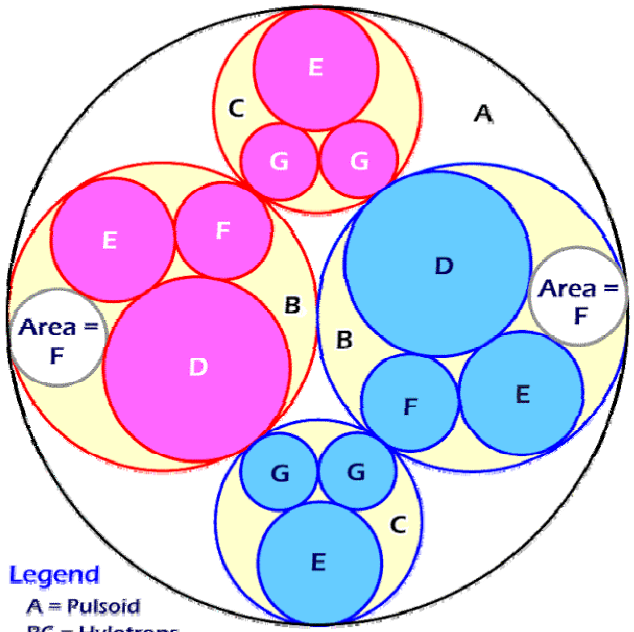
Legend

- asymmetrical = a
- symmetrical
  - dual = d
  - hylotron = h
  - single = s

Tini Cirts: 381:254d; 635:127s; 762:180a; 1016h

Tangent, Infinite, Integer Spheres

Tini Sphere heuristic Pulsoid with Hylotrons, Phorbs, and Soloids



Legend

A = Pulsoid
BC = Hylotrons
B & C = Phorbs
D, E, F, & G = Soloids

Integer values for the letters A thru G can be generated by any integer above zero.