SAND BOX GEOMETRY LLC

ALΣXANDΣR; CAGE FREE THINKIN' FROM THE SAND BOX

winter

FIELD STRUCTURE

2011

A parametric geometry view of strong nuclear fields as they might look considering maximum strength of lines and alignment of vectored magnitude curvature assembled with spin and rotation.

JOINING ATOMIC NUCLEAR STRUCTURES

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Reasoning for Micro Space utility of Sand Box Geometry Curved Space Division Assembly (**CSDA**) parametric nuclear construction.

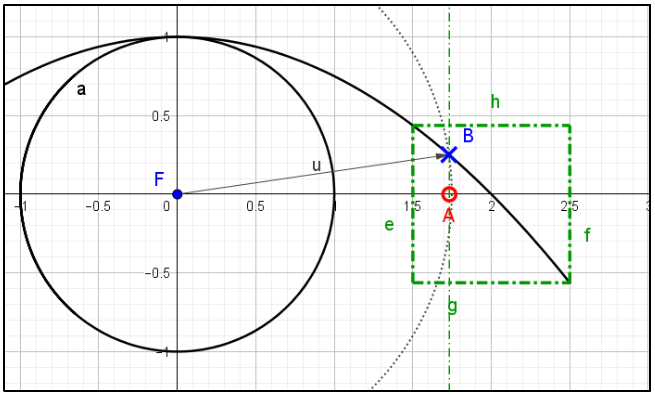

Figure 1: macro space CSDA and G-field space-time square

After years of working with macro space **CSDA**, I became aware the dependent (N) dependent parabola curve vertex marks the intersection of $\left(\frac{\pi}{2}\right)$ spin axis (independent part of **CSDA,** the central force origin) with the curved space directrix. A curved space directrix produced defines limiting accretion properties of **CSDA** external *domain* of M_1

I first considered micro space *construction* analytics of possible parametric standard model of *nuclear* energy curves fall 2010. Could an internal dependent parabola curve be constructed within the independent system, vertex @ $\left(\frac{\pi}{2}\right)$ spin axis within the boundary separating our two infinities, both legs planted firmly on macro space accretion plane of the G-field range *within* bounded circumference of potential?

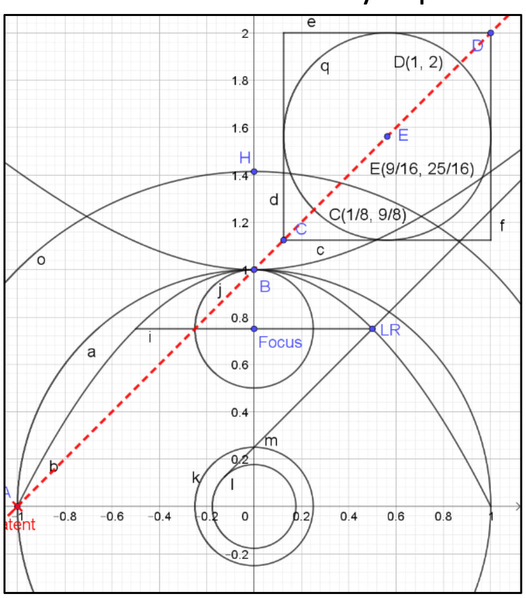

Figure 2: micro CSDA with nuclear space-time square and latent heat red colinear collection (A, B, C, E, D) needed for phase transitioning solid, liquid, and gas.

Nuclear standard models begin with the dependent curve vertex placed within the independent system @ $\left(\frac{\pi}{2}\right)$ spin axis. Analytic geometry will provide focus, latus rectum, discover neighborhood of (p), designating where to lay our unity tangent and unity tangent normal, and make clear probable construction of the energy shape of our nuclear curved space using lines and curves of our second-degree square space parametric geometry.

This GeoGebra construction is a composite of two Central Force Field mechanical energy space time squares.

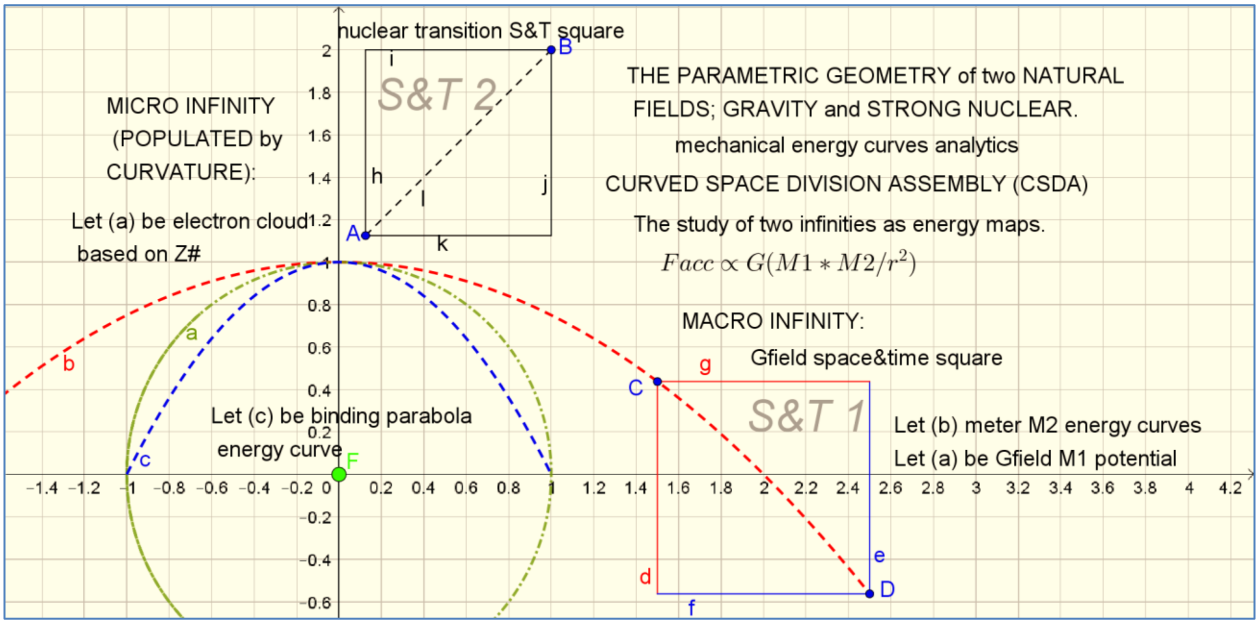

Figure 3: GeoGebra construction of two central force space and time squares.

G-field space and time square (S&T 1) proffers easy energy reads as changing motive energy of M_2.

The nuclear transition space and time square (S&T2) will be used to study mechanical bonding of two like atoms.

The only energy transition atoms can make available for human perception would be heat signature (change in environ temperature). Examples of visible disturbed heat signature would be boiling water and heating element of an electric stove.

After bonding two like elements, the concept of a GeoGebra Latent Heat Thermometer will be constructed to demonstrate changing nuclear environ temperature as energy required for phase transition (solid, liquid, and gas).

The transition range between solid and liquid is called heat of fusion.

The transition range for liquid to gas is called heat of vaporization.

PART 2: Nuclear CSDA (constructing atoms, nuclear electromagnetic bond)

Basic atom structure (2018)

Let curve (a) be electron cloud of carbon (Z#6). Let curve (h) be the binding energy parabola holding ecloud around nuclear center.

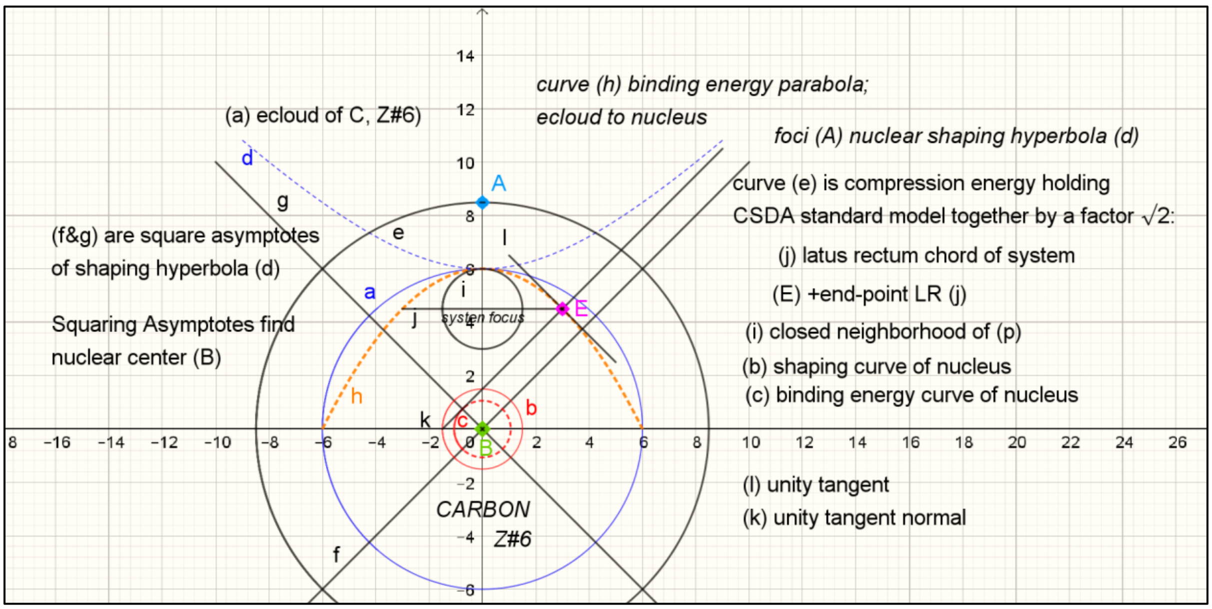

Figure 3: basic CSDA for nuclear curves

(f & g) are squaring asymptote of hyperbolic shaping curve (d), used to locate nucleus. Foci (A) of shaping hyperbola (d) provide spherical compression force shaping an atom. Split foci of shaping hyperbola (d) provide radii of compression ring $\left(Z\#\sqrt{2}\right)$ as the greater energy curve with respect to electron cloud (a) by the factor $\sqrt{2}$. Latus rectum (j) +endpoint (E), provides $(m = \pm 1)$ unity tangent (l) and corresponding tangent normal (k) are used to construct shape nuclear shaping curves. Binding energy curve(c) and nuclear shape (b). Let (i) be the closed neighborhood (*p*), the initial $\left(\frac{\pi}{2}\right)$ focal radius of the binding parabola (h), making $\left(icos(t), isin(t)\right)$ the profile shape (b) of the nucleus, where (i) is sourced from (primitive) focal radius of (^{1}H). The binding energy curve of any element nucleus is (Z#) × $\left((p)\ \times\ (curvature)\right)$ of (^{1}H) compression ring. Z# becomes constant coefficient too $\left((1\text{H}p)\ \times\ (curvature(1\text{H}))\right)$.

$\left[\left(\frac{1}{4}\right)\left(\frac{1}{\sqrt{2}}\right) = \frac{\sqrt{2}}{8}\right] = \left(Z\# \times \left(\frac{\sqrt{2}}{8}\right)\right)$. The following data compilation uses Z# and original (^{1}H) parameters (source primitive) to map a CSDA nuclear standard model. (Z# × (^{1}H) parameter = new Z# parametric construction protocol).

Z#	(p)	Spin (4p)	ncorner	Intec vibasy and latent	Trans c	ecloud	Bond r	Nuclear binding r	Dec. equiv.
1 (^{1}H)	(1/4)	(0,1)	$\left(\frac{1}{8},\frac{9}{8}\right)$	(NA)$\left(\frac{Z\#}{(Z\#-1)},\frac{Z\#^2}{(Z\#-1)}\right)$	$\left(\frac{9}{16},\frac{25}{16}\right)$	(1,2)	$\left(\frac{15}{8},\frac{17}{8}\right)$	$\frac{\sqrt{2}}{8}$	0.177
2(He)	(1/2)	(0,2)	$\left(\frac{1}{4},\frac{9}{4}\right)$	(2,4)	$\left(\frac{9}{8},\frac{25}{8}\right)$	(2,4)	$\left(\frac{15}{4},\frac{17}{4}\right)$	$\frac{1\sqrt{2}}{4}$	0.353
3 (Li)	(3/4)	(0,3)	$\left(\frac{3}{8},\frac{27}{8}\right)$	$\left(\frac{3}{2},\frac{9}{2}\right)$	$\left(\frac{27}{16},\frac{75}{16}\right)$	(3,6)	$\left(\frac{45}{8},\frac{51}{8}\right)$	$\frac{3\sqrt{2}}{8}$	0.530
4 (Be)	(1)	(0,4)	$\left(\frac{1}{2},\frac{9}{2}\right)$	$\left(\frac{4}{3},\frac{16}{3}\right)$	$\left(\frac{9}{4},\frac{25}{4}\right)$	(4,8)	$\left(\frac{15}{2},\frac{17}{2}\right)$	$\frac{1\sqrt{2}}{2}$	0.707
5 (B)	(5/4)	(0,5)	$\left(\frac{5}{8},\frac{45}{8}\right)$	$\left(\frac{5}{4},\frac{25}{4}\right)$	$\left(\frac{45}{16},\frac{125}{16}\right)$	(5,10)	$\left(\frac{75}{8},\frac{85}{8}\right)$	$\frac{5\sqrt{2}}{8}$	0.884
6 (C)	(3/2)	(0,6)	$\left(\frac{3}{4},\frac{27}{4}\right)$	$\left(\frac{6}{5},\frac{36}{5}\right)$	$\left(\frac{27}{8},\frac{75}{8}\right)$	(6,12)	$\left(\frac{45}{4},\frac{51}{4}\right)$	$\left(\frac{3\sqrt{2}}{4}\right)$	1.061
7 (N)	(7/4)	(0,7)	$\left(\frac{7}{8},\frac{63}{8}\right)$	$\left(\frac{7}{6},\frac{49}{6}\right)$	$\left(\frac{63}{16},\frac{175}{16}\right)$	(7,14)	$\left(\frac{106}{8},\frac{119}{8}\right)$	$\frac{7\sqrt{2}}{8}$	1.237
8 (O)	(2)	(0,8)	(1,9)	$\left(\frac{8}{7},\frac{64}{7}\right)$	$\left(\frac{9}{2},\frac{25}{2}\right)$	(8,16)	(15,17)	$\frac{1\sqrt{2}}{1}$	1.414
9Ne)	(9/4)	(0,9)	$\left(\frac{9}{8},\frac{81}{8}\right)$	$\left(\frac{9}{8},\frac{81}{8}\right)$	$\left(\frac{81}{16},\frac{225}{16}\right)$	(9,18)	$\left(\frac{135}{8},\frac{153}{8}\right)$	$\frac{9\sqrt{2}}{8}$	1.591
10 (F)	(5/2)	(0,10)	$\left(\frac{5}{4},\frac{45}{4}\right)$	$\left(\frac{10}{9},\frac{100}{9}\right)$	$\left(\frac{45}{8},\frac{100}{8}\right)$	(10,20)	$\left(\frac{75}{4},\frac{85}{4}\right)$	$\frac{5\sqrt{2}}{4}$	1.767

Field Units: Let the nuclear field unit (p, $\left(\frac{\pi}{2}\right)$ initial focal radii) be sourced from (initial H^1 focal radius) and become the constant of proportionality used to construct the (shape) of nuclear mechanical energy curves. Using 4(p), the system Latus Rectum chord, of a dependent parabola binding energy curve (h), that energy holding electron cloud to nucleus, becomes a mechanical survey tool, providing means to construct nuclear shape of elements using second degree lines and curves, producing a parametric geometry third degree (up, down, and around) spinning nuclear micro assembly.

MACRO-INFINITY $\left(p = r;\ 1unit\ independent\ \left(\frac{\pi}{2}\right) spin\right)$. In macro gravity field space LR is rotation. $\left(4 \times \frac{\pi}{2}\ spin\ radius(p) = (accretion\ diameter; average\ energy\ curve\ of system)\right)$;

MICRO-INFINITY LR $\left((p) = Z\# \times \frac{1}{4}\right)$: micro infinite latus rectum chord *is* congruent with the atom spin radius. $\left(Z\# \times (p\ of\ 1H\ \left(\frac{1}{4}\right)) = (p)\ and\ 4(p) = nuclear\ \left(\frac{\pi}{2}\right) spin\ radius\right)$.

Macro ∞ LR rotates and micro ∞ LR spins.

BONDING

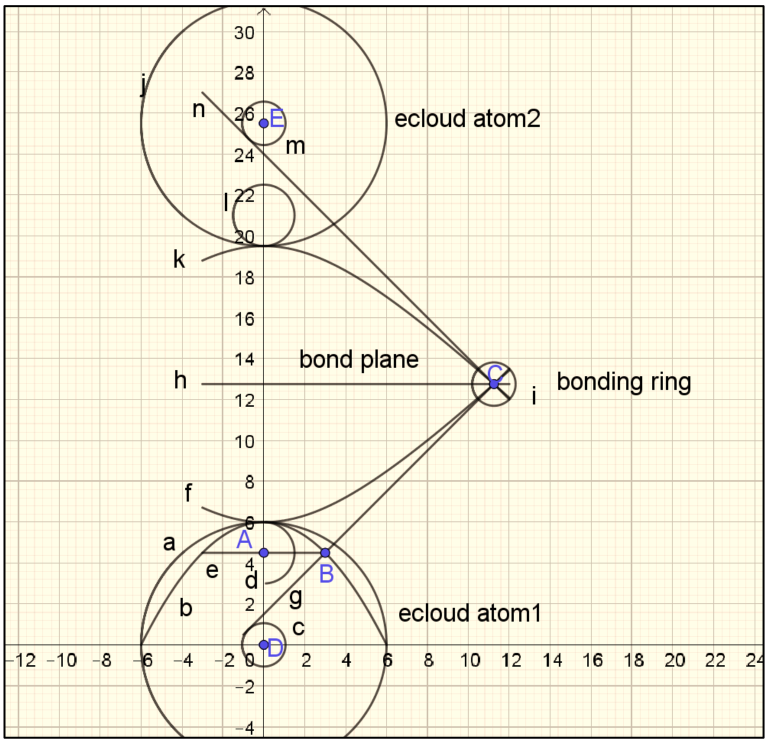

Figure 4: bond plane and bond ring connection atom1 with atom2 (Z#6)

(CSDA parametric Geometry) Let (D) be nuclear center atom1 and (E) be nuclear center atom2. To locate center of mutual bond ring construct two unity tangent normal (n&g). Confirm intercept by constructing both shaping hyperbola for atom1 and atom2 (f&k). Point (C) for (Z#6) is $\left(\frac{45}{4}, \frac{51}{4}\right)$.

Constructing a bonding profile of two atoms are built with two **CSDA** sections. One section will be atom1 and the other section is atom2. Let Atom1 be south of atom2 and both atoms be separated by a bond plane (h). Spin axis bond comprising two atoms involves nuclear alignment along centered foci of a common spin axis producing conserved symmetry. Fold any nuclear bond of two along the spin axis letting east meet west or fold on the bond plane of rotation letting north meet south, and profile symmetry of two element nuclear curves will be conserved. Only profile geometry will change to accommodate increasing atomic ‘weight’ by utilizing Z# as electron cloud radius.

The shaping radius (i) of the bond ring is determined by the nuclear binding energy curve (c&m). Both unity tangents, (n) and (g), contact with binding energy curve of same element nuclei convey shape of bond ring radii by plane geometry unity curve tangent contact. In other words, nuclear binding energy curves shape bond rings.

The next construction will be a nuclear schematic diagram of electromagnetic circuitry connect phenomena of bond. In schematic wire diagrams, circuit flow is from potential to ground through a load such as a charge device, table lamp or computer. Electric loads consume energy as work generating heat, avoiding violent short circuits of direct contact of 'hot' wire to ground!

proposed electro-magnetic circuit flow: filaments

(2017, nuclear construction, nuclear bond, bonding) I begin with the philosophy of plasma filaments because I believe at the nuclear level such hook-up is a filament type connection found only in Plasma Physics of Quantum Philosophies.

https://www.youtube.com/watch?v=5BLPvs3JTyA

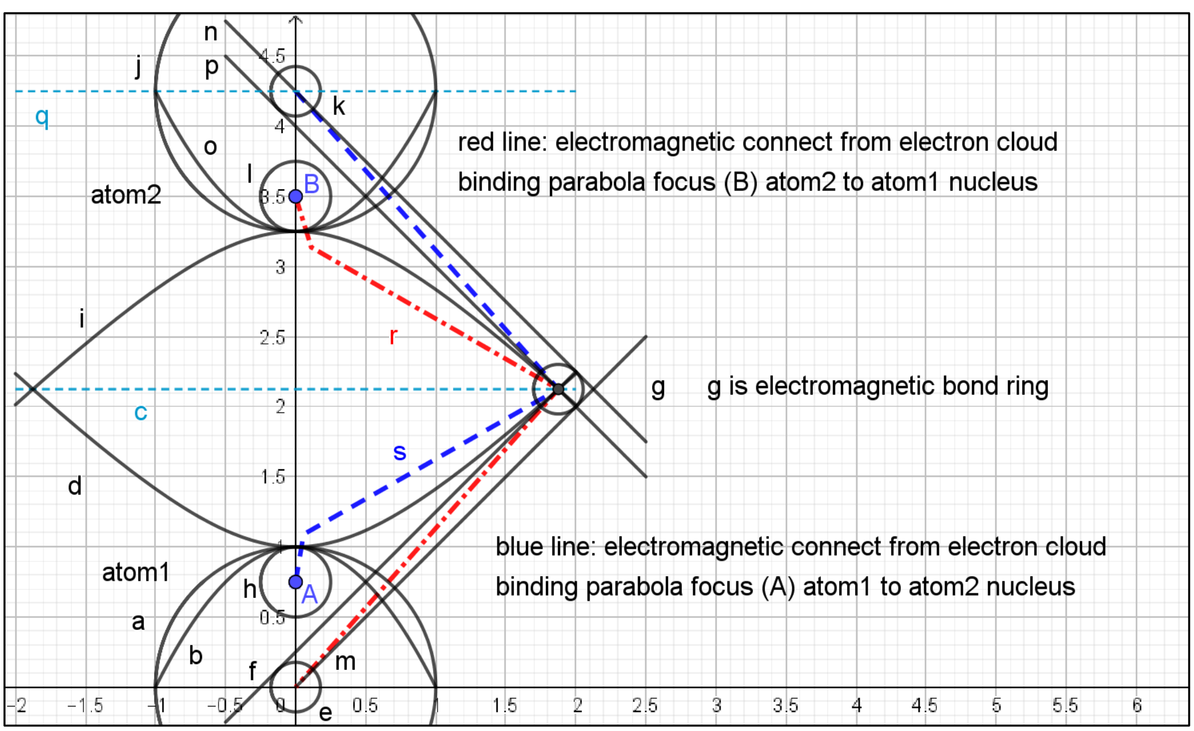

Figure 6: CSDA electromagnetic bond connection; atom1 with atom2.

A nuclear level Euclidean line is a line with no ordinary end points, but two connected endpoints of charge $(+,-)$.

Nuclear filament lines, unlike Euclidean line, have width. Connection phenomena between atom1 and atom2 is linear with width of electron. And length of connect? Let distance between focus (A) atom 1 partnership with nuclear binding energy curve (k) of atom2, (blue connect), be L of connection.

Atom1 circuit connect is from (N) neighborhood (p; focus A, a negative charge source) to (+) nucleus of atom2. This connection filament is blue. Atom2 with atom1 circuit is red. There is no arrow pointing direction flow of field charge for atomic level experience is best imagined as a connecting attractive force between nuclear charge$(- \leftrightarrow +)$. An arrow suggests linear, I imagine two spinning 3-D hyperbolic cone surface sharing a common base connect @ (bond plane). Atom1 and atom2 3-D curves and lines form a 2-space profile column (hall way conduit) using shaping hyperbola to 'leave' element ecloud atom1, and 'connect' with atom2 via hyperbola squaring asymptote and binding parabola unity tangent normal to conduct (-) charge of electron cloud to $(+)$ of partner atom nuclear center *after* separating magnetism followers from electric filament properties in bond ring.

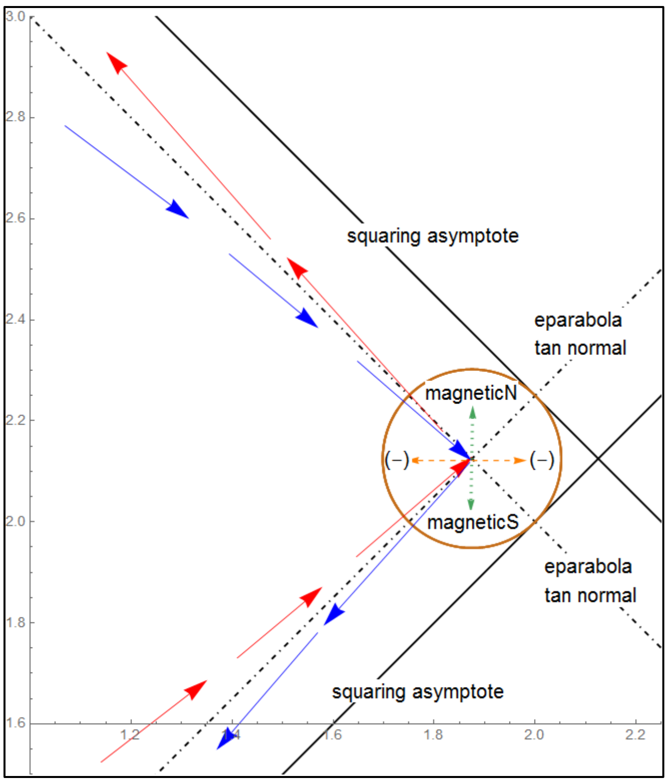

Figure7: vector description of opposing magnetic and electric field filament meet-up in atom bond ring. These are field vectors and carry attractive and/or repulsive forces of charge, not velocity.

Separation of magnetism and electric charge phenomena

Filament circuits will carry electromagnetic phenomena of 'current', a following 'magnetism' field curled around filament charge from atom1 and atom2. Consider elementary right-hand rule structuring magnetic field lines surrounding filament charge. A nuclear right-hand thumb *does not* point along a filament profile path but toward nuclear centers on spin axis. Clockwise atom 2 toward atom 1, and counter clockwise atom 1 toward atom 2. When meeting in electromagnetic bond ring, magnetic phenomena accompanying ecloud profile filament have opposite curl. When these magnetic field lines meet face to face (as north and south source magnetons they happen to be), they lock (mutual attraction) in the bond ring and remain captured in bond ring as pure magnetism, becoming principal strength of bond and remain in the bond ring leaving $(-)$ profile charge of filament from electron cloud to connect with partnered atom (+) charge nucleus.

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Magnetism is gripping phenomena of bond. The stripping of electricity and magnetism into a separate single entity they happen to be, provide a natural 'load' by doing work, producing heat, and in so doing prevent explosive property of direct contact of same charge or charge to 'ground' without load energy consumption.

~~The heat generated as 'load' protection of direct contact of two~~ $\cancel{(-charge)}$ ~~entities, (such~~ heat ~~being the separation phenomena stripping magnetic properties from electric filament), we see as spectroscopic bar lines. I suspect bar lines are dedicated signature of an element regardless of heat environ. Let the most extreme bar lines experience of an element be gas [hot] (Emission Lines). The least extreme presentation be solid [cold] (Absorption Lines). Fixed spectroscopic signature is state/phase dedicated as fingerprint of an element, regardless of change of phase or physical state. Increase or decrease of internal work heat, (latent heat) phenomena @ nuclear level, is required for phase change of an element. Once phase is achieved, the same (spectroscopic bar line) gives recognition of an element no matter temperature of state(???)~~. I will examine parametric geometry of phase/state after a peek at proposed nuclear level gravity hook.

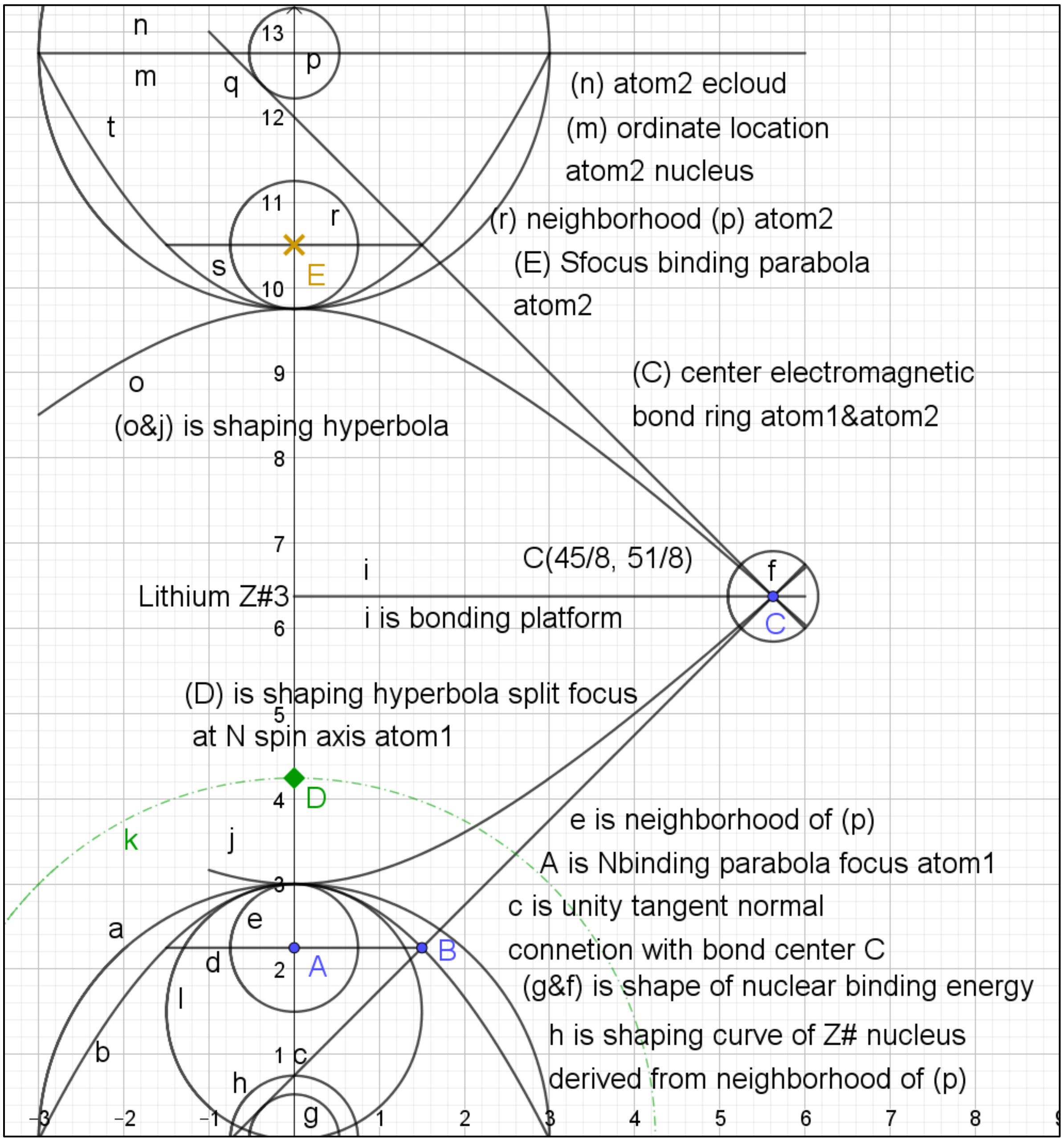

Figure 4: (A&E) are foci of binding parabola atom1 (A) and atom2 (E). (c&q) are unity tangent normal for atom1 and atom2. (g, f, and p) are shaped by binding energy of nucleus.

parametric geometry map of lithium bond atom1 with atom2

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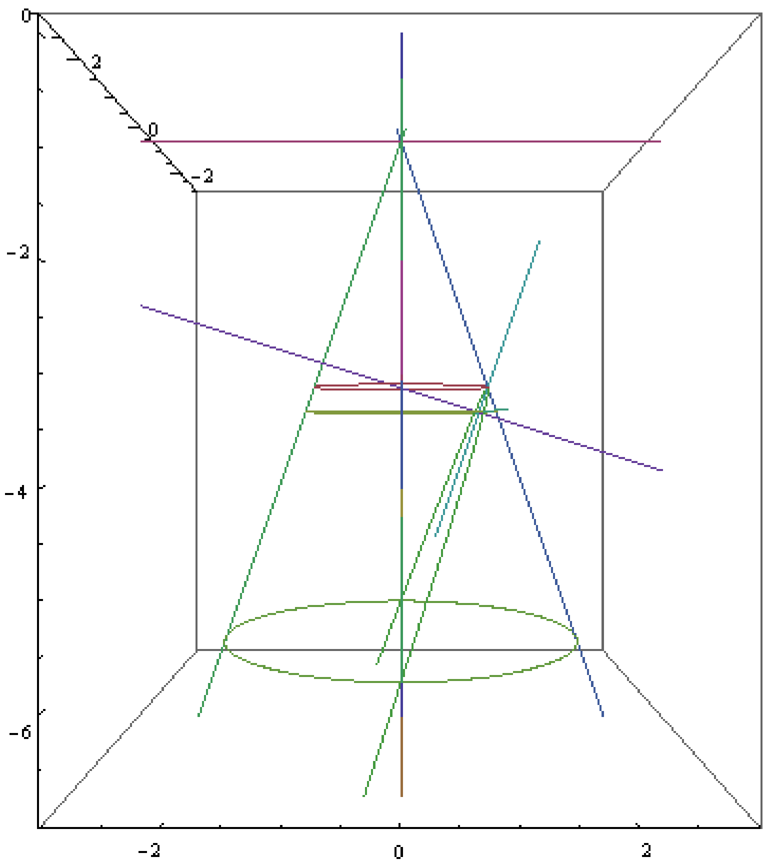
Sand Box Geometry LLC, a company dedicated to utility of Ancient Greek Geometry in pursuing exploration and discovery of Central Force Field Curves.

Using computer parametric geometry code to construct the focus of an Apollonian parabola section within a right cone.

"It is remarkable that the directrix does not appear at all in Apollonius great treatise on conics.



The focal properties of the central conics are given by Apollonius, but the foci are obtained in a different way, without any reference to the directrix; the focus of the parabola does not appear at all... Sir Thomas Heath: "A HISTORY OF GREEK MATHEMATICS" page 119, book II.

Sand Box Geometry LLC Alexander; CEO and copyright owner.
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The computer is my sandbox, the unit circle my compass, and the focal radius of the unit parabola my straight edge.

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The square space hypotenuse of Pythagoras is the secant connecting (π/2) spin radius (0, 1) with accretion point (2, 0). I will use the curved space hypotenuse, also connecting spin radius (π/2) with accretion point (2, 0), to analyze g-field energy curves when we explore changing acceleration phenomena.

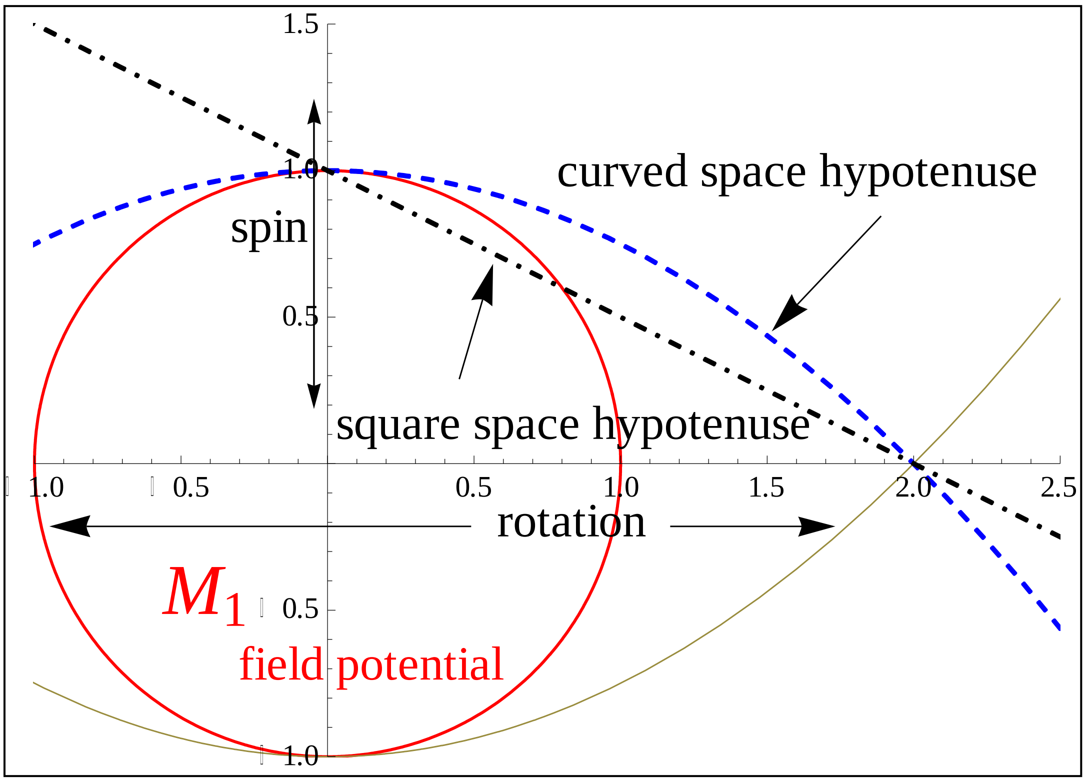

Figure 5: CSDA demonstration of a curved space hypotenuse and a square space hypotenuse together.

We have two curved space hypotenuses because the gravity field is a symmetrical central force, and will have an energy curve at the **N** pole and one at the **S** pole of spin; just as a bar magnet. When exploring changing acceleration energy curves of M_2 orbits, we will use the N curve as our planet group approaches high energy perihelion on the north time/energy curve.

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