## A tale of two SpaceCurves

Exploring inversed parametric mechanical energy curves working as potential in the two SpaceTime spheres of human experience. Micro Infinity SpaceTime of S&T(3), our nuclear Quantum World, and S&T(2) Classic Big Surface Acceleration Curves of $(M_1)$.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC

Galileo's S&T1 has paved the way for S&T2 and S&T3.

| | |
|---|---|
| On inversing operating potential(s) found each side of surface acceleration at the crossover border of SpaceCurve(1) | December 9, 2024.02:31. |

This exploratory will establish a means to inverse ME curves and split potential working both spheres of human SpaceTime in to two parts. One part working central force spin and one part working central force plane of rotation; accretion.

Inversed potential. A CurvedSpace answer to SquareSpace Inverse Square Law.

The humans who knew little were smarter than humans who think they know everything. Study the things before your eyes. Turn them over in your mind using your imagination. Hammer thoughts into the shape God has given what your eyes perceive.

32 pages, 5000words 12/21/24.23:07.

The human experience of those potential curves of open space and those of closed space.

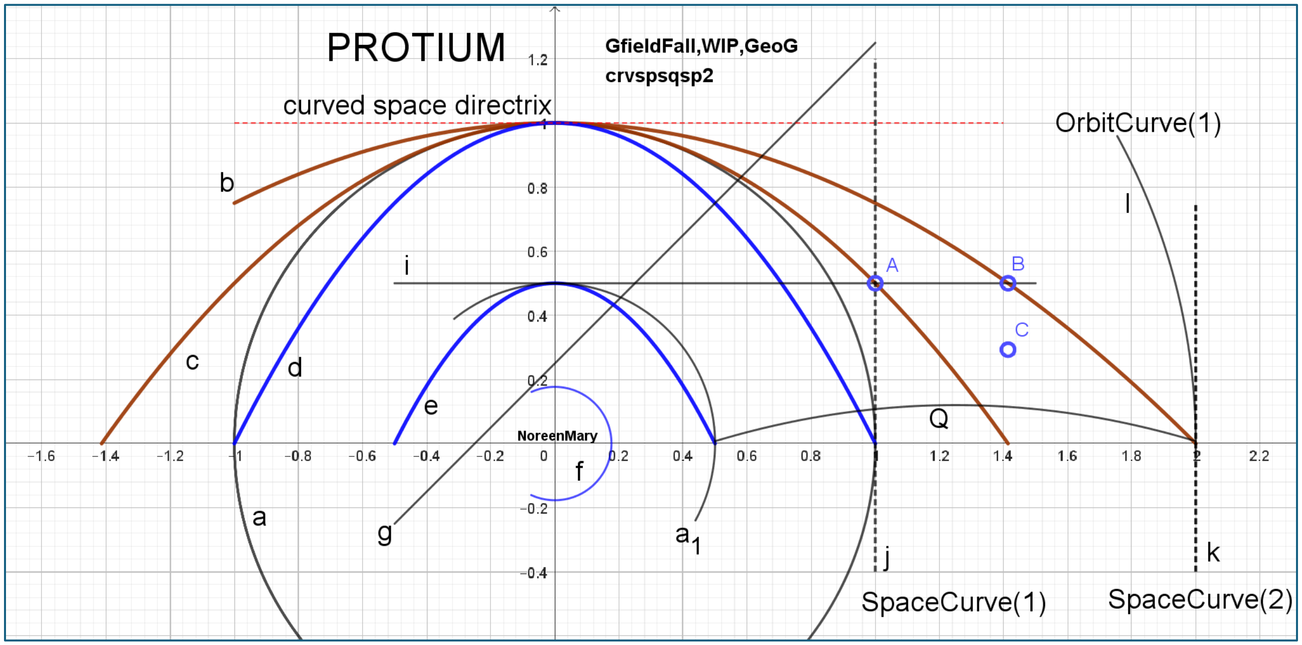


*Figure 1*: Let curves($a$&$b$) be a basic CSDA independent/dependent happening at the border crossing of surface acceleration curve($a$) of M1's SC(1). I fall into the micro infinity world of quanta nuclear space from macro infinity Gfield space. (e) is protium proton existence space and (f) is nuclear binding energy. (Q), the inverse connect, links SquareSpace with CurvedSpace. ($h$) is (+) potential and ($e$) (−) potential of Quanta space.

I begin with Protium. I have used index solution curves to construct three parametric definitions of central force mechanical energy.

c. ($M_1$) Potential.

b. Registration of period motion.

e. (+) nucleus potential.

d. (−) electron cloud potential.

Let G-field rest energy, curve($i$), be a direct connection with a 1/2 unit jump up or down spin range leaping across average energy diameters of consecutive orbit(s), slope($\pm 1$) events curve(b).

Quantum world rest energy is the ground state of a CSDA Z#($n$) discovery proton curve($a_1$).

I use *inversed* index solution curves to study workplace assignment of central force mechanical energy potential(s). I find four. Period Time Curve($b$), potential ($M_1$) curve($c$), electron cloud (-) potential curve($d$), and nucleus (+) potential curve($e$) within nucleus existence space($a_1$). These constructions evolve main body solution curves of inversed potential happening @ (+) spin in 1st and 2nd Quadrant of Descartes.

I use four colors. The blue colors are QuantumWorld potentials. Brown is ClassicBig potentials. Blue for S&T(3), and brown for S&T(2).

PROTIUM: SpaceCurve(1), Z#1, OrbitCurve(none)

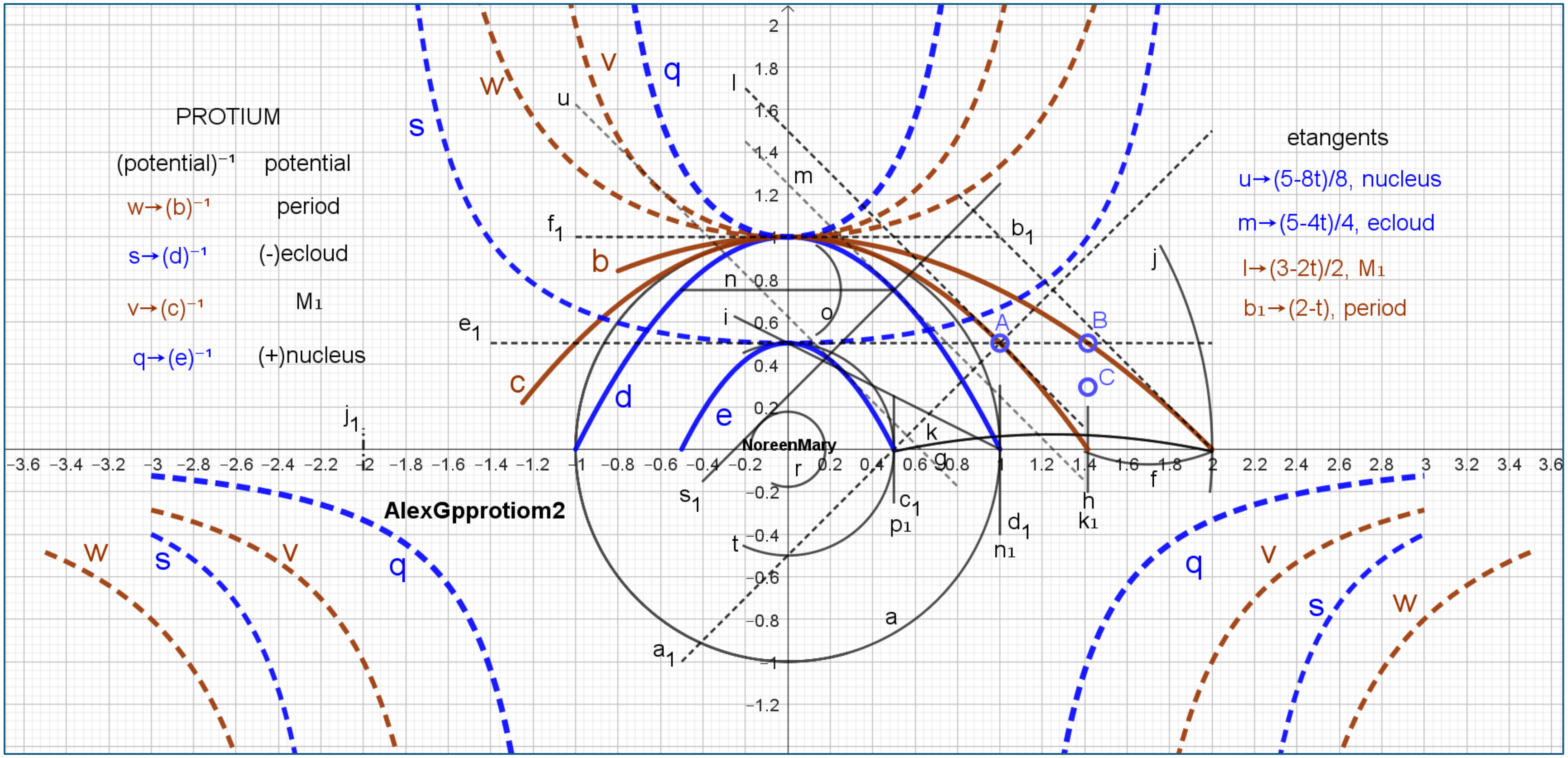


*Figure 2*: the connected spaces of Quanta and ClassicBig potentials and inverse potentials curves$(k, f)$. Black hyphen happenings$(b1, l, m, u)$ are slope(m = ±1) energy/tangents of discovered potentials$(b, c, d, e)$. Curve$(s1)$ is ecloud tangent normal to bond plane. Curve$(a1)$ is etan normal link M1 potential$(c)$ with nuclear potential$(e)$

The four potential curves$(b, c, d, e)$ constructed in figure(2), when parametrically inversed, become asymptotic curves$(w, s, v, q)$. I style these curves with same color but hyphenated line. Main body solution curves collect along positive spin. $(\pm)$ spirit curves, born of asymptote inverse conversion of main body curves, approach accretion space along negative spin and travel signed accretion out to open space.

## Inversing potential curves of open space and closed space.

Inversed index solution curves are three parts asymptotic. Inverse potential asymptotes present normal domain *limits* on potential existence space, in a captured containment space sense as to where they may operate. Asymptote$(p_1)$ define limits of nucleus, curve(e) existence space potential, $\pm\left(\frac{1}{2}\right)$ unit each side of spin. $(n_1)$ asymptote definition limits existence space of electron $(-)$ potential, curve$(d)$, ±1unit space each side of spin. Asymptote $(k_1)$ definition limits existence space of $(M_1)$ potential, curve$(c)$, $\sqrt[2]{SC(2)}$ unit space each side of spin. $(j_1)$ Asymptotic definition is dimensional declarative of period average energy diameter as reference for conserved period motion of Central Force SpaceCurve(2) OrbitCurve(1).

Inverse index solution curves are two parts. the mainbody solution curve and its (±)spirit curves. I call asymptote split curves each side of asymptote potential space curves spirit curves. I Assign $(\pm charge)$ to their existence. These guys work open space plane of rotation, each side of accretion. Main body solution curves work the spin of a CSDA central core. Spirit parts work accretive rotation. S&T2 is Gfield centrifuge and S&T3 are nuclear gravitons source of M1 potential of accretive gathering.

Solid brown lines are S&T2 central force mechanical energy happenings of gravity. Curve$(j)$, Sir Isaac Newton's average energy orbit curve of displacement, is locked with asymptote($j_1 \rightarrow \pm 2$) captured on the system domain number line. Curve(k) Asymptote limits($k_1$) are system potential curve$\left(c^{-1} \rightarrow \left(\pm\sqrt[2]{2}\right)\right)$ of $M_1$.

## Reference figure(1)

This whole diagram is a crossover happening; points(ABC). We have left SpaceCurve$(2)$, traveled period curve(b) of OrbitCurve$(1)$ to $(B)$, coordinates $\left(\sqrt[2]{SC(2)}, \frac{1}{2}\right)$ penetrated surface acceleration curve$(a)$ of $(M_1)$ aka$(SC(1))$ by falling(1/2) unit spin between the nuclear cracks of SpaceCurve$(1)$ using rest energy curve$(i)$ of SC(2) discovery$(a)$, to find the first quantum world discovery curve$(a_1)$; a proton. Discovery curve$(a)$ now becomes the electron cloud, now a dependent definition curve for the nucleus Z#(1) proton$(a_1)$. Setting curve$(a)$ as independent/dependent hybrid of a CSDA allows co-existence of human perceptions of both Classic Big and Quantum Small parametric construction of : SpaceCurve(#), Z(#) and OrbitCurve(#-1).

## Protium, SC(1), OC(0), Z#1

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| Name | Description | Caption |
| --- | --- | --- |
| Curve a | Curve(cos(t), sin(t), t, -5, 5) | hybrid curve discovery and definition |
| Curve b | Curve(t, $t^2$ / -4 + 1, t, -0.8, 2) | Period curve |
| Curve $c_1$ | Curve(0.5, t, t, -0.25, 0.25) | Curvature evaluation SpaceCurveC(2), OrbitCurve(1) |
| Curve g | Curve(t + 1.25, $t^2$ / -7 + 0.07, t, -0.75, 0.75) | Inverse connect, radius and curvature |
| Curve i | Curve(t, $t^1$ / -2 + 1 / 2, t, 0, 1) | Linear registration SC(2) OrbitCurve(1) with spin |
| Curve f | Curve(t + 1.7, $t^2$ / 1.5 - 0.07, t, -0.3, 0.3) | Sir Isaac Newton's inverse square connect |
| Point A | | crossover. |
| Point B | | Crossover. |
| Point C | | Crossover. |
| Curve h | Curve(sqrt(2), t, t, -0.2, 0.2) | abscissa ID $\left(\sqrt[2]{SpaceCurve(2)}\right)$, aka $(M_1)$ potential |
| Curve d | Curve(t, $t^2$ / -1 + 1, t, -1, 1) | Electron cloud $(-)$ potential |
| Curve n | Curve(t, 3 / 4, t, -0.5, 0.5) | Latus rectum cord electron cloud potential |
| Curve c | Curve(t, $t^2$ / -2 + 1, t, -1.25, sqrt(2)) | $(M_1)$ system ohh potential |

| | | |
|---|---|---|
| Curve o | Curve(0.25cos(t), 0.25sin(t) + 0.75, t, -1, 1) | Closed neighborhood($p$) ecloud potential |
| Curve r | Curve(1 / (4sqrt(2)) cos(t), 1 / (4sqrt(2)) sin(t), t, -2, 3) | Nuclear binding energy protium |
| Curve w | Curve(t, $(t^2 / -4 + 1)^{-1}$, t, -3.5, 3.5) | inverse period curve |
| Curve v | Curve(t, $(t^2 / -2 + 1)^{-1}$, t, -3, 3) | Inverse ($M_1$) system potential |
| Curve q | Curve(t, $(t^2 / -1 + 1)^{-1}$, t, -3, 3) | invers nuclear potential |
| Curve s | Curve(t, $(t^2 / -2 + 2)^{-1}$, t, -3, 3) | Inverse ecloud potential |
| Curve t | Curve(0.5cos(t), 0.5sin(t), t, -2, 2) | existence space of the protium nucleus |
| Curve e | Curve(t, $t^2$ / -0.5 + 0.5, t, -0.5, 0.5) | protium nucleus positive potential |
| Curve u | Curve(t, (5 - 8t) / 8, t, -1, 0.8) | etangent nucleus positive potential |
| Curve l | Curve(t, (3 - 2t) / 2, t, -0.2, 1.4) | Etangent ($M_1$) system potential |
| Curve m | Curve(t, (5 - 4t) / 4, t, -0.2, 1.4) | etangent electron negative potential |
| Curve $a_1$ | Curve(t, (-1 + 2t) / 2, t, 0, 2) | Etangent normal ($M_1$) system potential |
| Curve $s_1$ | Curve(t, (1 + 4t) / 4, t, -0.4, 1) | Etangent normal electron cloud (-)potential connect with Bond Plane. |
| Curve $b_1$ | Curve(t, -t + 2, t, 0.8, 2) | Etangent period curve |
| Curve $j_1$ | Curve(-2, t, t, -0.1, 0.1) | $\pm$ asymptote limits period curve average energy diameter |

| | | |
|---|---|---|
| Curve $d_1$ | Curve(1, t, t, -0.4, 0.3) | ± asymptote limits nucleus existence space |
| Curve $e_1$ | Curve(t, 0.5, t, -1.4, 2) | Curvature limit connect ecloud(−) potential and nucleus(+) potential |
| Curve $f_1$ | Curve(t, 1, t, -1, 1) | Curvature limit nucleus(+) potential, period potential, $M_1$ system potential, approach limit to ecloud(−) ptential |

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## Inside SpaceCurve(1) with protium

I'm uncertain as to reasoning for plotting jump levels across sequential Z#'s as done with sequential average energy curves of orbit.

Element own position on Mendeleev's period table, they are fixed and there they will stay.

I believe we (as humans) exist on surface acceleration. It is that SpaceCurve from which we have evolved. Our place in space requires great energy to lift, suspend, escape the bonds of Galilean uniform acceleration. But humans do so and have done so since early 1900. However, we have not yet found the science of physical regressive 'pass-through' into a solid phase place. We can go 'out' space we can't go 'in' space.

With parametric geometry we can construct familiar potentials which exist everywhere. Curve($a$) is the nucleus existence space. Curve($e$), S&T(3) nucleus potential, graviton property of nucleus ability to acquire accretive candidates of like elements. Curve($e$) accretive intensity is increased by S&T(3) potential curve($d$), the electrical link joining the electron field(−) with the nucleus proton(+); an electromagnetic field. Rest Energy is ground level for the proton. GrounLevel, the Central Force Domain number field.

It is the crossover surface acceleration curve that we change the calculus hierarchy. The discovery curve now becomes the electron cloud, dependent definition curve for the Z number. Two sets of CF potential follow every SpaceCurve along thr CF domain. Classic Big and Quanta Small. Galilean Uniform Acceleration and Sir Issac's Uniform Period Acceleration. In QuantaSpace we have polarity, $(+ \ and \ -)$ and $(N \ and \ S)$. And spin. AlexG

We humans can pass no further. The 'gate' we need to open to find another 'where' is the cold death-like stillness of absolute zero.

Helium: SpaceCurve(2), Z#(2), OrbitCurve(1)

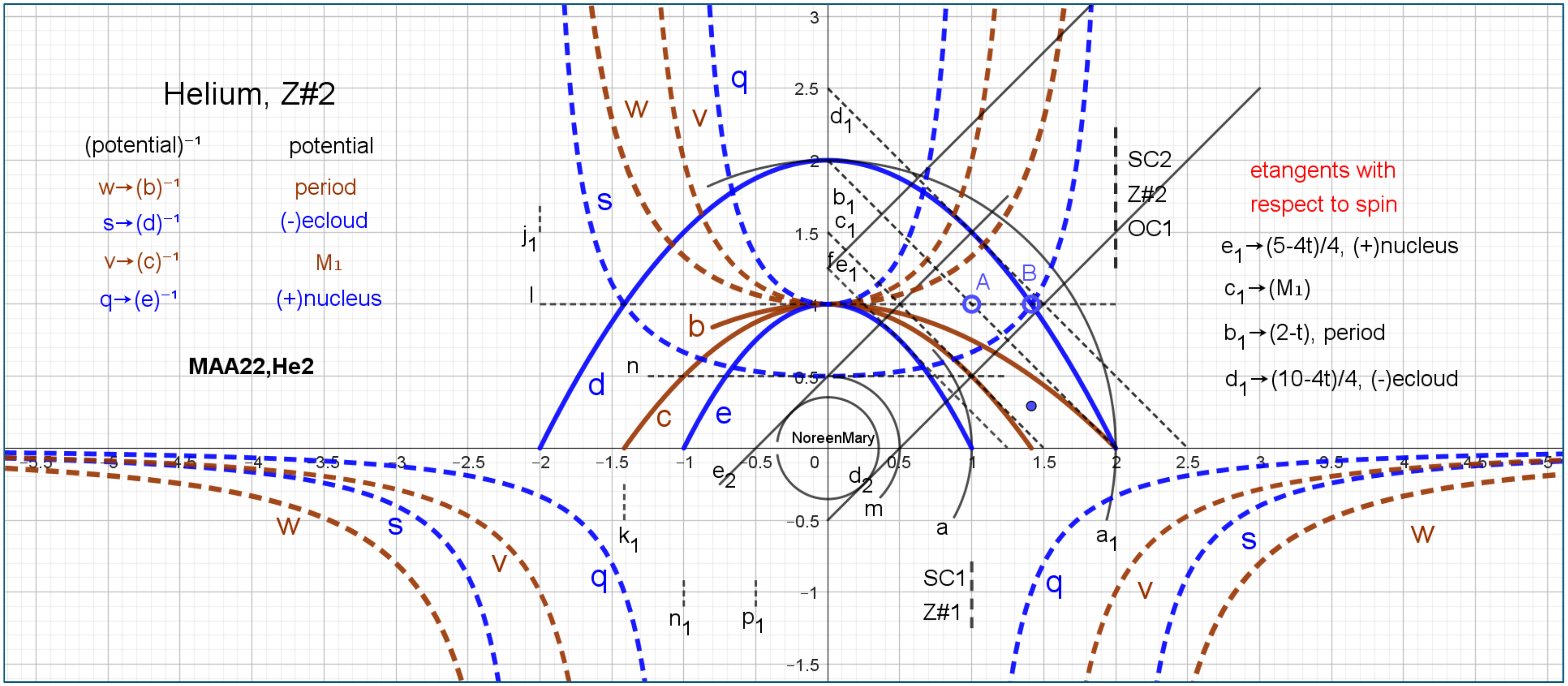


*Figure 3*: Leaving SC(1), moving on to SC(2), Z#(2), and OC(1). Instead of entering our quanta world to explore elements, we leave our surface curve and climb space curves.

## Helium, Z#2, SC(2), OC(2); ALΣXANDΣR

| Name | Description | Caption |
|---|---|---|
| Curve b | Curve(t, $t^2$ / -4 + 1, t, -0.8, 2) | Period curve |
| Curve c | Curve(t, $t^2$ / -2 + 1, t, -sqrt(2), sqrt(2)) | $M_1$ potential curve |
| Curve a | Curve(1cos(t), 1sin(t), t, -0.5, 0.75) | hybrid curve discovery and definition, macrospace and microspace |
| Curve $d_2$ | Curve(sqrt(2) / 4 cos(t), sqrt(2) / 4 sin(t), t, -3, 3) | Binding energy curve He(Z#2) |
| Curve e | Curve(t, $t^2$ / -1 + 1, t, -1, 1) | protium nucleus positive potential |
| Curve d | Curve(t, $t^2$ / -2 + 2, t, -2, 2) | Electron cloud (−) potential |
| Curve $e_2$ | Curve(t, (1 + 2t) / 2, t, -0.75, 1.25) | Etangent normal guide to bond plane |
| Curve $a_1$ | Curve(2cos(t), 2sin(t), t, -0.25, 2) | SpaceCurve(2), Z#(2), OrbitCurve(1) |
| Curve w | Curve(t, $(t^2 / -4 + 1)^{-1}$, t, -6, 6) | Inverse period potential |
| Curve s | Curve(t, $(t^2 / -2 + 2)^{-1}$, t, -6, 6) | Inverse electron cloud (−) potential |
| Curve v | Curve(t, $(t^2 / -2 + 1)^{-1}$, t, -6, 6) | Inverse $M_1$ potential |
| Curve q | Curve(t, $(t^2 / -1 + 1)^{-1}$, t, -6, 6) | Inverse nucleus (+) potential |
| Curve l | Curve(t, 1, t, -2, 2) | Curvature approach limit potential curves (w,v, and q) to ecloud |
| Curve n | Curve(t, 0.5, t, -1.25, 1.25) | Curvature approach limit electron cloud to nuclear binding energy curve |

| | | |
|---|---|---|
| Curve $k_1$ | Curve(-sqrt(2), t, t, -0.5, -0.25) | Asymptote boundary $\pm M_1$ |
| Curve o | Curve(2, t, t, 1.25, 2.25) | Abscissa ID SC(2) |
| Curve p | Curve(1, t, t, -1.25, -0.75) | HemZ#(2) nucleus existence space |
| Point A | | crossover |
| Point B | | crossover |
| Point C | | crossover |
| Curve $n_1$ | Curve(-1, t, t, -1.1, -0.9) | Asymotote boundary nucleus (+)potential |
| Curve $j_1$ | Curve(-2, t, t, 1.5, 1.7) | ±Asymptote limit average energy curve of period |
| Curve $p_1$ | Curve(-0.5, t, t, -1.1, -0.9) | |
| Curve $e_1$ | Curve(t, (5 - 4t) / 4, t, 0, 1.25) | |
| Curve $c_1$ | Curve(t, (6 - 4t) / 4, t, 0, 1.5) | |
| Curve $b_1$ | Curve(t, 2 - t, t, 0, 2) | |
| Curve $d_1$ | Curve(t, (10 - 4t) / 4, t, 0, 2.5) | |
| Curve f | Curve(t, (5 + 4t) / 4, t, 0, 2) | |
| Curve g | Curve(t, (-1 + 2t) / 2, t, 0, 3) | |

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QED: QuantaSmall ↔ ClassicBig SpaceCurve(2)

## Lithium: SpaceCurve(3), Z#(3), OrbitCurve(2)

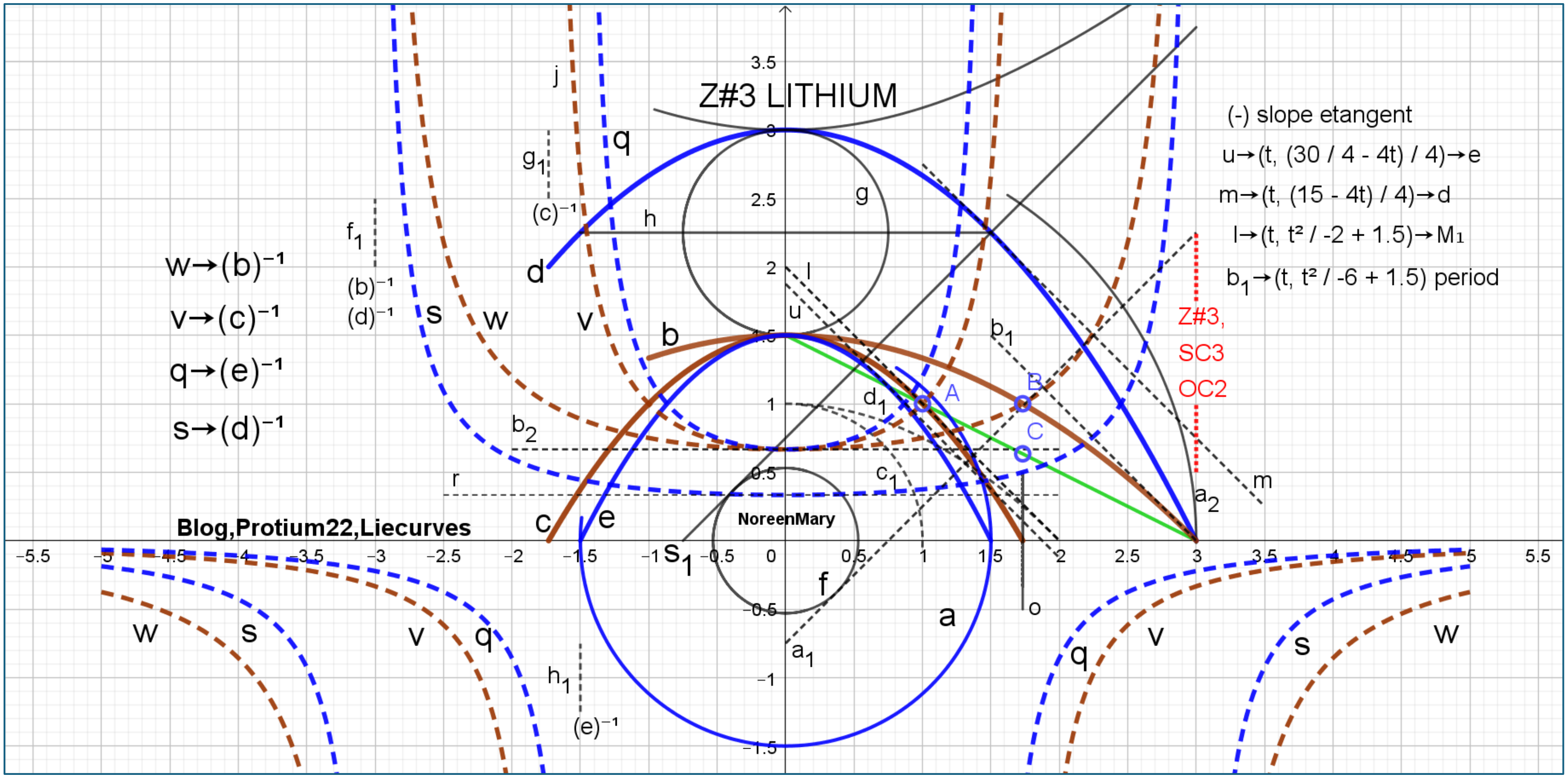


*Figure 4*:Lithium our tech energy source. Z#(3), SC(3), OC(2).

# Li,SC3,Z#3,orbit(2) and inverse index solution curves

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| Name | Description | Caption |
|---|---|---|
| Curve $c_2$ | Curve(t, $t^1$ / -2 + 3 / 2, t, 0, 3) | surface acceleration curve SC1 |
| Curve d | Curve(t, $t^2$ / -3 + 3, t, -sqrt(3), 3) | potential curve electron cloud |
| Curve g | Curve(0.75cos(t) + 0, 0.75sin(t) + 9 / 4, t, -5, 5) | electron cloud potential curve neighborhood P |
| Curve h | Curve(t, 9 / 4, t, -3 / 2, 3 / 2) | electron cloud potential curve lattice rectum |
| Curve i | Curve(3sqrt(2) / 8 cos(t), 3sqrt(2) / 8 sin(t), t, -5, 5) | binding energy curve lithium nucleus |
| Curve j | Curve(t, sqrt(9 + $t^2$), t, -1.5, 6) | shaping hyperbola used to find bond platform. |
| Curve a | Curve(t, $t^2$ / -2 + 1.5, t, -sqrt(3), sqrt(3)) | surface acceleration potential for M1 |
| Curve $a_1$ | Curve(1.5cos(t), 1.5sin(t), t, -5, 1) | discovery curve space curve 3 |
| Curve m | Curve(t, (3 + 4t) / 4, t, -0.75, 3) | etangent normal connect Never.with Bond platform. |
| Curve $a_2$ | Curve(3cos(t), 3sin(t), t, -0.01, 1) | space curve 3 Z #3 orbit curve 2 |
| Curve b | Curve(t, $t^2$ / -6 + 1.5, t, -1, 3) | period time curve Orbit curve 2. |
| Curve c | Curve(t, $t^2$ / -1.5 + 1.5, t, -1.5, 1.5) | lithium nucleus potential |

| | | |
|---|---|---|
| Point A | | crossover |
| Point B | | Crossover. |
| Point C | | Crossover. |
| Curve $c_1$ | Curve(cos(t), sin(t), t, -0.05, 1.5) | discovery curves space curve 2 |
| Curve $d_1$ | Curve(t, $t^2$ / -4 + 1, t, 0, 2) | period time curve orbit curve one |
| Curve e | Curve(t, ($t^2$ / -2 + 1.5)$^{-1}$, t, -5, 5) | inverse potential M1 surface acceleration |
| Curve f | Curve(t, ($t^2$ / -6 + 1.5)$^{-1}$, t, -5, 5) | inverse potential period time curve 2 orbit 2 |
| Curve p | Curve(t, ($t^2$ / -1.5 + 1.5)$^{-1}$, t, -5, 5) | inverse Positive.potential that the nucleus. |
| Curve q | Curve(t, ($t^2$ / -3 + 3)$^{-1}$, t, -5, 5) | inverse and negative potential lithium electron cloud |
| Curve r | Curve(t, 1 / 3, t, -2.5, 2) | curvature limit electron cloud encroachment |
| Curve $b_1$ | Curve(t, 2 / 3, t, -2, 2) | curvature limit |
| Curve $e_1$ | Curve(3 / 2 cos(t), 3 / 2 sin(t), t, -0.01, 1.5) | > |
| Curve $f_1$ | Curve(-3, t, t, 2, 2.5) | asymptote limit inverse potential period time curve |
| Curve $g_1$ | Curve(-sqrt(3), t, t, 2.5, 3) | essential limit M1 potential |
| Curve $h_1$ | Curve(-1.5, t, t, -1.25, -0.75) | asymptote limit to |

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beryllium: SpaceCurve(4), Z#(4), OrbitCurve(3) 1/12/25.13:45

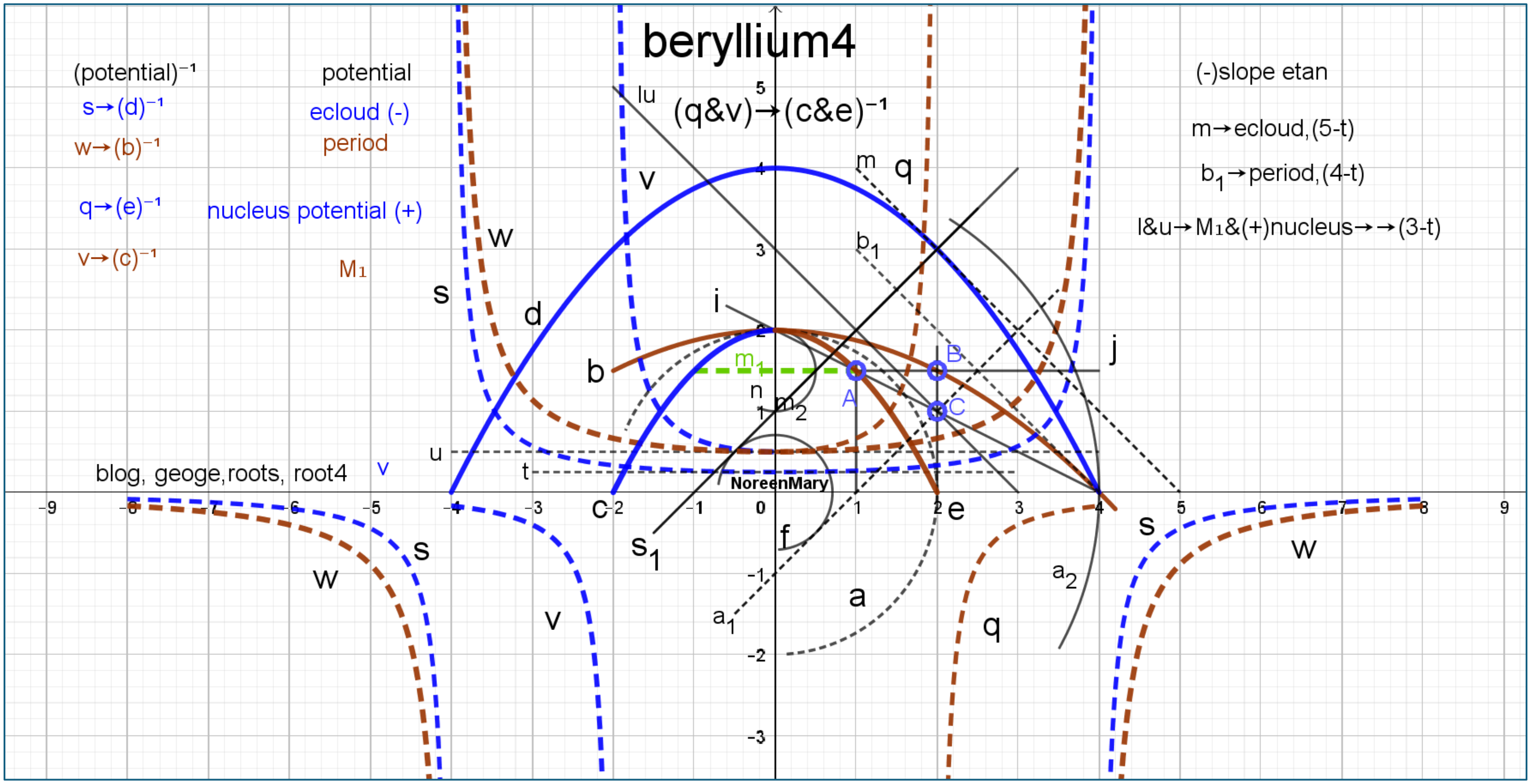


*Figure 5*: Beryllium. Z#(4), SC(4), OC(3). Beryllium is the first number not prime but a perfect square: $(\sqrt[2]{4})$. Two fields become one. (v and q). I color (v&q) brown and blue. Could this be coincidence? Our orbit space makes our existence a square space happening! The working of God's Mind? SpaceCurve(4) OrbitCurve(3)! M1 potential is an *inverse square property*!

**dealing with ME curves of integer(4) Z#4, SC4, and OC3**

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| **Name** | **Description** | **Caption** |
|---|---|---|
| Curve b | Curve(t, $t^2$ / -8 + 2, t, -2, 4.2) | Period curve SC($) OC(3) |
| Curve c | Curve(1 / 4, t, t, -0.5, 0.5) | |
| Curve e | Curve(t + 17 / 8, $t^2$ / (-14 / 2) + 4 / 8, t, -15 / 8, 15 / 8) | |
| Curve $m_1$ | Curve(t, 1.5, t, -1, 1) | $M_1$ potential curve latus rectum chord |
| Curve $d_1$ | Curve(1, t, t, 0, 1.6) | |
| Curve g | Curve(sqrt(4), t, t, -0.2, 1.8) | |
| Curve h | Curve(t + 3, (-$t^2$) / -2 - 0.5, t, -1, 1) | |
| Curve i | Curve(t, $t^1$ / -2 + 2, t, -0.6, 4) | Registration SC(4) OC(3) with spin |
| Point A | | Crossover |
| Point B | | crossover |
| Point C | | crossover |

| | | |
|---|---|---|
| Curve j | Curve(t, $t^0$ / -2 + 2, t, 1, 4) | Rest energy discovery(j) |
| Curve k | Curve(1cos(t), 1sin(t), t, -3, 4) | |
| Curve l | Curve(t, $t^2$ / 2 - 1, t, -0.5, 4) | |
| Curve n | Curve(1 / 2 cos(t), 1 / 2 sin(t) + 1.5, t, -2, 2) | Closed neighborhood(p) $M_1$ potential |
| Curve d | Curve(t, $t^2$ / -4 + 4, t, -4, 4) | (-) potential electron cloud |
| Curve $s_1$ | Curve(t, 1 + t, t, -1.5, 2.5) | Ecloud etan normal connect with bond plane |
| Curve q | Curve(t, $(t^2 / -2 + 4 / 2)^{-1}$, t, 0, 4) | (+)nucleus potential curve inversed |
| Curve v | Curve(t, $(t^2 / -2 + 4 / 2)^{-1}$, t, -4, 0) | $M_1$ potential curve inversed |
| Curve f | Curve(1 / sqrt(2) cos(t), 1 / sqrt(2) sin(t), t, -1.5, 3) | Z#(4) binding energy curve |
| Curve a | Curve(2cos(t), 2sin(t), t, -1.5, 2.75) | Hybrid curve: Z#, SC(#), OC(#) discovery SC(#) |
| Curve s | Curve(t, $(t^2 / -4 + 4)^{-1}$, t, -8, 8) | (-) ecloud potential inversed |
| Curve t | Curve(t, 1 / 4, t, -3, 3) | Curvature limit ecloud encroachment on binding energy curve |
| Curve u | Curve(t, 1 / 2, t, -4, 4) | Curvature limit for potential(s) (w, v, q) invasive nucleus existence space |
| Curve w | Curve(t, $(t^2 / -8 + 4 / 2)^{-1}$, t, -8, 8) | Potential of period curve inversed |
| Curve $a_2$ | Curve(4cos(t), 4sin(t), t, -0.5, 1) | SC(4), OC(3) |
| Curve $a_3$ | Curve(t, $t^2$ / -2 + 4 / 2, t, -2, 0) | Split potentisl $M_1$ |

| | | |
|---|---|---|
| Curve $f_1$ | Curve(t, t² / -2 + 4 / 2, t, 0, 2) | Split potential (+) nucleus |
| Curve $a_1$ | Curve(t, -1 + t, t, -0.5, 3.5) | Etan normal (c&e)????? |
| Curve $m_2$ | Curve(t, 1 + t, t, 0, 3) | |
| Curve m | Curve(t, 5 - t, t, 1, 5) | |
| Curve $b_1$ | Curve(t, 4 - t, t, 1, 4) | |
| Curve lu | Curve(t, 3 - t, t, -2, 3) | |

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dealing with ME curves of integer(4)Z#4, SC4, and OC3

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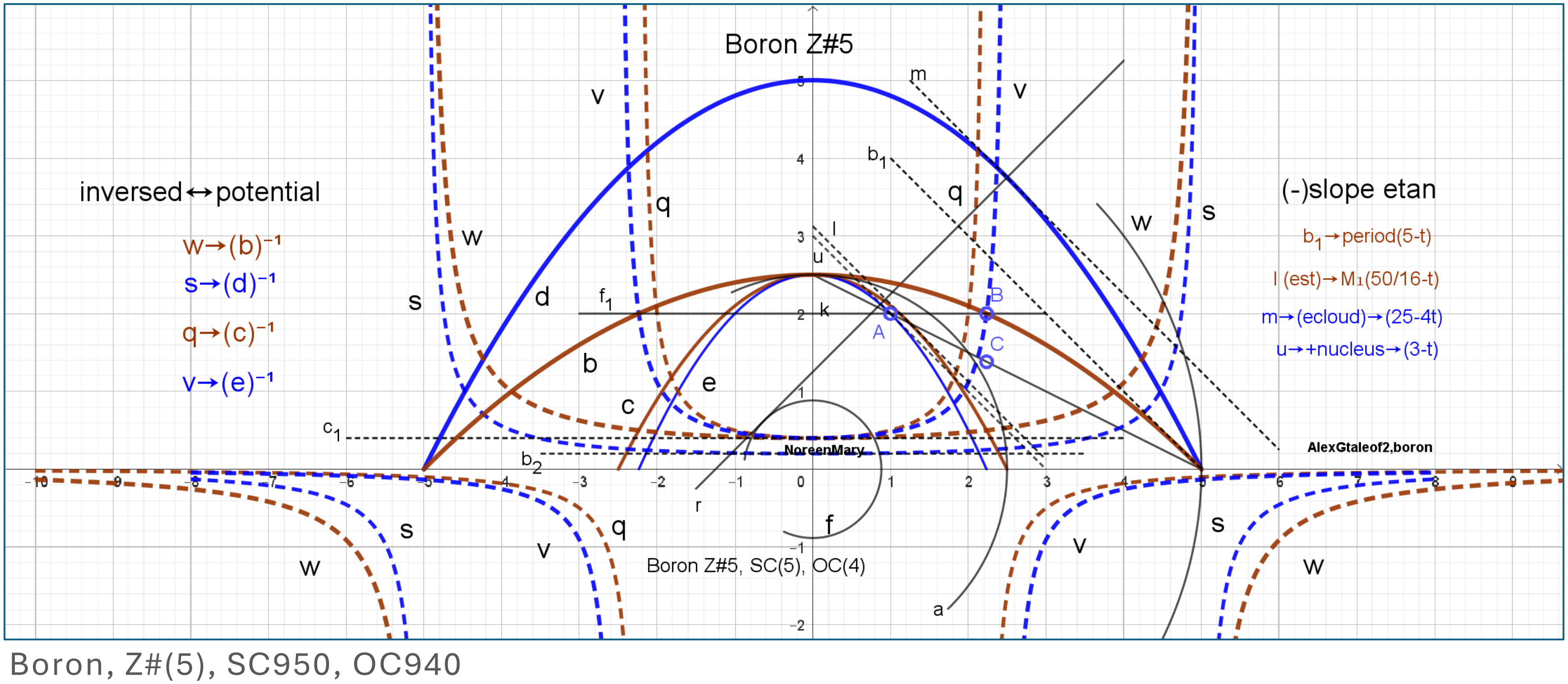


*Figure 6*: Boron: Z#(5), SC(5), OC(4)

boron: SpaceCurve(5), Z#(5), OrbitCurve(4)

**BORON Z#(5),SC(5), OC(4)**

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| **Name** | **Description** | **Caption** |
|---|---|---|
| Curve f | Curve(5 / (4sqrt(2)) cos(t), 5 / (4sqrt(2)) sin(t), t, -2, 3) | binding energy curve of boron |
| Curve i | Curve(t, $(t^2 / -5 + 5)^{-1}$, t, -7, 7) | |
| Curve j | Curve(t, $(t^2 / 5 - 5)^{-1}$, t, -7, 7) | |
| Curve $k_1$ | Curve(5, t, t, -7, 7) | |
| Curve $m_1$ | Curve(sqrt(5), t, t, -3, 3) | |
| Curve $l_1$ | Curve(t, $(t^2 / -8 / 5 + 5 / 2)^{-1}$, t, -12, 12) | |
| Curve n | Curve(10, t, t, -6, 6) | |
| Curve o | Curve(-10, t, t, -6, 6) | |
| Curve p | Curve(t, $(t^2 / 8 / 5 - 5 / 2)^{-1}$, t, -12, 12) | |
| Curve $q_1$ | Curve(sqrt(10), t, t, 3, 6) | |

| | | |
|---|---|---|
| Curve c | Curve(t, $t^2$ / -2.5 + 2.5, t, -2.5, 2.5) | system potential $M_1$ |
| Curve e | Curve(t, $t^2$ / -2 + 5 / 2, t, -sqrt(5), sqrt(5)) | (+) potential Z#(5) nucleus |
| Point A | | crossover |
| Point B | | Crossover. |
| Curve k | Curve(t, $t^1$ / -2 + 5 / 2, t, 0, 5) | registration space curve 5 orbit curve four with spin |
| Curve d | Curve(t, $t^2$ / -5 + 5, t, -5, 5) | (-) potential electron cloud |
| Point C | | crossover |
| Curve q | Curve(t, $(t^2 / -2 + 5 / 2)^{-1}$, t, -10, 10) | $M_1$ system potential inversed |
| Curve w | Curve(t, $(t^2 / -10 + 2.5)^{-1}$, t, -10, 10) | orbit curve four period curve inversed. |
| Curve v | Curve(t, $(t^2 / -2.5 + 2.5)^{-1}$, t, -8, 8) | (+) potential Z#(5) inversed |
| Curve s | Curve(t, $(t^2 / -5 + 5)^{-1}$, t, -8, 8) | (-) potential ecloud inversed |
| Curve $b_2$ | Curve(t, 1 / 5, t, -3.5, 3.5) | curvature limit electron cloud encroachment on binding energy curve |
| Curve $c_1$ | Curve(t, 2 / 5, t, -6, 4) | Invasive curvature limit on nucleus space of potential (w, v, p) Inverse. |
| Curve r | Curve(t, (5 + 4t) / 4, t, -1.5, 4) | Electron cloud etan normal connect with bond plane. |
| Curve b | Curve(t, $t^2$ / -10 + 2.5, t, -5, 5) | SC5 period curve for orbit curve 4. |

| | | |
|---|---|---|
| Curve $a_1$ | Curve(5cos(t), 5sin(t), t, -0.5, 0.75) | space curve 5 ecloud Z#5 |
| Curve a | Curve(5 / 2 cos(t), 5 / 2 sin(t), t, -0.8, 2) | discovery curve space curve 5 |
| Curve m | Curve(t, (25 - 4t) / 4, t, 1.25, 6) | etangent electron cloud |
| Curve $b_1$ | Curve(t, 5 - t, t, 1, 5) | Slope(±) etan period curve. |
| Curve u | Curve(t, 3 - t, t, 0, 3) | (±) etan nucleus potential curve |
| Curve $f_1$ | Curve(t, 2, t, -3, 3) | Rest energy discovery(a) |
| (Curve l | Curve(t, 50 / 16 - t, t, 0, 3) | (±)1 e tan slope for $M_1$ potential (estimated) |

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CARBON Z#6

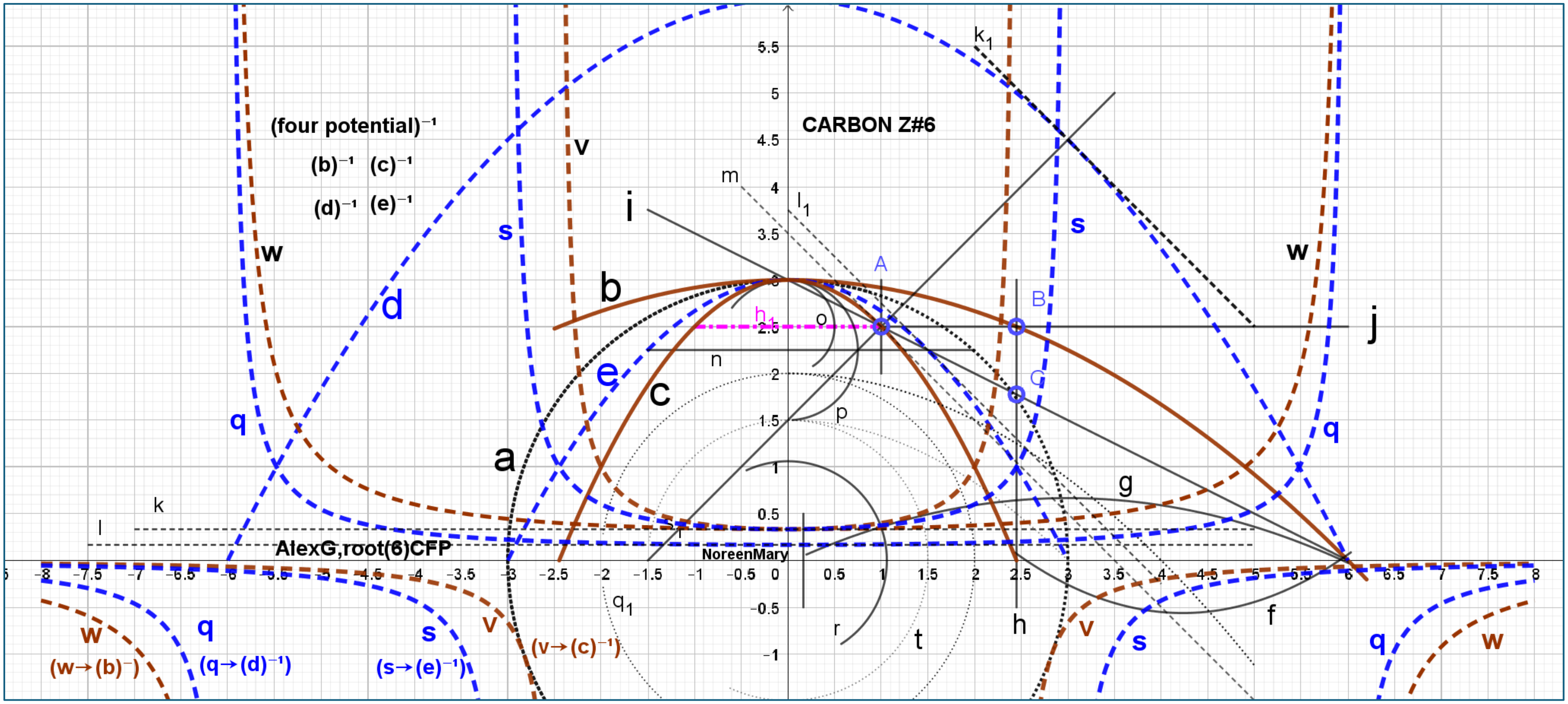


*Figure 7*: CarbonZ#(6), SpaceCurve(6), OrbitCurve(5). System potential curves are 4. Inverse potential curves are 4. Energytangent curves are 3.

dealing with mechanical ecurves integer(6)

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| Name | Description | Caption |
| --- | --- | --- |
| Curve a | Curve(3cos(t), 3sin(t), t, -5, 5) | space curve(6) hybrid discovery |
| Curve b | Curve(t, $t^2$ / -12 + 3, t, -2.5, 6.2) | period time Orbit curve(5). |
| Curve $c_1$ | Curve(1 / 6, t, t, -0.5, 0.5) | curvature value displacement orbit(5) via SpaceCurve(6) |
| Curve $d_1$ | Curve(1, t, t, 2, 3) | abscissa ID Galileo's first second tile |
| Curve g | Curve(t + 3, $t^2$ / -13 + 4 / 6, t, -2.8, 3) | curvature, inverse connection. |
| Curve i | Curve(t, $t^1$ / -2 + 3, t, -1.5, 6) | registration OrbitCurve(5) with $(M_1)$ spin |
| Curve f | Curve(t + 4.23, ($-t^2$) / -5 - 9 / 16, t, -1.8, 1.8) | Sir Isaac Newton's inverse square connection |
| Point A | | crossover. |
| Point B | | Crossover. |
| Point C | | Crossover. |
| Curve h | Curve(sqrt(6), t, t, -0.5, 3) | Abscissa ID $\sqrt[2]{6}$ |
| Curve $h_1$ | Curve(t, 5 / 2, t, -1, 1) | Latus rectum $(M_1)$ degree(2) potential. |
| Curve j | Curve(t, $t^0$ / -2 + 3, t, 1, 6) | risk energy discovery$(a)$ |
| Curve d | Curve(t, $t^2$ / -6 + 6, t, -6, 6) | negative potential electron cloud |
| Curve e | Curve(t, $t^2$ / -3 + 3, t, -3, 3) | positive potential nucleus existence space. |
| Curve n | Curve(t, 9 / 4, t, -1.5, 2) | latus rectum positive potential nucleus existence space |
| Curve o | Curve(0.5cos(t), 0.5sin(t) + 5 / 2, t, -1, 2) | Neighborhood$(p)$ $(M_1)$ potential |
| Curve p | Curve(0.75cos(t), 0.75sin(t) + 9 / 4, t, -1.5, 2.5) | Neighborhood$(p)$ nucleus existence space positive potential. |
| Curve $q_1$ | Curve(2cos(t), 2sin(t), t, -3, 3) | discovery curve space curve(4) derived from $(M_1)$ potential SpaceCurve(6) neighborhood$(p)$ |

| | | |
|---|---|---|
| Curve r | Curve(3 / (2sqrt(2)) cos(t), 3 / (2sqrt(2)) sin(t), t, -1, 2) | Z#(6) nuclear binding energy curve |
| Curve $s_1$ | Curve(t, (3 + 2t) / 2, t, -1.5, 3.5) | etangent normal connect with Z#(6) bond plane. |
| Curve t | Curve(1.5cos(t), 1.5sin(t), t, -2, 3) | Discovery space curve(3)via nucleus existence($t$) via potential($e$) latus rectum(n) of neighborhood($p$) curve($p$) |
| Curve c | Curve(t, $t^2$ / -2 + 3, t, -sqrt(6), sqrt(6)) | ($M_1$) system potential control SpaceCurves(6) |
| Curve u | Curve(t, $t^2$ / -8 + 2, t, 0, 5) | period time curve OrbitCurve(3). SpaceCurve(4). |
| Curve $v_1$ | Curve(t, $t^2$ / -6 + 1.5, t, 0, 3) | Period time curve SpaceCurve(3) OrbitCurve(2) |
| Curve w | Curve(t, $(t^2 / -12 + 3)^{-1}$, t, -8, 8) | period time curve(b) potential inversed. |
| Curve v | Curve(t, $(t^2 / -2 + 3)^{-1}$, t, -8, 8) | ($M_1$) potential field inverse. |
| Curve q | Curve(t, $(t^2 / -6 + 6)^{-1}$, t, -8, 8) | electron field negative potential inverse |
| Curve s | Curve(t, $(t^2 / -3 + 3)^{-1}$, t, -8, 8) | nucleus positive potential field inverse |
| Curve k | Curve(t, 1 / 3, t, -7, 5) | curvature encroachment limit nucleus positive potential. |
| Curve l | Curve(t, 1 / 6, t, -7.5, 5) | curvature encroachment limit electron field(d) with nucleus positive field(e) |
| Curve $k_1$ | Curve(t, (15 - 2t) / 2, t, 2, 5) | etangent with electron negative potential curve(d) |
| Curve $l_1$ | Curve(t, (15 - 4t) / 4, t, -0, 4) | etangent with nucleus positive potential |
| Curve m | Curve(t, 3.5 - t, t, -0.5, 6) | etangent potential with ($M_1$). |

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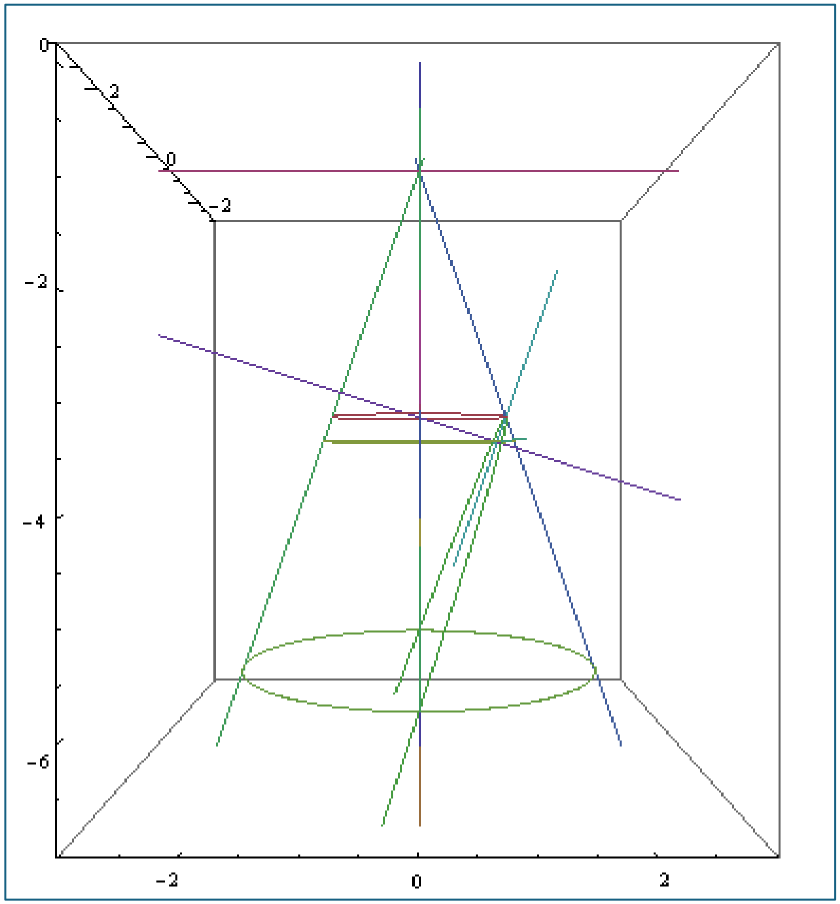



Using computer parametric geometry code to construct the focus of an Apollonian parabola section within a right cone.

"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.

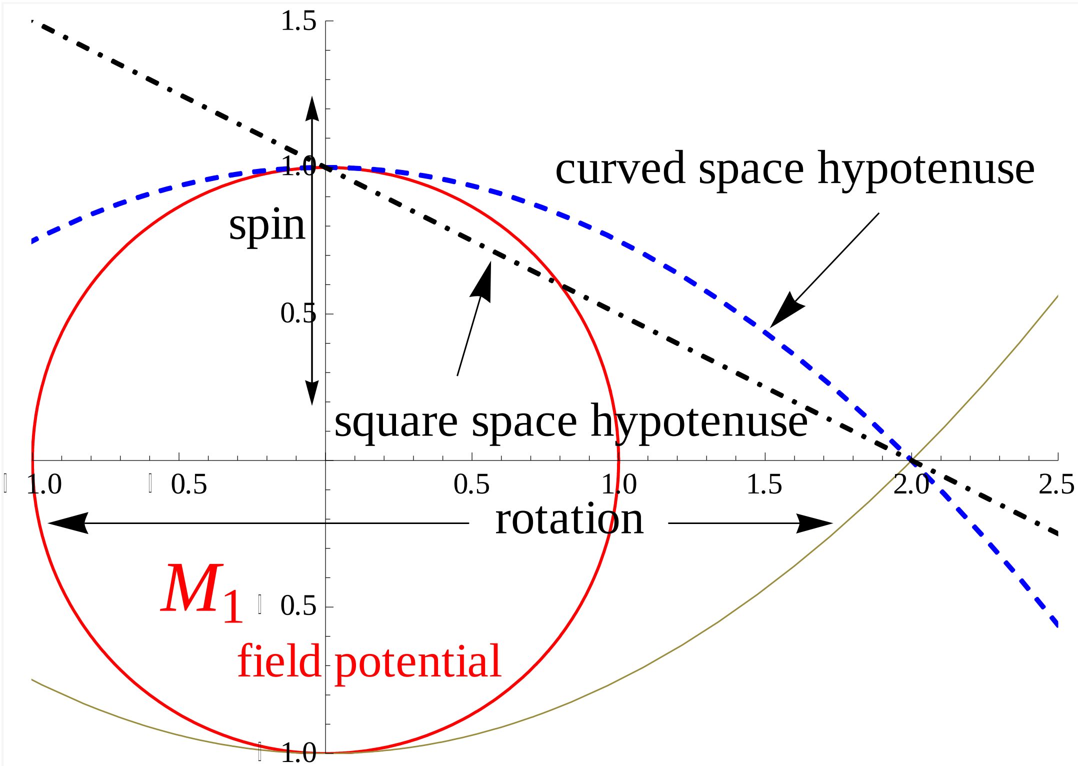

alexander@sandboxgeometry.com

The computer is my sandbox, the unit circle my compass, and the focal radius of the unit parabola my straight edge.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC

CAGE FREE THINKIN' FROM THE SAND BOX

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 mechanical energy curves.




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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SANDBOX GEOMETRY WEB SITES:

1. (sandboxgeometry.com) Oldest site, untouched since inception by Betsy Labelle; 1st Q 2011 (no longer web master).
2. (sandboxgeometry.info) my Blog/Diary.
3. (sandboxgeometry.org) Dated record of abstract presentation. A learning curve so to speak; about CSDA development.
4. (sandboxgeometry.net) unused.

BIBLIOGRAPHY (21st Century internet used extensively as well as smart lookup for language word utility and *fit*).

*Mathematica* References:

1. The *Mathematica* Book (version 4, 4th edition). Stephen Wolfram
Cambridge University Press
2. Modern Differential Geometry of Curves and Surfaces with *Mathematica*
Alfred Grey; CRC Press.
3. The Beginners Guide to *Mathematica* (version 4)..Jerry Glynn, Theodore Gray
Cambridge University Press

Data Reference for our Planet Group:

4. Hand Book of Chemistry and Physics (64th Edition, 1983-1984) *CRC* Press
5. Exploration of the Universe. George Abell;

Holt, Rinehart, and Winston; 1968

Geometry:

6. A History of Greek Mathematics, Volume I & II. Sir Thomas Heath; 1921
Republished by Dover Science Books; 1981
7. Research & Education Association PROBLEM SOLVERS, Plane, Solid, and Analytic Geometry
8. Elements of Plane and Spherical Trigonometry. Daniel A. Murray; Longmans, Green, And Co.; 1912
9. Plane Geometry. Betz and Webb, Ginn And Company; 1912
10. Analytic Geometry; Drs. Wilson and Tracey. D C Heath and Co.; 1925

Physics:

11. Adventures in Physics; Highsmith & Howard. WB Saunder and Co. 1972
12. Physics, Hausmann & Black, D. Van Nostrand Company; 1939
13. A Contemporary View of Elementary Physics, Borowitz & Bornstein McGraw-Hill; 1968

Mathematics:

14. Research and Education Association; The Vector Analysis Problem Solver

15. Algebra, Trigonometry, and Analytic Geometry; Rees and Sparks.
McGraw-Hill; 1967

16. Calculus of a Single Variable; Larson, Hostetler, Edwards. Houghton Mifflin Co
1998

17. Research and Education Association; Calculus Problem Solver

18. Analytic Geometry and the Calculus; A. W. Goodman. Macmillan Publishing Co
1974

19. Calculus with Analytic Geometry; Louis Leithold-USC; Harper and Row 1968
My first Calculus Text Book; Thank you Mr. Louis Leithold.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC

CONCLUSION

7/5/2018 Finally finished lifetime pursuit 1st winter 2018

Posted on June 29, 2018 by admin

Started Web Publishing March 2010. My daughter Michelle set up first foray. Last summer, after 7 years of no comment from academia, after repeated rejection from 21st century publishing venue, I decided I would write my innovative discovery geometry about Central Force Energy Curves using 5 computer languages, targeting general public interest, hopefully catching a publisher. The code, in order of utilization, Mathematica, Texas Instrument n-spire, Sage, GeoGebra, and Maple. Got the first three done, started with GeoGebra while awaiting approval from Maple to use their CAS.
I first encountered GeoGebra 2011 mini-course offered @MAA Summerfest. Learned quickly static math, could not do dynamic math till 2017 summer efforts. Wow, what a CAS!

Anyway, I was off and running! GeoGebra dynamic math knitted loose ends cluttering my imagination into spectacular order! i was able to see all aggregate human knowledge, using the pearls of discovery, providing a reasonable philosophy, to be understood by all, helped, of course with 21st century computer technology!

I post my cover page, purposely using Sir Isaac Newton's famous title, only as a suggested philosophical addendum, a continuation of a phenomenal line of thought using plane geometry lines and curves, souped up with his and Gottfried Wilhelm Leibniz, the Calculus.

Don't claim to know a lot about anything specific, just a general cognizance of 74 years human curiosity. I become octogenarian March 14, 1944

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