A SYNOPSIS ON READING, CONSTRUCTING, AND ANALYZING

CENTRAL FORCE MECHANICAL ENERGY CURVES.

A SandBoxGeometry Philosophical Exploration.

Dedicated to our families, gone and here.

Alexander and Noreen M Garron, nee
Noreen Mary Spicer,
how fortunate I am to have and hold her these past 56 years!

ALΣXANDΣR; CAGE FREE THINKIN' FROM THE SAND BOX

Left blank for a reason. Criticism, correction, congratulations, thank you, anything else that I might pull my way.

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13 pages, 1900 words. 9/3/24.00:39

The following construction is a combined system. Orbit 6 and SpaceCurve(7) are green Gravity field ME curve(s). Let Z#(7), the element Neon overlay be blue hash line. BigSpace SmallSpace; I'll put'em together.
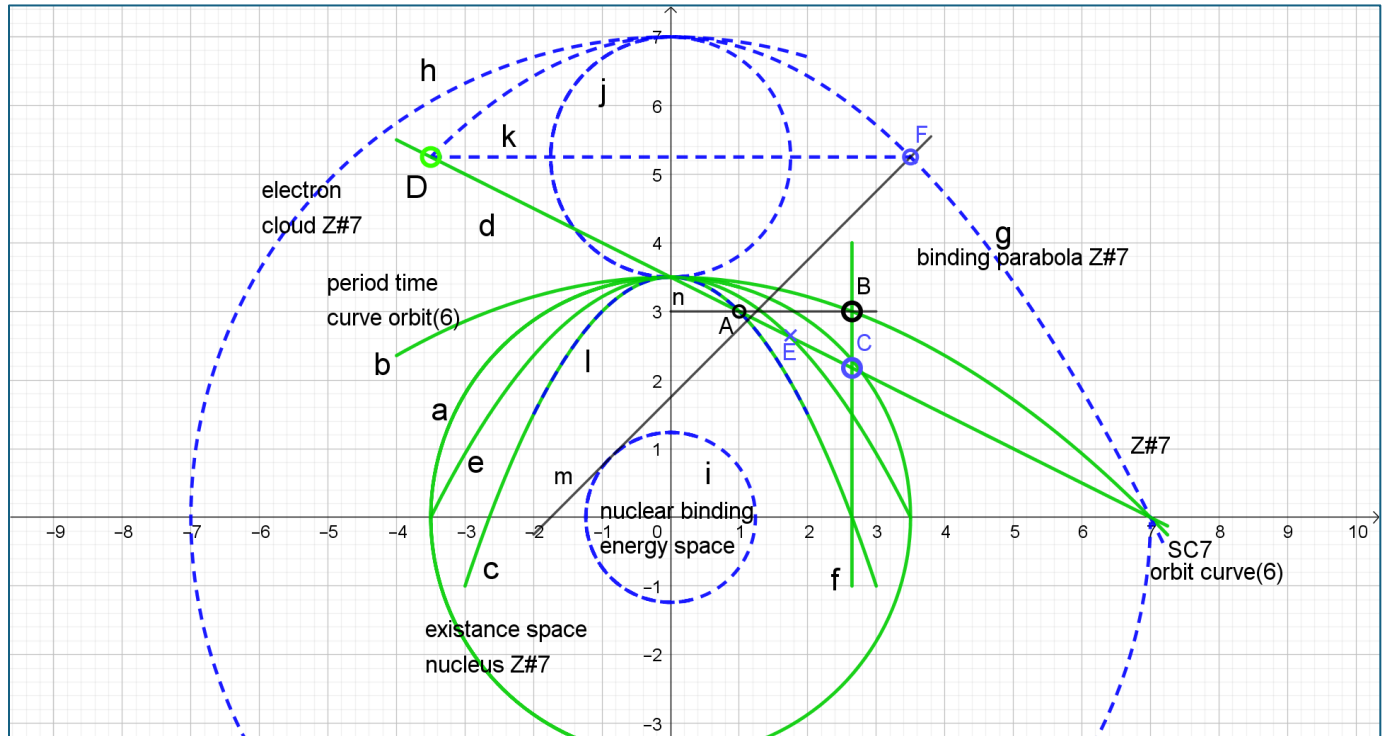

Figure 1: Let (M_1M_2) happenings be green with Quantum Field Z#7 happenings as blue.

Energy tangent normal(m) produced leads to Z#(7) spin bond plane. Note, Quantum Latus Rectum(k) endpoint(F) and etangent normal(m) *tangency* with nuclear binding energy curve(i), are the two points needed to find bond ring center, for pairing two like elements along a shared spin axis and bond plane.

Latus Rectum(n) positive endpoint, collects a whole bunch of stuff @ Crossover(A), which is positive end point of latus rectum(n). Finding rest energy discovery curve(a) one-half point down on (M_1) spin axis, Galileo's first second tile @domain integer(1), registration curve(d) connecting (M_2) average energy diameter orbit curve(6) with (M_1) spin enabling (M_1M_2) system to go live by empowering period time curve(b) with (M_1) system potential curve(c).

Curve(h) is a quantum world ecloud definition sourced from existence space of nitrogen Z#7 nucleus, Quantum curve(a). Let Quantum curve(a) be expressed as $\left(\frac{7}{2}\right)$. When travelling from surface acceleration *out-to* macro-Infinity, a discovery curve is 1/2 definition curve, or $\left(\frac{7}{2}\right)$units of space. When traveling from surfaces acceleration *into* micro Infinity, the electron cloud to be combined with nucleus existence space quantum discovery curve(a), is twice quantum discovery curve(a) and becomes Z#7, element Neon.

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Name	Description	Value	Caption
Curve a	Classic: S&T2 discovery curve(a)	S&T2 curve(a) : $\left(\frac{disp}{2}\cos(t),\frac{disp}{2}\sin(t)\right)$	Classic Discovery curve
Curve b	Classic: period time curve(b) M_2	S&T2 curve(b): $\left(t,\frac{t^2}{-4(p)}+discovery,\; where\;(p)=disp/2\right)$	Classic Definition curve
Curve a	Quantum: Z#7 Nucleus existence space curve(a)	$\left(\frac{Z\#}{2}\cos(t),\frac{Z\#}{2}\sin(t)\right)$	Quantum Discovery curve
Curve h	Quantum: Definition Z#7 electron cloud(h)	$Z\#\cos(t),Z\#\sin(t)$	Quantum Definition curve
Curve e	Quantum: binding parabola(e) nucleus with electron cloud system potebtial	Quantum: $\left(t,\frac{t^2}{-2}+\frac{SC}{2}\right)$	Nucleus existence space binding parabola link with electron cloud
Curve f	Classic:	Abscissa ID square root of SC7, S&T2 displacement(integer(7))	$(\sqrt{7},t,t,-1,4)$
Curve g	Quantum:	Binding parabola(g) Z#7	$\left(t,\frac{t^2}{-7}+7\right)$
Curve j	Quantum:	neighborhood(p) binding parabola(g)	$\left(\frac{Z\#}{4}\cos(t),\frac{Z\#}{4}\sin(t)+focus\right)$
Curve k	Quantum:	latus rectum binding parabola(g)	$\left(t,\frac{21}{4},t,\frac{-7}{2},\frac{7}{2}\right)$
Curve c	Curve(t, t² / -2 + 7 / 2, t, -2, 2)	c: $S\&T2$ (M_1) system potential	$\left(t,\frac{t^2}{-4(p=0.5)}+\frac{SC(7)}{2}\right)$
Curve l		Redundant; same as curve(c)	
Point A	CrossOver, Galileo 1ˢᵗ sec tile	A = (1, 3)	$\left(Galileo1stsec,\frac{t^0}{-2}+\frac{SC(7)}{2}\right)$
Point B	CrossOver	B = (√7, restenergy S&T2 discovery(a))	$\left(\sqrt{7},\frac{t^0}{-2}+\frac{SC(7)}{2}\right)$
Curve d	Curve(t, t¹ / -2 + 3.5, t, -4, 7.25)	S&T2 curve(d): linear registration displacement with (M_1) spin.	$\left(t,\frac{t^1}{-2}+\frac{SC(7)}{2},t,-4,7.25\right)$

Point D	Negative side quantum latus rectum binding para(g)	D = (-3.5, 5.25)	
Point C	CrossOver	Links S&T2 registration with ($\sqrt{SC7}$) period time curve(b) and restenergy discovery(a)	$\left(\sqrt{SC(7)}, \dfrac{SC(7)}{2} - \dfrac{\sqrt{SC(7)}}{2}\right)$
Point E	Intercept Quantum nucleus binding parabola(e) with S&T2 SpaceCurve(7) registration	$E = \left(\dfrac{7}{2}, \dfrac{21}{8}\right)$	?Quantum curved space parametric link with square space
Curve i	Quantum:	Curve(i): binding energy curve of the Z#7 nucleus	$\left(Z\# * \dfrac{\sqrt{2}}{8}\right)\cos(t),$ $\left(Z\# * \dfrac{\sqrt{2}}{8}\right)\sin(t)$
Curve m	Quantum:	binding parabola(g) etangent normal connect with electromagnetic bond plane.	$\left(t, t + \dfrac{Z\#}{4}\right)$
Point F	Quantum:	F = (3.5, 5.25)	Central Force command of SquareSpace accretion domain
Curve n	Quantum	+ side quantum latus rectum	+side quantum latus rectum

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Sir Isaac Newton' [displacement[(2), SC#2, orbit curve(1), and Z#1) meets S&T3 quantum protium. Almost

On occasion I used the term displacement. This is because my previous S&T2 studies (34years) concerned Sir Isaac Newton's square space geometry. I find square space displacement to be a physics Triumvirate of numbers. Displacement term as a SpaceCurve number from spin, and orbit number. S&T3 brings Z#. Clear and concise CurvedSpace parametrics require all three monikers need post specific properties when analyzing curved space mechanical energy. Both big and small happenings.

Sir Isaac Newton S&T2: this construction concerns displacement(2) from (M_1) spin axis. Displacement 2 has three identities.

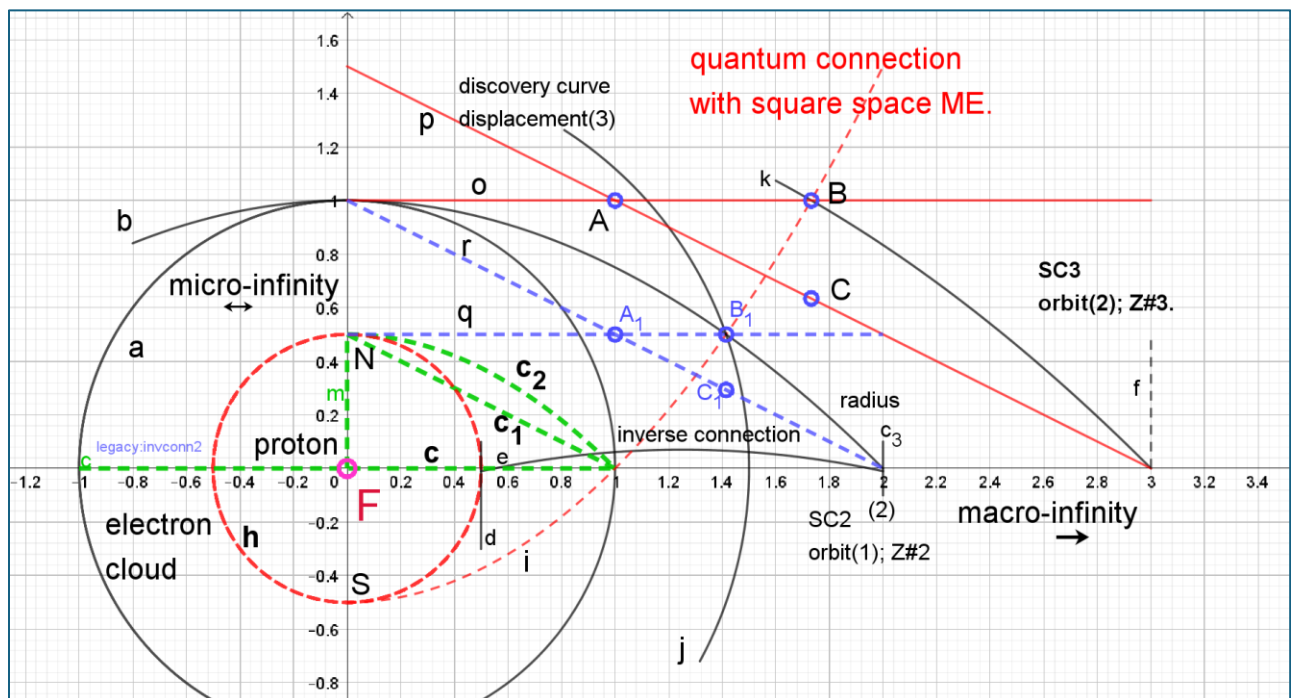1. Space Curve(2)
2. Orbit Curve(1)
3. Z#(2)

Figure 2: note two CrossOver triangles. CrossOver (ABC) is the parametric path to get from SpaceCurve(3), orbt curve(2) to spin axis and find S&T2 discovery curve(a) registration(r) of SpaceCurve(2) and orbit curve(1). CrossOver $(A_1B_1C_1)$ is parametric path to (M_1) surface acceleration curve S&T2 curve(a).

Sir Isaac Newton' displacement(2) meets quantum protium

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Name	Description	Value	Caption
Curve a	Curve(cos(t), sin(t), t, -5, 5)	Basic CSDA discovery curve @unityradius. (M_1) surface acceleration curve.	
Curve c_3	Curve(2, t, t, -0.1, 0.1)	c_3: Central force displ radius 2 units, SC2, orbit curve(1)	
~~Curve e~~	~~Curve~~(t + 1.25, t² / -7 + 0.07, t, -0.75, 0.75)	~~e:~~ inverse connection $\left(radius(2) \leftrightarrow \frac{1}{2} \right)$	
Curve c_1	Curve(t, t¹ / -2 + 1 / 2, t, 0, 1)	c_1: linear connect of Z#1nucleus with Z#1 quantum curve(a) electron cloud	
Curve c_2	Curve(t, t² / -2 + 1 / 2, t, 0, 1)	c_2: nucleus potential as discovery curve for dependent electron cloud Quantum curve(a)	
Curve d	Curve(0.5, t, t, -0.1, 0.1)	d: abscissa ID Galileo's 1st second tile.	
Curve h	Curve(0.5cos(t), 0.5sin(t), t, -10, 10)	h: existence space of Z#1 Protium proton	
Curve i	Curve(t, t² / 2 - 1 / 2, t, 0, 2)	i: mass/volume ratio collective influence above surface acceleration curve (M_1)	
Curve b	Curve(t, t² / -4 + 1, t, -0.8, 2)	b: S&T2 period time curve for (M_2), SC2, orbit(1).	
Curve j	Curve(1.5cos(t), 1.5sin(t), t, -0.5, 1)	j: S&T2 discovery curve displacement(3), SC(3), orbit curve(2)	
Curve k	Curve(t, t² / -6 + 1.5, t, 1.6, 3)	k: period time curve displacement orbit(2)	
Point B	SC3, orbit(2) CrossOver	$B = \left(\sqrt{3}, rest\ energy\ SC(3) \right)$	
Point C_2(0.5, -0.21, 0)	Redundant entry	C_2 = Z#1 proton connect with Z#1 electron cloud.	
Point B_1(1.41, 0.5, 0)		$B_1 = \left(\sqrt{2}, \frac{1}{2} \right)$, SC2, orbit(1), linear connect with (M_1) surface via spin axis and restenergy	

Curve c	Curve(t, 0, t, -1, 1)	c:(t, 0) rest energy protium, on quantum field accretion domain.	
Curve m	Curve(0, t, t, 0, 0.5)	M: nucleus spin axis of Protium	
Point(F) (0, 0, 0)		F = central force F	
Curve o	Curve(t, t^0 / -2 + 3 / 2, t, 0, 3)	o: linear connect restenergy of SC3 discovery(1.5) with (M_1) spin	
Curve p	Curve(t, t^1 / -2 + 3 / 2, t, 0, 3)	p: linear registration orbit curve(2) with (M_1)	
Point A	CrossOver map for orbit curve(3) to orbit curve(2) and 1st second tile.	A = (1, 1, 0)	
Point C	CrossOver links all (3)index solution curves of SC3 orbit(2) and rest energy discovery curve(j).	$C = \left(\sqrt{3}, \frac{3}{2} - \frac{\sqrt{3}}{2}\right)$	
Curve q	Curve(t, t^0 / -2 + 2 / 2, t, 0, 2)	q: rest energy discovery(a), SC2 orbit curve(1)	
Curve r	Curve(t, t^1 / -2 + 2 / 2, t, 0, 2)	r: linear registration SC2 and orbit curve(1) with (M_1) spin	
Point A_1(1, 0.5, 0)	$\left(1, \frac{1}{2}\right)$	A_1 = crossover map orbit curve(1) to (M_1) surface acceleration; discovery(a) and new discovery(h)	
Point C_1(1.41, 0.29, 0)	$\left(\sqrt{2}, \frac{2}{2} - \frac{\sqrt{2}}{2}\right)$	C_1 = CrossOver links all (3)index solution curves of SC2 orbit(1) and rest energy discovery curve(a) and (M_1) spin	
Curve f	Curve(3, t, t, 0, 0.5)	f: abscissa ID for space curve(3), orbit curve(2)	

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the arithmetic parameters of Mendeleevs first 10 elements.

After falling across/through/and below surface acceleration curve of (M_1), S&T2 curve(a), let the first quantum discovery curve, curve(h) fig2, be a proton. All Quantum discovery curves shall be nucleus existence space as is curve(^1H) fig3. all quantum discovery curves are (---) in my construction.

Curve(g) of protium is at South Pole of the first proton. Let curve(g) be potential definition of discovery proton. Let curve(g) have sensory connect with SC1 ground, the surface acceleration curve(a) of (M_1). How ever, curve(g) locked below and contained by (M_1) surface acceleration, is constrained, its consummate reach and utility of potential forever limited to the quantum world.

Curve(g), now becomes definition curve, searching a protium electron cloud, labels Central Force SC1 domain integer(1), Z#1, its electron cloud.

Domain integer one has a dual purpose. As integer(1), it defines helium nucleus existance space, found to be at range one. Helium, found at range one has a unity curve connect with domain integer(1), and a definition curve(e). Helium definition curve(e), claims domain SC2 as Z#2 to complete the element.

Lithium (Li), found at range $\left(\frac{3}{2}\right)$, has a unity curve connect with domain accretion integer$\left(\frac{3}{2}\right)$, and a definition curve(j). Lithium definition curve(j), claims domain SC3 as Z#3 to complete the element.

$$n : \begin{array}{l} x = 0.5 \ \cos(t) \\ y = 0.5 \ \sin(t) \end{array} \Big\} - 1.02 \le t \le 2$$

$$He : \begin{array}{l} x = \cos(t) \\ y = \sin(t) \end{array} \Big\} - 1.01 \le t \le 2$$

$$Li : \begin{array}{l} x = 1.5 \ \cos(t) \\ y = 1.5 \ \sin(t) \end{array} \Big\} - 1.15 \le t \le 2$$

$$g : \begin{array}{l} x = t \\ y = \frac{t^2}{2} - 0.5 \end{array} \Big\} \ 0 \le t \le 1.15$$

$$e : \begin{array}{l} x = t \\ y = \frac{t^2}{4} - 1 \end{array} \Big\} \ 0 \le t \le 2.15$$

$$j : \begin{array}{l} x = t \\ y = \frac{t^2}{6} - 1.5 \end{array} \Big\} \ 0 \le t \le 3.15$$
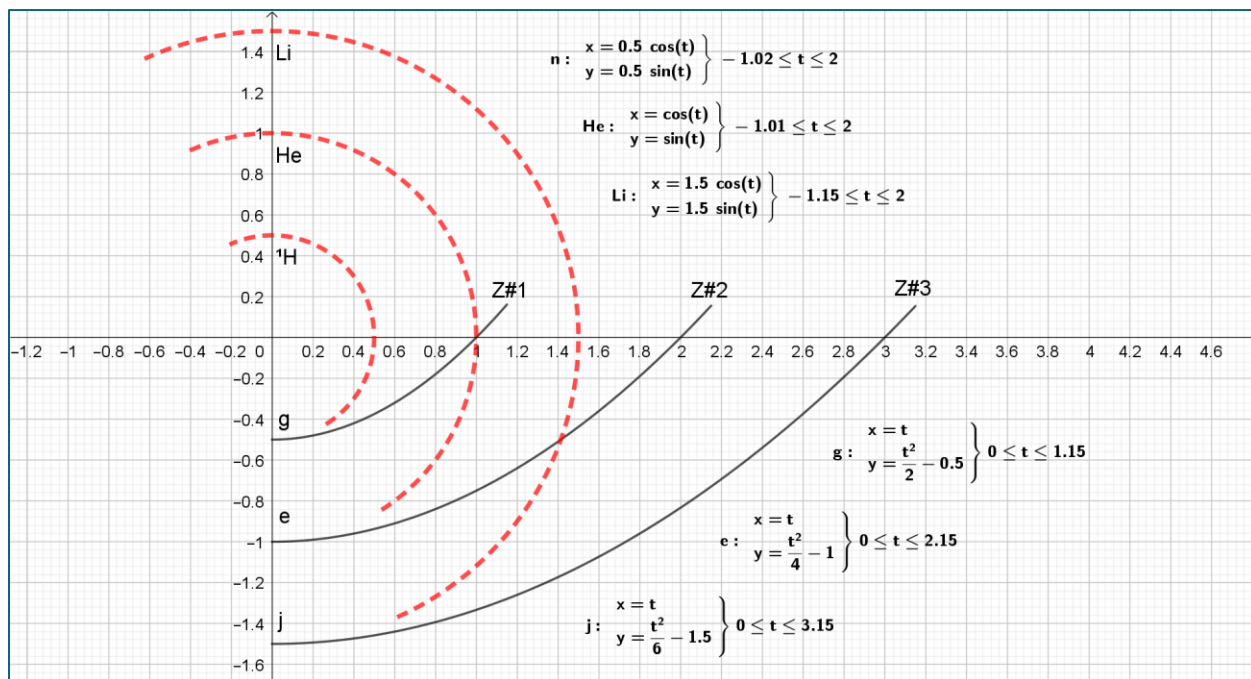
Figure 3: Protium, Helium, and Lithium, in period arithmetic order.

3 Quantum curves, protium, He (not a pronoun), Li.

Alexander

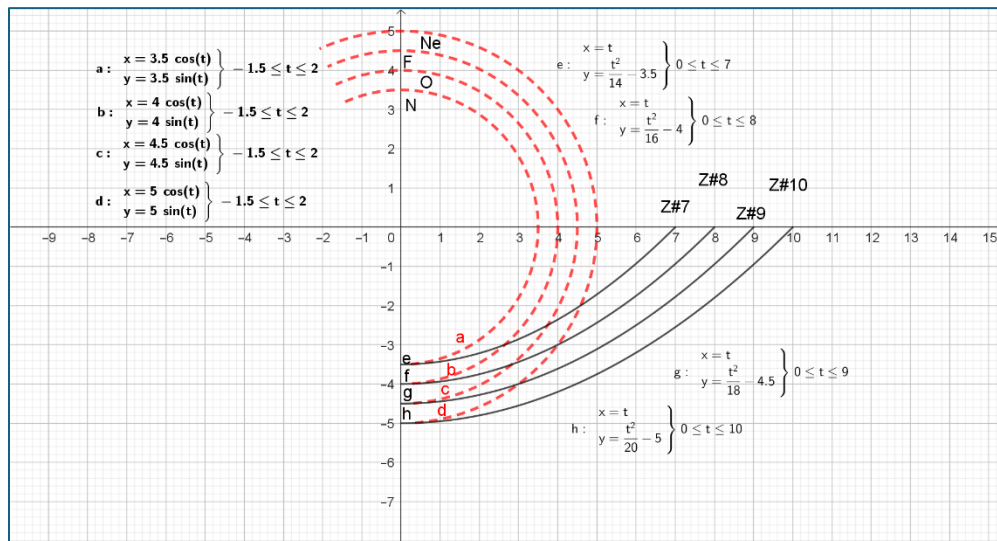| Name	Description	Value	Caption
Curve g	Curve(t, t² / 2 - 0.5, t, 0, 1.15)	g:(t, t² / 2 - 0.5)	definition curve protium nucleus existence space
Curve e	Curve(t, t² / 4 - 1, t, 0, 2.15)	e:(t, t² / 4 - 1)	definition curve helium nucleus existence space
Curve j	Curve(t, t² / 6 - 1.5, t, 0, 3.15)	j:(t, t² / 6 - 1.5)	definition curve lithium nucleus definition space
Curve ¹H	0.5cos(t),0.5sin(t)		Discovery curve Protium
Curve He	Curve(1cos(t), 1sin(t), t, -1.01, 2)	He:(1cos(t), 1sin(t))	Discovery curve He
Curve Li	Curve(1.5cos(t), 1.5sin(t), t, -1.15, 2)	Li:(1.5cos(t), 1.5sin(t))	Discovery curve Li

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Z#4,5,6

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Curves shown with parametric definitions:

$$a: \begin{cases} x = 2\ \cos(t) \\ y = 2\ \sin(t) \end{cases} -1.06 \leq t \leq 2$$

$$b: \begin{cases} x = 2.5\ \cos(t) \\ y = 2.5\ \sin(t) \end{cases} -1.5 \leq t \leq 2$$

$$d: \begin{cases} x = 3\ \cos(t) \\ y = 3\ \sin(t) \end{cases} -1.55 \leq t \leq 2$$

$$e: \begin{cases} x = t \\ y = \dfrac{t^2}{8} - 2 \end{cases} 0 \leq t \leq 4.25$$

$$f: \begin{cases} x = t \\ y = \dfrac{t^2}{10} - 2.5 \end{cases} 0 \leq t \leq 5.2$$

$$g: \begin{cases} x = t \\ y = \dfrac{t^2}{12} - 3 \end{cases} 0 \leq t \leq 6.2$$

Z#4,5,6

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Name	Description	Value	Caption
Curve e	Curve(t, t² / 8 - 2, t, 0, 4.25)	e:(t, t² / 8 - 2)	definition curve Be, Z#4
Curve a	Curve(2cos(t), 2sin(t), t, -1.06, 2)	a:(2cos(t), 2sin(t))	Discovery curve Beryllium, nucleus definition space
Curve b	Curve(2.5cos(t), 2.5sin(t), t, -1.5, 2)	b:(2.5cos(t), 2.5sin(t))	Discovery curve Boron, nucleus definition space
Curve f	Curve(t, t² / 10 - 2.5, t, 0, 5.2)	f:(t, t² / 10 - 2.5)	definition curve B, Z#5
Curve d	Curve(3cos(t), 3sin(t), t, -1.55, 2)	d:(3cos(t), 3sin(t))	Discovery curve Carbon, nucleus definition space
Curve g	Curve(t, t² / 12 - 3, t, 0, 6.2)	g:(t, t² / 12 - 3)	definition curve C, Z#6

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Z#7,8,9,10

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Name	Description	Value	Caption
Curve c	Curve(4.5cos(t), 4.5sin(t), t, -1.5, 2)	c:(4.5cos(t), 4.5sin(t))	Discovery curve Fluorine, nucleus definition space
Curve a	Curve(3.5cos(t), 3.5sin(t), t, -1.5, 2)	a:(3.5cos(t), 3.5sin(t))	Discovery curve Nitrogen, nucleus definition space
Curve b	Curve(4cos(t), 4sin(t), t, -1.5, 2)	b:(4cos(t), 4sin(t))	Discovery curve Oxygen, nucleus definition space
Curve d	Curve(5cos(t), 5sin(t), t, -1.5, 2)	d:(5cos(t), 5sin(t))	Discovery curve Neon, nucleus definition space
Curve e	Curve(t, t² / 14 - 3.5, t, 0, 7)	e:(t, t² / 14 - 3.5)	definition curve N, Z#7
Curve f	Curve(t, t² / 16 - 4, t, 0, 8)	f:(t, t² / 16 - 4)	definition curve O, Z#8
Curve g	Curve(t, t² / 18 - 4.5, t, 0, 9)	g:(t, t² / 18 - 4.5)	definition curve F, Z#9
Curve h	Curve(t, t² / 20 - 5, t, 0, 10)	h:(t, t² / 20 - 5)	definition curve Ne, Z#10

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Let me say this about the 1st 10 elements collected on the last 4 pages. They represent effort, on my part, to try and replicate the arithmetic magic, seeming simplicity, of Mendeleev's, et al, periodic table. I demonstrate that my construction techniques for atoms (elements) fit well with his count of elements using Z#. Nothing more.

My constructions do not explain the insane leaps a few electrons, protons and neutrons, added, or subtracted here or there generate in perception of state and temperature, solid, liquid, or gas. I can propose suggestion as to the philosophy of electromagnetic bond, shapes of central force fields, and perception of state, using order of charge, potential, polarity, and temperature of fusion and vaporization. And have done so.

It works for me and it will work for you.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC.