

A Parametric Geometry Philosophical Exloration  
between two central force fields we live with.

GRAVITY & NUCLEAR

Let Classic Big be the arena of SpaceTime(2),  
GRAVITY  
and Quantum Small the purview of SpaceTime(3),  
NUCLEAR

ALEXANDER; CEO SAND BOX GEOMETRY LLC

10Pages, 2000Words

Using my own established curved space nomenclature, I construct a parametric map leading from SpaceCurve(6), our orbitcurve(5) which is Jupiter, to SpaceCurve(5), our orbitcurve(4) planet Mars. Let red be initial parametric mapping of ME lines and curves for SpaceCurve(6).

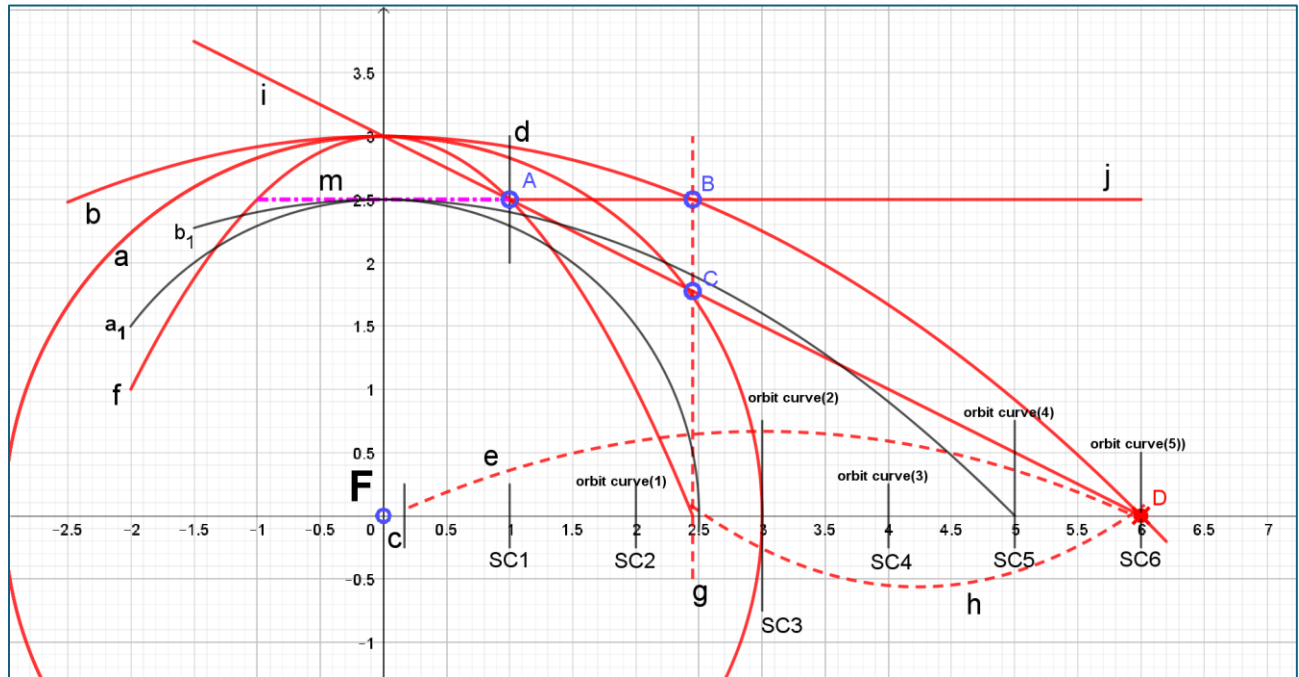


Figure 1: AlexG, inverseroots M1, root(6).

The parametric path starts from the average energy diameter, point(D) of SpaceCurve(6). Then along the period time curve(b) to point(B) of the crossover triangle.

Curved space coordinates:  $(\sqrt[2]{6}), restenergy\ discovery(a).$

At crossover(B) we have a linear connection via curve(j) to  $(M_1)$  spin, a drop of 1/2 point on the spin axis of  $(M_1)$ . Here we find discovery curve( $a_1$ ) and period time curve( $b_1$ ) leading to space curve(5) and orbit curve(4) planet Mars.

Let's try to map a parametric route from space curve(2), orbit curve(1), Mercury in our system and fall through and across the surface acceleration curve of  $(M_1)$  into the quantum world; a place where we will find the principal composition of surface acceleration curves. Protons, neutrons and electrons.

No amount of imagination can help us cross 5000°C surface of our star let alone the corona. Suicidal thinking. Anyway, surface acceleration curve of solar gravity is too dense to penetrate. Stuff can only leave as solar wind means of travel. So, let the earth be  $(M_1)$  and the moon be  $(M_2)$ . I find it to be a fitting simile. Below the surface acceleration curve of our

Earth, we will find a population unlimited and infinite of atoms, molecules, neutrons protons and electrons. Just waiting to be cohesive and gravitationally attractive.

**dealing with mechanical ecurves integer (6)**

**ALEXANDER**

Name	Description	Caption
Curve a	Curve(3cos(t), 3sin(t), t, -5, 5)	discovery curve
Curve b	Curve(t, t <sup>2</sup> / -12 + 3, t, -2.5, 6.2)	definition curve
Curve d	Curve(1, t, t, 2, 3)	Galileo first second tile, surface acceleration curve (M <sub>1</sub> )
Curve e	Curve(t + 3, t <sup>2</sup> / -13 + 4 / 6, t, -2.8, 3)	inverse connection
Curve f	Curve(t, t <sup>2</sup> / -2 + 3, t, -2, sqrt(6))	potential space curve 6
Curve i	Curve(t, t <sup>1</sup> / -2 + 3, t, -1.5, 6)	linear registration space curve 6 with spin
Curve h	Curve(t + 4.23, (-t <sup>2</sup> ) / -5 - 9 / 16, t, -1.8, 1.8)	inverse square connection
Point A		crossover triangle
Point B		crossover triangle
Point C		crossover triangle
Curve g	Curve(sqrt(6), t, t, -0.5, 3)	abscissa ID square root 6
Curve m	Curve(t, 5 / 2, t, -1, 1)	(M <sub>1</sub> ) system potential
Curve j	Curve(t, t <sup>0</sup> / -2 + 3, t, 1, 6)	rest energy discovery(a)
Curve c	Curve(1 / 6, t, t, -0.25, 0.25)	curvature of orbit curve(5)
Curve b <sub>1</sub>	Curve(t, t <sup>2</sup> / -10 + 2.5, t, -1.5, 5)	Periodtime curve orbit curve(4)

## Readings from the SandBox

Curve a <sub>1</sub>	Curve(2.5cos(t), 2.5sin(t), t, -0.05, 2.5)	discovery curve orbit curve(5).
Curve SC1	Curve(1, t, t, -0.25, 0.25)	
Curve SC2	Curve(2, t, t, -0.25, 0.25)	
Curve SC3	Curve(3, t, t, -0.75, 0.75)	
Curve SC4	Curve(4, t, t, -0.25, 0.25)	
Curve SC5	Curve(5, t, t, -0.25, 0.75)	
Curve SC6	Curve(6, t, t, -0.25, 0.5)	
Point F		gravity field central force

Created with [GeoGebra](#)

8/6/24.01:54.

Before I go any further, let's call a mistake a mistake. I beat my brain silly trying to bring a protocol, a permanent assignment of letter and number to field lines and curves rolling around in my imagination. Almost went insane about not 'nowing' an impossible goal. PLEASE, not now. My random approach to my central force construction(s) never start at the basement and enjoy continuity of ceiling; it's all over the place, it's spontaneous, concepts born without birth certificate, left to suffer machine identity and so be it.

ALXANDΞR; CEO SAND BOX GEOMETRY LLC

I've decided to let GeoGebra do the work. Their protocol is top notch second to none.

## Readings from the SandBox

Let's try to map a parametric route from space curve(2), orbit curve(1), Mercury in our system and fall through and across the surface acceleration curve of ( $M_1$ ) into the quantum world; and discover a 'flip' that we might perceive as upside down, but when here, perceptions *are* right side up, and *we* are the upside down.

Same script. Start from average diameter of orbit curve(1), move along period time curve( $b$ ) to crossover point(B). Take curve( $j$ ) all the way to the spin axis which will drop our pursuit another 1/2 point on discovery( $a$ ) spin axis and lead us to a new discovery curve( $n$ ). Let me, with my own shades of philosophical take, be presumptive and creative. And say that this is the shape, [a new term (existence space)] of the nuclear field composing protium. The binding parabola( $o$ ), vertex fixed at spin level(1), holds the electron cloud of protium, fixed to the accretive plane of rotation( $-1 \leftrightarrow +1$ ) the parametric limits of existence space for the protium atom. Orbit(1) is no longer space curve(2). It is an inquiry point for accretion, not spin, of a like protium element seeking a gravity field hookup for solid perception, temperature and approach limits permitting.

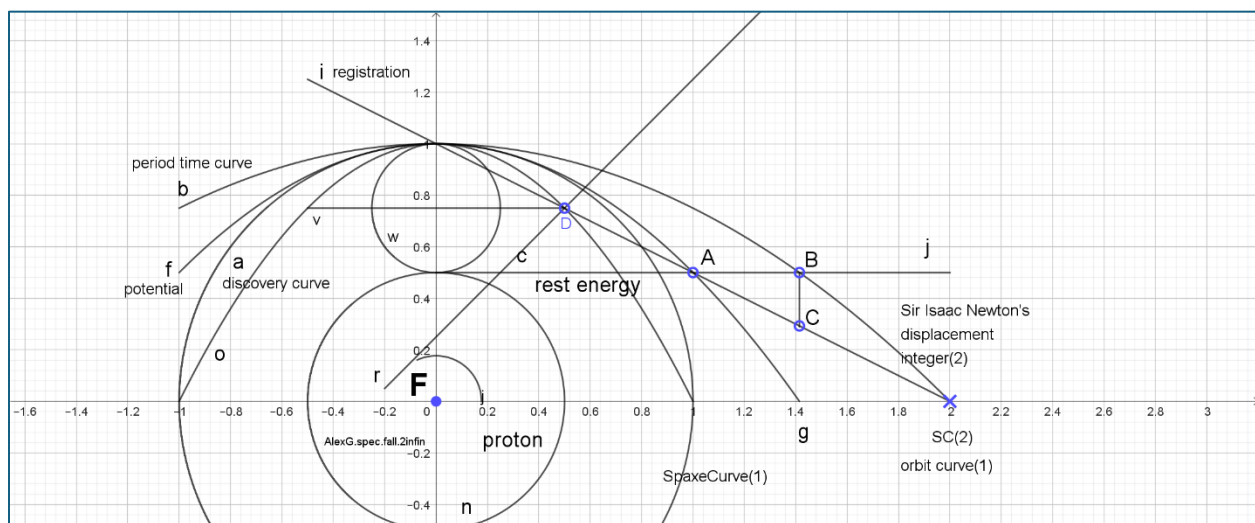


Figure 2: AlexG nomenclature S&T2. curve( $w$ ) is neighborhood of ( $p$ ), binding parabola curve( $o$ ) and latus rectum( $v$ ), control construction parameters of electromagnetic bond. latus rectum +end(D) connects with macro-space gravity via linear registration( $i$ ). SC(2) now serves a duo purpose as relative inquiry of nuclear accretive hookup approach limit and Sir Isaac Newton's average energy diameter, orbit curve(1). Nuclear style gravity and BigSpace relative.

Let quantum world curve( $a$ ), serve dual utility as S&T2 surface acceleration curve ( $M_1$ ) and atom existence space. An electron cloud marks existence space approach limits for like elements.

travel from SC(1) to protium quantum space

ALXANDER

Name	Description	Caption
Curve a	Curve(cos(t), sin(t), t, -4, 4)	discovery curve
Curve b	Curve( $t^2 / -4 + 1$ , t, -0.5, 2)	definition curve
Curve p	Curve( $t^1 / -2 + 1$ , t, -0.25, 2)	registration space curve(2) with spin.
Curve j	Curve( $t^0 / -2 + 1$ , t, -0.5, 2)	rest energy discovery(a)
Curve f	Curve( $t^2 / -2 + 1$ , t, -1, sqrt(2))	potential space curve(2)
Point A		crossover triangle
Point B		crossover triangle
Point C		crossover triangle
Curve n	Curve(0.5cos(t), 0.5sin(t), t, -3, 3)	existence space Z#1 nucleus
Curve o	Curve( $t^2 / -1 + 1$ , t, -1, 1)	binding parabola
Curve r	Curve( $(1 + 4t) / 4$ , t, -0.4, 1)	(e)tangent normal at binding parabola positive latus rectum end point
Curve k	Curve( $\sqrt{2} / 8 \cos(t)$ , $\sqrt{2} / 8 \sin(t)$ , t, -3, 3)	binding energy curve Z#1 nucleus
Point D		Protium existence space link with registration space curve(2).
Curve w	Curve(0.25cos(t), 0.25sin(t) + 3 / 4, t, -3, 3)	neighborhood P of binding parabola
Curve q	Curve( $3 / 4$ , t, -0.5, 0.5)	

Created with [GeoGebra](https://www.geogebra.org/)

So, now that we've found existence space for protium, how to find Mendeleev existence space for Z#2, helium.

What are we going to do about neutrons. I've only explored the 1st 10 elements because protons determine Z# and have the exact same number of electrons for stability (1<sup>st</sup>10 elements). And I want to keep a very complicated construction simple. Higher elements get weird. heavy stuff in more ways than one, require more neutrons to keep a stable happening.

Nuclear protocol script [PROTIUM]: we'll start with curve(a), the electron cloud of (<sub>1</sub>H) as definition curve for (Z#1). The nucleus existing space becomes independent and 1/2 the electron cloud radius, now discovery curve(n).

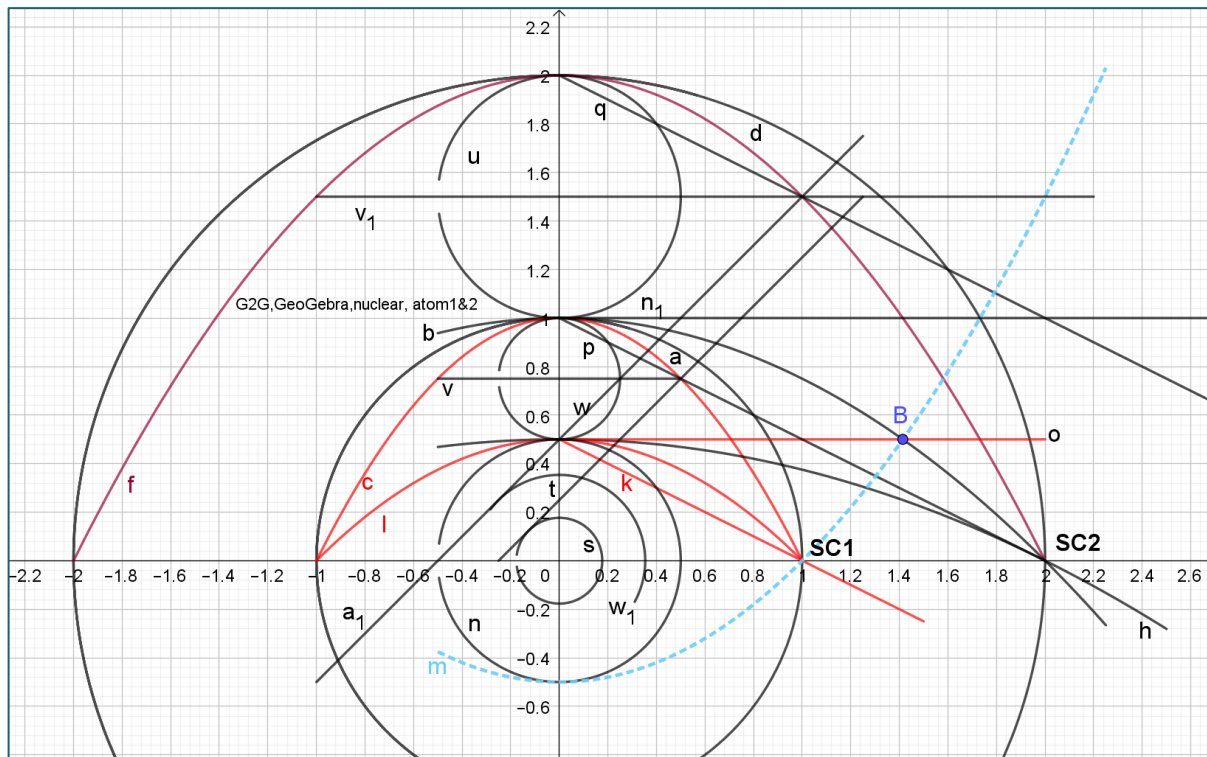


Figure 3: In this construction, complications require protocol to change. I identify object and object properties with machine assignment because graphic overlay of existence space for protium compared with the existence space of helium will be difficult and confusing using quantum world inverse mapping. In my construction, SC1 is protium(Z#1) approach limit and SC2 will serve as existence space of element helium(Z#2).

Curve(c) is the binding parabola holding the electron cloud(a) about the nucleus existence space curve(n). I constructed the neighborhood of (p) curve(w) and its latus rectum curve(v) and tangent normal curve(t) needed for electromagnetic mapping, survey tools to construct a bond plane for (<sub>1</sub>H); (Z#1).

## Readings from the SandBox

I construct the neighborhood of  $(p)$  for He, curve  $(u)$ , and the binding parabola curve  $(f)$  and its chord latus rectum  $(v_1)$  produced, intercepts curve  $(a_1)$ . Now, curve  $(a_1)$  is the etangent normal of binding parabola curve  $(f)$ .  $(a_1)$  produced toward nuclear center we'll meet nucleus existence space of He, curve  $(w_1)$  mapping bond connections for He atoms along spin. Order of discovery for He. Binding energy curve  $(W1)$ , exitance space for nucleus He, curve  $(a)$  serves with two hats, He nucleus discovery curve  $(a)$  and electron cloud  $Z\#1$  definition curve. He  $(e)$  cloud is curve  $(d)$ .

My final construction will be of Li,  $Z\#3$ . I haven't touched latent heat and transition of element perception, solid, liquid, or gas.

It's a dynamic GeoGebra construction with a slider labeled to the left; start  $(0)$  to  $(-3)$ . Move the slider back and forth and you will see what I propose to be my Latent Heat thermometer and required points in the field existence space of an element collective group to resonate for flash over transition of states; gas  $\leftrightarrow$  liquid or solid  $\leftrightarrow$  liquid.

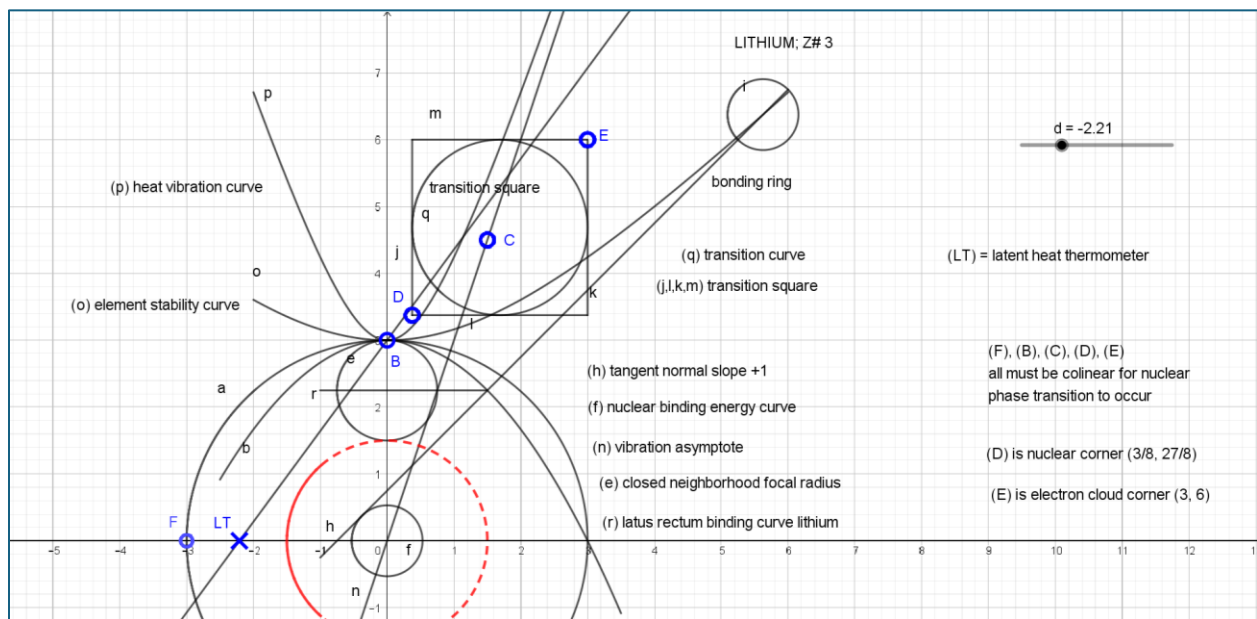


Figure 4: G2G; GeoGebra, nuclear, Liheat.

<https://www.geogebra.org/m/xvbeygrr>

## CAGE FREE THINKIN' FROM THE SAND BOX

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 (Tuesday, August 6, 2024)



## dealing with existence space for protium and helium

## ALXANDER

Name	Value	Caption
Curve a	$a:(1\cos(t), 1\sin(t))$	definition curve protium, electron cloud
Curve b	$b:(t, t^2 / -4 + 1)$	period time curve SC2, atom approach limit existence space protium
Curve c	$c:(t, t^2 / -1 + 1)$	binding parabola protium electron cloud and nucleus
Curve d	$d:(2\cos(t), 2\sin(t))$	definition curve helium, electron cloud helium
Curve f	$f:(t, t^2 / -2 + 2)$	binding parabola electron cloud helium
Curve h	$h:(t, t^2 / -8 + 0.5)$	approach registration limit for protium nucleus
Curve k	$k:(t, (-t) / 2 + 1 / 2)$	registration nuclear spin ( ${}_1\text{H}$ ) with electron cloud
Point B	$B = (1.41, 0.5)$	curved space coordinates SC2
Curve l	$l:(t, t^2 / -2 + 1 / 2)$	protium Nucleus potential
Curve $n_1$	$n_1:(t, 1)$	Protium curved space directrix
Curve o	$o:(t, 0.5)$	rest energy SC2 discovery( $a$ )
Curve w	$w:(0.25\cos(t), 0.25\sin(t) + 0.75)$	neighborhood of ( $p$ ), protium
Curve v	$v:(t, 0.75)$	Latus rectum binding parabola protium
Curve n	$n:(0.5\cos(t), 0.5\sin(t))$	Existence space protium nucleus
Curve s	$s:(\sqrt{2} / 8 \cos(t), \sqrt{2} / 8 \sin(t))$	Binding energy curve protium nucleus
Curve t	$t:(t, t + 1 / 4)$	tangent and normal, positive latus rectum endpoint binding parabola protium

Curve u	$u:(0.5\cos(t), 0.5\sin(t) + 1.5)$	neighborhood ( $p$ ) Helium
Curve q	$q:(t, (-t + 4) / 2)$	linear registration Helium electron cloud spin definition of approach limit and He existence space.
Curve p	$p:(t, (-t + 2) / 2)$	linear registration Protium electron cloud spin definition of approach limit and ( ${}_1H$ ) existence space.
Curve m	$m:(t, t^2 / 2 - 1 / 2)$	crossover connection curve space micro to square space macro
Curve $v_1$	$v_1:(t, 1.5)$	Latus rectum helium binding parabola
Curve $a_1$	$a_1:(t, t + 1 / 2)$	Etan normal helium binding parabola
Curve $w_1$	$w_1:(\sqrt{2} / 4 \cos(t), \sqrt{2} / 4 \sin(t))$	Binding energy curve helium nucleus

Created with [GeoGebra](#)

I suppose I should make some sort of conclusion. These essays are a first visit for (me). Exploratory travel between two central force fields and parametric geometry of energy curves and lines must most certainly remain TIP and WIP: (thinking in process) and (work in progress).

My curiosities source from three math terms, my curiosity switch(es) one might say.

Two terms, precipitated college math courses. Simply wanted to know what they mean.

### ( $\int$ and $\Sigma$ )

The final term, or action of ( $\sqrt[a]{x}$ ), would take me back to our math beginnings, conic section and the study of changing conic curvature. I wanted to know how to construct radical operation on a radicand and the parametric changes invoked by an inverse index operation on the same radicand. I saw the radicand candidate as a sort of median event suspended between curved space and square space.

ALXANDER; CEO SAND BOX GEOMETRY LLC