

## Readings from the SandBox

On parametric geometry exploration of four inversed potential mechanical energy curves composing SpaceCurve(5) accretion zone. Curves will be select from Macro Infinity S&T(2), Sir Isaac Newtons ( $M_1$ ), ( $M_2$ ) OrbitCurve(4), and S&T(3) Quantum World atom configuration of Boron. Z#(5) electron field and nucleus potential; an exploration of four field potentials and accretion.

A tale of four potentials composing SC(5); Z(#5) and OrbitCurve(#4)

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On inverting the potential of two active SpaceTime compositions, OrbitCurve(4), Z#(5), composing SpaceCurve(5).

December 9, 2024.02:31.

A proposed means to study Accretion Phenomena of a Composite Central Force Field.

S&T(2) and S&T(3) accretion zone maps and ME potential.

10 pages; 2100 words

Galileo's S&T1 has paved the way for S&T2 and S&T3. He built the medieval stone arch bridge connecting human knowledge of Classic Big with Quanta Small. All we gotta do is imagine walk from here to there.

ALEXANDER

*hello SpaceCurve(5)*

I've visited and interviewed five potential fields. They are entwined with two sets of perceived gravity, one gravity is period curves of Classical Big and the other gravity is surface acceleration sourced from the world beneath us, Quanta Small.

*Classic Big Space of Sir Isaac Newton and Galileo.*

1. Uniform acceleration of Galileo's First Second SpaceTime Tile.
2. Sir Isaac Newton's ( $M_1$ ) surface acceleration curve. System potential.
  - a. In my construction this curve is usually labeled curve( $a$ ), my discovery curve.
3. Sir Isaac Newton's ( $M_2$ ) PeriodCurve of motion. My required definition curve for where in space I am to interview time.
  - b. In my construction this curve is usually labeled curve( $b$ ).

*Quanta world of atom as free standing element.*

4. Binding energy parabola. This curve holds the electron field about the nucleus. Let this be the ( $-$ ) part of the nuclear fields.
5. Potential of the nucleus existence space. let this be the ( $+$ ) part.

*CROSSOVERS*

Let point( $A$ ) be the link unifying Galileo's Uniform Surface Acceleration curve with ClassicBig macro-infinity space of ( $M_1$ ) as Prime Mover. Let point( $B$ ) coordinate set on ( $M_2$ ) period motion connect ( $M_1$ ) Uniform Acceleration @ Galileo's 1<sup>st</sup> second tile making a complete ( $M_1M_2$ ) period happening. Ttwo system potential; ( $M_1$ ) surface curve point( $A$ ) and ( $M_2$ ) period motion point( $B$ ). Point( $C$ ). My registration point confirming unity between spin of ( $M_1$ ) and position in time and space of SpaceCurve(5). Three points. A right triangle. A pure and perfect sign of ancient human intellect. Keeps us goin' the right direction.

AlexG, tale2spercv,SC5OC4

## Potential for system ( $M_1M_2$ ) construction and inversed potential for ( $M_1$ ) accretion and ( $M_2$ ) motive period curve.

I began exploring accretion April 2019. I did so by inverting central force potential curves using Index Solution Curves. I use Index Solution Curves to construct roots, that small number in a radicand hook. I did a analytic exploratory on the *inverse* of my index solution curves, what happens when we *inverse* the answer curve of an index inquiry. I dug ever so deep in a paper dated April 2019, (Numbers and numbers as exponents). It happens to be loaded with very busy construction on four central force potentials. Use computer zoom technology to read the tight spots of my presentation as well as protocol list will help alleviate the burden. There is a recent endeavour after COVID, can't recall date.

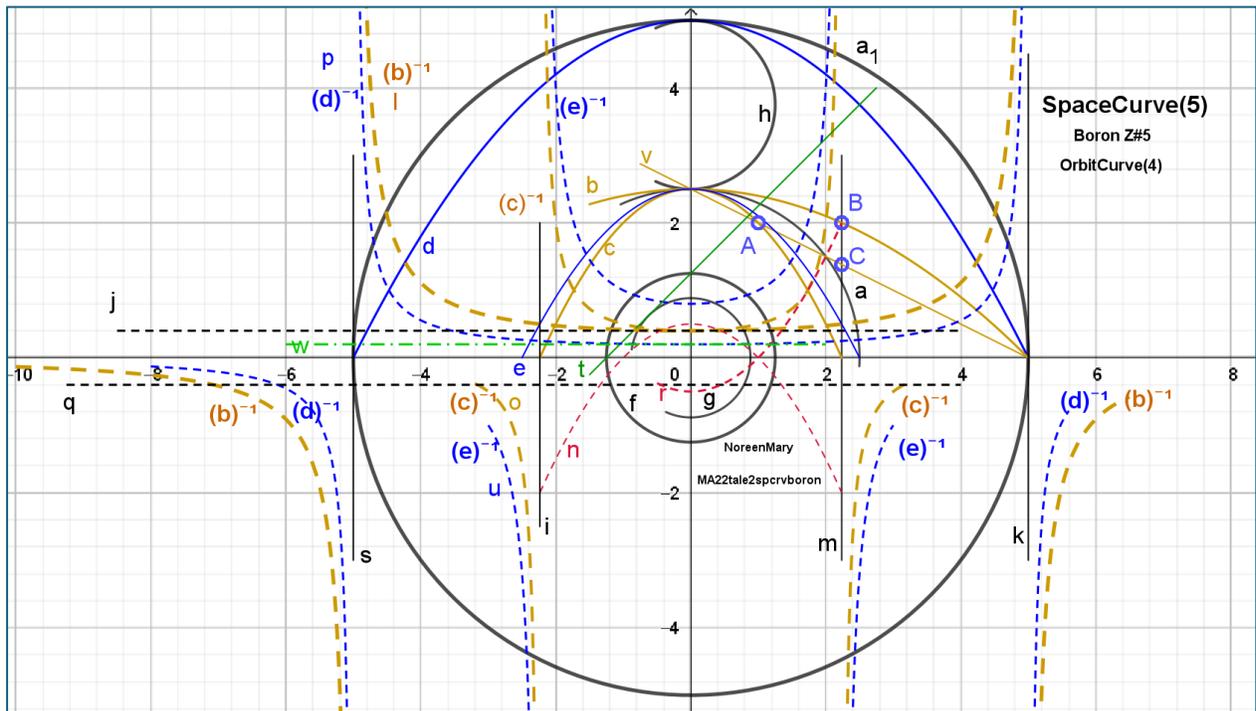


Figure 1 Figure 1 My four potentials are the period curve(b), ( $M_1$ ) potential curve(c), the (-)electron cloud binding parabola curve(d), and nucleus (+)existence space potential curve(e). this mainbody resides @ (+)spin

Inverse Index construction are interesting curves. I called them asymptotic, though I don't believe we have seen these type asymptotic curve. The asymptotes I studied in school are Criss-Cross lines. They may creep close to the spin axis, or they may hug close to the domain. The index solution curve asymptotes I discovered divide space into three parts crossing rotation demarcation of both positive and negative Spin Space. The main body solution curve is an open continuous curve with vertex on spin. Two main body curves exist. One positive, resides North Spin and one Negative residing South Spin.

The spirit curves are separated each side of mainbody asymptote demarcation. one set of spirit curves I call (+) and the other set (-). The main body will exist on ( $\pm$ ) top/bottom plane of rotation. Spirit curve are on the left and right side of spin asymptotes. These curves create rules for accretion. I imagine control limits on domain with open range climbing ( $\pm$ )infinity of spin.

An aside annoyance. Index solution curves are a symmetrical and have ( $\pm$ ) existence. Fold the system curves along spin and both are one.

*Straight Asymptotes.*

I use hyperbolic shaping curves to construct atoms. I locate the center of the atom using hyperbola asymptotes. I also enjoy the dual foci these curves provide as compression space radius to hold the contents of an atom entity, electron cloud and nucleus assembly.

**inverse potentials and accretion**

**ALEXANDER**

Name	Description	Caption
Curve a <sub>1</sub>	Curve(5cos(t), 5sin(t), t, -5, 5)	SC(5), Z#(5), OC(4)
Curve c	Curve(t, t <sup>2</sup> / -2 + 5 / 2, t, -sqrt(5), sqrt(5))	(M <sub>1</sub> ) system potential
Curve a	Curve(5 / 2 cos(t), 5 / 2 sin(t), t, -0.05, 2)	Discovery curve SC(5)
Curve g	Curve(5 / (4sqrt(2)) cos(t), 5 / (4sqrt(2)) sin(t), t, -2, 3)	Binding energy curve nucleus
Curve f	Curve(5 / 4 cos(t), 5 / 4 sin(t), t, -5, 5)	Closed neighborhood(f) nucleus (+potential)
Curve h	Curve(5 / 4 cos(t), 5 / 4 sin(t) + 3.75, t, -2, 2)	Closed neighborhood(h) ecloud (-potential)
Curve i	Curve(t, (t <sup>2</sup> / -5 + 5) <sup>-1</sup> , t, -7, 7)	(-√5) triad-asymptote for spin axis main body solution curve (c <sup>-1</sup> )and (e <sup>-1</sup> ) and ± accretive spirit curves (o and u).
Curve m	Curve(sqrt(5), t, t, -3, 3)	(√5) triad-asymptote for spin axis main body solution curve (c <sup>-1</sup> )and (e <sup>-1</sup> ) and ± accretive spirit curves (o and u).
Curve b	Curve(t, t <sup>2</sup> / -10 + 5 / 2, t, -1.5, 5)	Discovery definition/period curve
Curve l	Curve(t, (t <sup>2</sup> / -10 + 5 / 2) <sup>-1</sup> , t, -6.5, 6.5)	Period curve(b) potential inversed
Point B		Period curve crossover

Point A		$(M_1)$ surface acceleration crossover
Curve p	Curve( $t, (t^2 / -5 + 5)^{-1}, t, -5.6, 5.6$ )	Ecloud binding parabola curve( $d$ ) inversed
Curve o	Curve( $t, (t^2 / -2 + 5 / 2)^{-1}, t, -3.2, 3.2$ )	$(M_1)$ surface acceleration curve( $o$ ) inversed
Curve s	Curve( $-5, t, t, -3, 3$ )	$(-5)$ triad-asymptote for spin axis main body solution curve ( $d^{-1}$ ) and ( $b^{-1}$ ) and $\pm$ accretive spirit curves ( $p$ and $l$ ).
Curve e	Curve( $t, t^2 / -2.5 + 2.5, t, -2.5, 2.5$ )	nucleus ( $+potential$ )
Curve u	Curve( $t, (t^2 / -1 / 4 + 5 / 4)^{-1}, t, -3, 3$ )	$(\pm)$ spirit curves of nucleus ( $+potential$ ) curve( $e$ ) <sup>-1</sup>
Point C		Registration SC(5) and OC(4) crossover with spin.
Curve v	Curve( $t, t^1 / -2 + 5 / 2, t, -0.75, 5$ )	Index solution curve registration
Curve k	Curve( $5, t, t, -3, 4.5$ )	$(+5)$ triad-asymptote for spin axis main body solution curve ( $b^{-1}$ ) and ( $d^{-1}$ ) and $\pm$ accretive spirit curves ( $p$ and $l$ ).
Curve t	Curve( $t, (5 + 4t) / 4, t, -1.5, 2.25$ )	Etangent normal path to $Z\#(5)$ bond plane

Created with [GeoGebra](#)

### Accretion zones

I will not provide a protocol list with this construction. My main interest is asymptotes ( $s, i, m, k$ ). Asymptotes of a central force I call triad. They split both space, nuclear and gravity, into three distinct regions, spin, plane of rotation and accretion.

Asymptote ( $i&m$ ) are born of point( $B$ ) ( $t, \pm\sqrt{5}$ ) and everything betwixt 'em found on period curves of Sir Isaac Newton. These asymptotes lock between them two inversed index solution curves, existing as main body solution curves.  $(M_1)$  potential ( $c$ )<sup>-1</sup> and nuclear space ( $+potential$ ), ( $e$ )<sup>-1</sup>.

Asymptote ( $s&k$ ) are the average energy diameter ( $\pm 5$ ) of OrbitCurve(4) found operating on centralforce domain SpaceCurve(5). These asymptotes lock between them two inversed index solution curves, existing as main body solution curves. Sir Isaac Newton's period curve inversed ( $b$ )<sup>-1</sup> and ecloud binding parabola nuclear ( $-potential$ ) inversed ( $d$ )<sup>-1</sup>

I have constructed three lines parallel with central force domain, ( $j, q, \text{ and } w$ ). ( $j \text{ and } q$ ) are curvature limits of discovery curve( $a$ )  $(\pm \frac{5}{2})^{-1}$ . Curve( $w$ ) is the curvature limit average energy diameter of ( $M_2$ ),  $(\pm 5)^{-1}$ .

Whats important is happenings with mainbody cuves ( $c$ )<sup>-1</sup> and ( $b$ )<sup>-1</sup>. Note, the ( $M_1$ ) potential curve ( $c$ )<sup>-1</sup> and period curve ( $b$ )<sup>-1</sup>, approach the accretion zone with congruent vertices connected with spin but will not cross ( $j$  and  $q$ ). the period curve of ( $M_2$ ) and potential of ( $M_1$ ), the stuff making ( $M_1M_2$ ) a physical happening skate each side of accretion, not in the zone iself.

Now, what about the nuclear composition behind surface acceleration curves. ( $d$ )<sup>-1</sup> dives deep into accretion placing its open continuous curve vertex on curvature limit( $w$ ) and will cross no further. Nuclear potential ( $e$ )<sup>-1</sup> skates just below nuclear binding energy curve( $g$ ) and and well above negative climbout curve( $n$ ). In fact, both nuclear climbout curves set their vertices on spin above, not within accretion space.

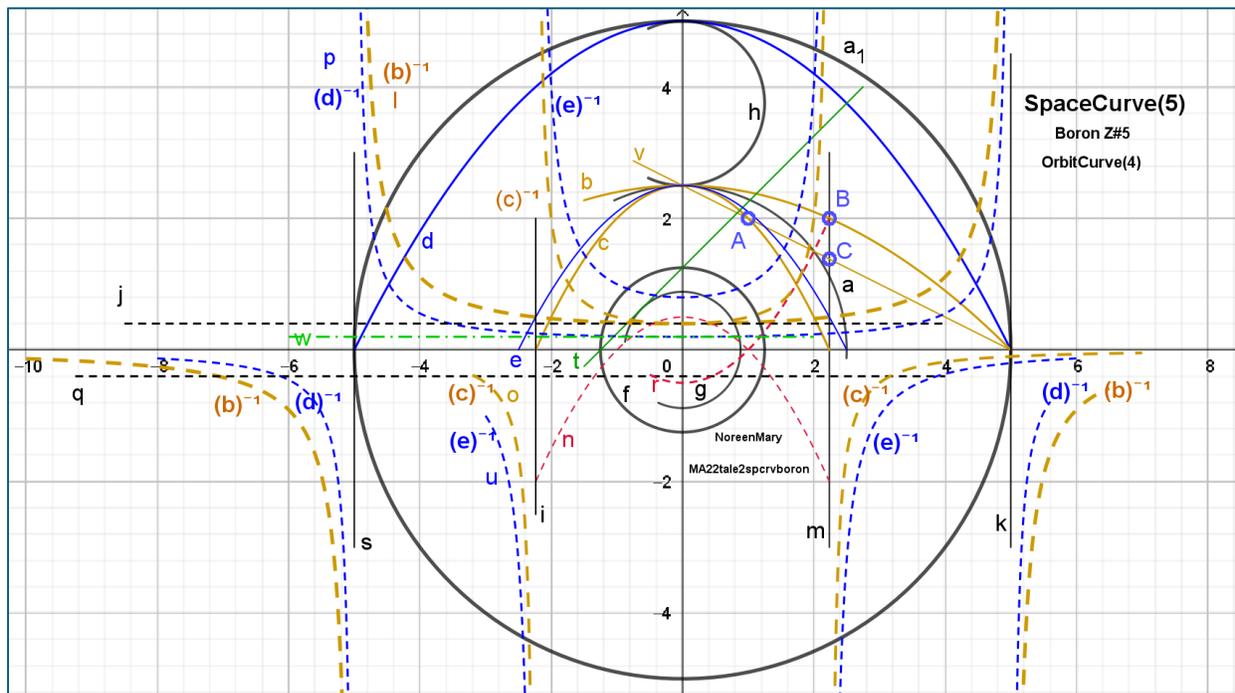


Figure 2: This construction concerns SpaceCurve(5) and its composition, OrbitCurve(4) and Z#(5). I've added three control lines in the accretion zone. Two lines introduced, ( $j$  &  $q$ ) have similar source and ( $w$ ) does not.

*MainBody SpiritCurves.*

SpiritCurves ( $e$ )<sup>-1</sup>, (+potential) of nucleus and ( $c$ )<sup>-1</sup> ( $M_1$ ) system potential operate each side of  $\pm\sqrt{5}$ . negative side asymptote( $i$ ) and positive side asymptote( $m$ ). ( $M_1$ ) system potential is always closest to spin.

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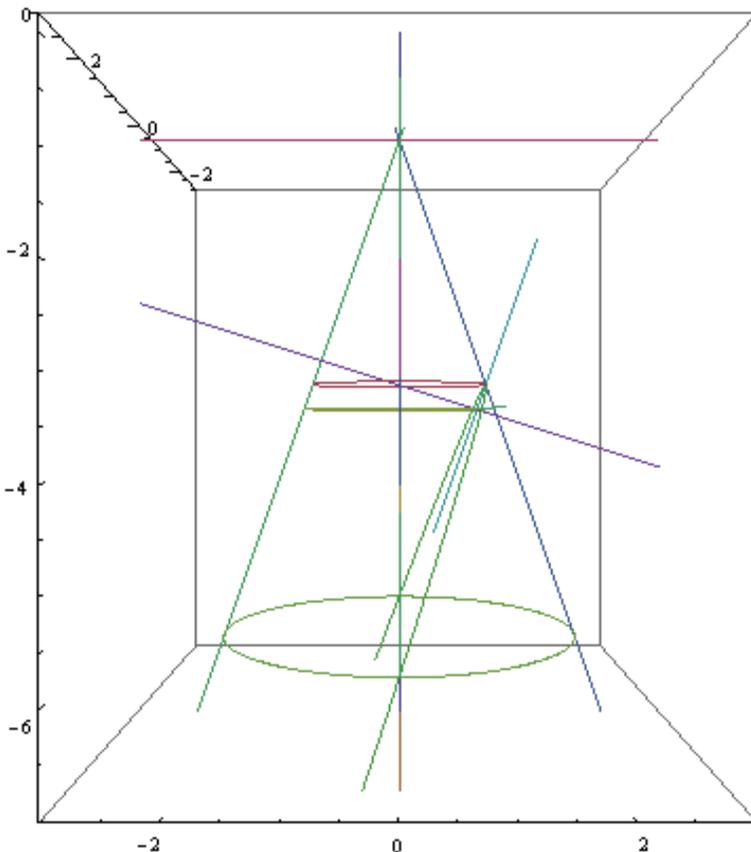
SpiritCurves  $(b)^{-1}$ , Sir Isacc Newton's period curve orbit(4) and  $(d)^{-1}$  binding parabola for ecloud (-)potential. Operate each side of asymptote(s&k), curvature of  $(M_2)$  average energy on SC(5). negative side asymptote(s) and positive side asymptote(k). ecloud parabola is always closest to spin.

In my current construction I suggest that these spirit curves are in a positive sense since they approach rotation from the negative space of quadrant 4 and quadrant 3, climb to rotation and then peel off along rotation into the infinities of quadrant one and four and quadrant two and three.

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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.

Utility of a Unit Circle and Construct Function Unit Parabola may not be used without written permission of my publishing company Sand Box Geometry LLC Alexander, CEO and copyright owner.

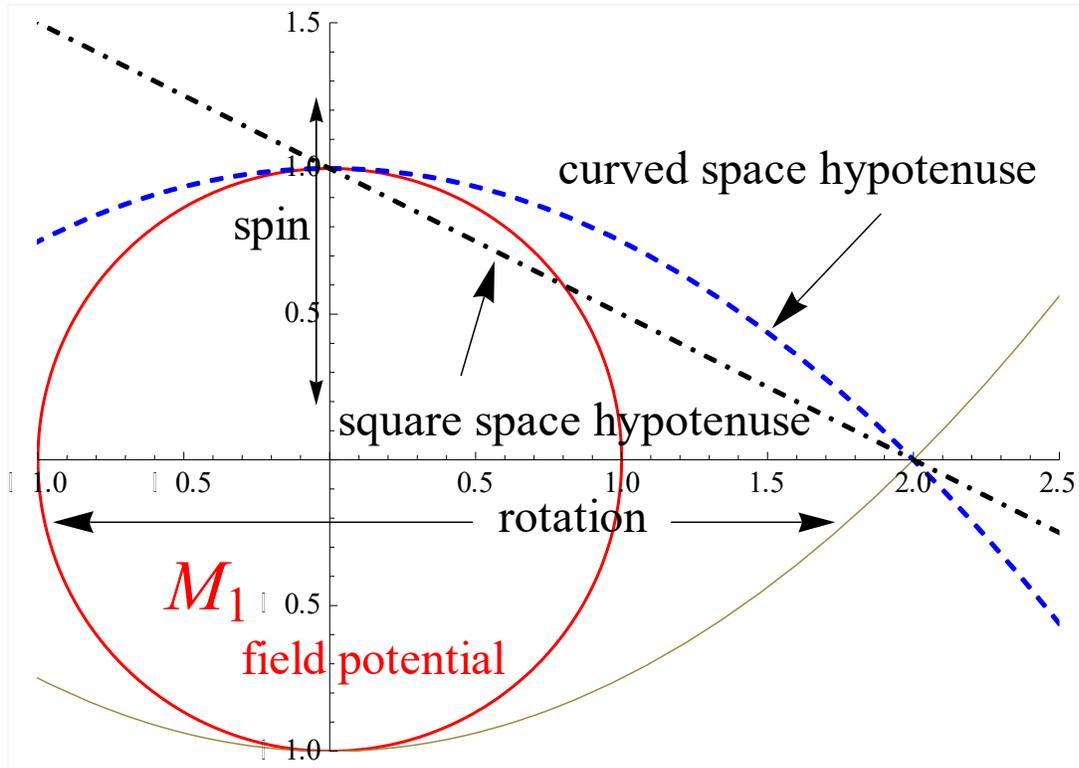
[alexander@sandboxgeometry.com](mailto:alexander@sandboxgeometry.com)

The computer is my sandbox, the unit circle my compass, and the focal radius of the unit parabola my straight edge. Armed with these as weapon and shield, I go hunting Curved Space Parametric Geometry.

ALEXANDER; CEO SAND BOX GEOMETRY LLC

### CAGE FREE THINKIN' FROM THE SAND BOX

The square space hypotenuse of Pythagoras is the secant connecting  $(\pi/2)$  spin radius  $(0, 1)$  with accretion point  $(2, 0)$ . I will use the curved space hypotenuse, also connecting spin radius  $(\pi/2)$  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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## Readings from the SandBox

The foundation of human mathematics is geometry. If one would take some time to look at the written works (they happen to be library available) of Newton, Kepler, and the time-tested Conic Treatise of Apollonius, you will be face to face with the stick art of human mathematics. However, unlike art, freedom of interpretation is not invited. Only a single path of rigorous logic leading to an irrefutable conclusion is proffered. Proofing still rules today, as the only way to structure an argument advancing human math to the next level.

It is not important to understand the proofing used with exploratory Philosophical Geometry of the Masters for this can be as difficult to fathom as a triple integral proof, simply witness the incisive descriptive language explaining methods used by these great geometers of our past, Huygens, Newton, and Kepler, to name a few, as they ponder Questions of Natural Phenomena using descriptive mathematical relations between lines and curves with the unique irrefutable perspective of picture perfect classic geometry.