On Mechanical Registration of Central Force Curved Space index(2) solution curve Latus Rectum Chord limits:

$$
(-\min , \text { average },+\max )
$$

with Square Space accreted displacement.

Curved space ME analytics using index(2) solution curves working displaced number line

Sunday, September 25, 2022
22:13 integers.

Constructing S\&T2 displacement and S\&T3 Z\# energy curve(s) geographic area of variable intensity control by a Central Force Field.

## ALEXANDER; CEO SAND BOX GEOMETRY LLC

Pages 19; 2000 words.
first up will be square space displacement integers: $(\sqrt[2]{25}, \sqrt[2]{9}, \sqrt[2]{2})$
followed by nuclear assemblies: $\sqrt[2]{L i}, \sqrt[2]{C}, \sqrt[2]{S}$

Readings from the SB

$$
\sqrt[2]{25}
$$



Figure 1: curve (b) is M2 period time energy curve working S\&T2. Latus Rectum chord(m) of solution curve(f) registers parametric M2 displacement energy in M1 space. (I) high limit, (i) low limit and (k) as average energy curve of system.
dealing with mechanical energy curves of displacement integer(25).

## ALEXANDER

| No. | Name | Description | Value |
| :---: | :---: | :---: | :---: |
| 1 | Curve a | Curve( $12.5 \cos (\mathrm{t}), 12.5 \sin (\mathrm{t}), \mathrm{t},-5,5)$ | Discovery curve |
| 5 | Curve f | Curve(t, $\left.\mathrm{t}^{2} /-2+25 / 2, \mathrm{t},-2,5\right)$ | Solution curve $\left(25^{\frac{1}{2}}\right)$ |
| 17 | Curve b | Curve(t, $\left.\mathrm{t}^{2} /-50+25 / 2, \mathrm{t},-5,25\right)$ | S\&T2 period curve |
| 18 | Curve j | Curve(t, $\left.\mathrm{t}^{0} /-2+12.5, \mathrm{t}, 1,12\right)$ | Solution curve (radicand $d^{\frac{1}{0}}$ ) |
| 19 | Curve m | Curve(t, 12, t, -1, 1) | Latus rectum chord |
| 22 | Point A | ( $1^{\text {st }}$ Galilean S\&T1 tile, $\left(25^{\frac{1}{0}}\right)$. With respect to + LR endpoint | $A=(1,12)$ |


| 23 | Point B | $(\sqrt[2]{25}),\left(25^{\frac{1}{0}}\right)$ Link index (2) solution curve(f) with period time curve(b). | $B=(5,12)$ |
| :---: | :---: | :---: | :---: |
| 24 | Point C | $\left((\sqrt[2]{25}),\left(\frac{25}{2}-\frac{\sqrt[2]{25}}{2}\right)\right)$ completes crossover linking curve space ME with period curve(b) | $\mathrm{C}=(5,10)$ |
| 29 | Curve i | Curve(t, t/-2 + $25 / 2, \mathrm{t}, 1,25$ ) | (+) LR endpoint |
| 30 | Curve k | Curve(t, t/-2+24/2, t, 0, 24) | LR median |
| 31 | Curve I | Curve(t, t/-2+23/2, t, -1, 23) | (-) LR endpoint |

## Created with GeoGebra

(A): $\quad(1,12)$.
(B): $(5,12)$.
(C): $(5,10)$
Rt. $\Delta$ (ABC): base (5-1) alt.: 2
Hyp: $\quad\{c \rightarrow 2 \sqrt{5}\}$
Area: 4 units
(A): (first Galilean tile, solution curve $(\sqrt[0]{25})$ ). (Reference + LR endpoint)
(B): $\quad(\sqrt[2]{25}$, solution curve $(\sqrt[0]{25}))$.
(C): $\quad\left(\sqrt[2]{25},\left(\frac{25}{2}-\frac{\sqrt[2]{25}}{2}\right)\right.$.

| $\sqrt{12^{2}+(25-1)^{2}}$ | $12 \cdot \sqrt{5}$ |
| :--- | :--- |
| $\sqrt{12^{2}+24^{2}}$ | $12 \cdot \sqrt{5}$ |
| $\sqrt{12^{2}+(23--1)^{2}}$ | $12 \cdot \sqrt{5}$ |

Figure 2: curved space ME reach, from spin to rotation, by solution curve(f).

| $\frac{12 \cdot(25-1)}{2}$ |
| :---: |
| $\frac{12 \cdot 24}{2}$ |
| $\frac{12 \cdot(23--1)}{2}$ | $1444^{2}+144$

Figure 3: unit time area control of M2 period motion by M1 potential.

Hypotenuse motion on curved space LR chord will not change S\&T2 dynamics.
A parametric geometry confirmation of Kepler's empirical law(2), which is orbit area, with respect to Central Force spin per unit time, remains constant.

Readings from the SB
dealing with mechanical ecurves of integer(9) in Central Force Displacement space.

ALIXANDER


| No. | Name | Description | Value |
| :--- | :--- | :--- | :--- |
| 1 | Curve a | Curve $(4.5 \cos (\mathrm{t}), 4.5 \sin (\mathrm{t}), \mathrm{t},-5,5)$ | Discovery curve |
| 2 | Curve b | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-18+4.5, \mathrm{t},-2,9\right)$ | S\&T2 period curve |
| 5 | Curve f | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-2+9 / 2, \mathrm{t},-2.5\right.$, sqrt(9)) | Solution curve $\left(9^{\frac{1}{2}}\right)$ |
| $\mathbf{8}$ | Point A |  | $\mathrm{A}=(1,4)$ |
| 9 | Point B |  | $\mathrm{B}=(3,4)$ |
| 10 | Point C |  | $\mathrm{C}=(3,3)$ |

Readings from the SB

| 21 | Curve $m$ | Curve $(t, 4, t,-1,1)$ | Latus rectum chord |
| :--- | :--- | :--- | :--- |
| 40 | Curve $w$ | Curve $\left(t, t^{1} /-2+4, t, 0,8\right)$ | LR median |
| 41 | Curve $v$ | Curve $\left(t, t^{1} /-2+3.5, t,-1,7\right)$ | $(-)$ LR endpoint |
| 43 | Curve $j$ | Curve $\left(t, t^{0} /-2+9 / 2, t, 1,9\right)$ | Solution curve $\left(9^{\frac{1}{0}}\right)$ |
| 44 | Curve i | Curve $\left(t, t^{1} /-2+9 / 2, t, 1,9\right)$ | $(+)$ LR endpoint |

## Created with GeoGebra

(A): $(1,4)$.
(B): $\quad(3,4)$
(C): $(3,3)$

Rt. $\Delta$ ( ABC ): base (2) alt.: 1
Hyp: $\quad\{c \rightarrow \sqrt{5}\}$
Area: 1 units


Figure 5: curved space ME reach, from spin to rotation, by solution curve(f).

| $\frac{1.1}{\frac{4 \cdot(9-1)}{2}}$ | RDoc |
| :---: | :---: |
| $\frac{4 \cdot 8}{2}$ | 16 |
| $\frac{4 \cdot(7--1)}{2}$ | 16 |

Figure 4: unit time area control of M2 period motion by M1 potential.

Hypotenuse motion on curved space LR chord will not change S\&T2 dynamics.
A parametric geometry confirmation of Kepler's empirical law(2), which is, orbit area with respect to Central Force spin per unit time, remains constant.
dealing with ME radicand(2), Alexander


| No. | Name | Description | Value |
| :---: | :---: | :---: | :---: |
| 1 | Curve a | Curve $(\cos (t), \sin (t), t,-4,4)$ | discovery curve |
| 2 | Curve e | Curve(t, t2 $2-1, \mathrm{t},-1,1.7)$ | +parametric solution curve |
| 3 | Curve d | Curve $(\sqrt[2]{2}), \mathrm{t}, \mathrm{t},-0.75,1.5)$ | Abscissa definition $\sqrt[2]{2}$ |
| 4 | Curve c | Curve(t, $\left.\mathrm{t}^{2} /-2+1, \mathrm{t},-1,1.8\right)$ | -solution curve |
| 6 | Curve b | Curve(t, $\left.\mathrm{t}^{2} /-4+1, \mathrm{t},-1.5,2\right)$ | S\&T2 period time curve |
| 17 | Curve m | Curve(t, $1 / 2, \mathrm{t},-1,1)$ | Latus rectum chord index(2) of radicand |
| 18 | Curve f | Curve(t, $\left.\mathrm{t}^{1} /-2+0, t,-1,0\right)$ | (-) LR endpoint |
| 19 | Curve g | Curve(t, t / -2 + 0.5, t, 0, 1) | LR median |
| 20 | Curve h | Curve(t, t/-2 + 1, t, 1, 2) | (+) LR endpoint |

## Created with GeoGebra

There is not a crossover per/se, big space crossover has flipped altitude/range. $(B C)$ connection linking period curve (b) with solution curve $(f)$ accretion no longer happens in S\&T2 big space. Connection (BC) is now $\left(\frac{\pi}{2}\right)$ spin axis, becoming my parametric CSDA meter of range. A means to construct time as a period curve. Parametric CSDA base meters two units of space on the accretion domain of F. Both sides. Creating a Latus Rectum Chord embedded in a Central Force accretion plane of rotation.

## Latus Rectum chord:

(-) LR endpoint: registers closest approach to spin for max motive energy.
(LR median: registration of average energy and orbit diameter).
(+) LR endpoint: registers remote spin displacement for min motive energy.


Figure 6: curved space ME reach, from spin to rotation, by solution curve(f).


Figure 7: unit time area control of M 2 period motion by M1 potential.
hypotenuse magnitude: GOLDEN RATIO connecting spin with rotation.
Hypotenuse motion on curved space LR chord will not change S\&T2 dynamics. A parametric geometry confirmation of Kepler's empirical law(2), which is orbit area, with respect to Central Force spin per unit time, remains constant.


## Lithium

## ALIXANDER

| No. | Name | Description | Value |
| :---: | :---: | :---: | :---: |
| 1 | Curve a | Curve ( $3 \cos (\mathrm{t}), 3 \sin (\mathrm{t}), \mathrm{t},-5,5)$ | Electron cloud Z\# |
| 2 | Curve c | Curve(t, $\left.\mathrm{t}^{2} /-3+3, \mathrm{t},-3,3\right)$ | Binding energy parabola |
| 3 | Curve b | Curve( $\left.\mathrm{t}, \mathrm{t}^{2} /-12+3, \mathrm{t},-2,6.25\right)$ | Nuclear gravity hook |
| 10 | Curve e | Curve(t, $\mathrm{t}^{2} /-2+3, \mathrm{t},-\mathrm{sqrt}(6)$, sqrt(6)) | Solution curve ( $\sqrt[2]{6}$ ) |
| 11 | Curve g | Curve( $\left.\mathrm{t}, \mathrm{t}^{1} /-2+2.5, \mathrm{t}, 0,5\right)$ | (-) LR endpoint |
| 12 | Curve h | Curve(t, $\left.\mathrm{t}^{1} /-2+2, \mathrm{t},-1,4\right)$ | LR median |
| 15 | Curve i | Curve( t , $\left.\mathrm{t}^{1} /-2+3, \mathrm{t}, 1,6\right)$ | (+) LR endpoint |
| 16 | Point A | $\left(1^{\text {st }} \text { Galilean S\&T1 tile, }\left(6^{\frac{1}{0}}\right)\right.$ | $\mathrm{A}=(1,2.5)$ |
| 17 | Point B | Nuclear connection with S\&T2 period time curve . | $\mathrm{B}=(\sqrt[2]{6}, 2.5)$ |
| 18 | Point C | Parametric registration of radicand with spin. | $C=\left(\sqrt[2]{6},\left(\frac{6}{2}-\frac{\sqrt[2]{6}}{2}\right)\right)$ |
| 19 | Curve j | Curve(sqrt(6), t, t, $3-\operatorname{sqrt}(3 / 2), 2.5)$ | $j:\left(2.45,\left(6^{\frac{1}{0}}\right)\right.$ |
| 24 | Curve f | Latus rectum chord. | $\mathrm{f}:\left(\mathrm{t}, \mathrm{t}^{0} /-2+3\right)$ |

Created with GeoGebra


Figure 8: curved space ME reach, from spin to rotation, by solution curve(f).


Figure 9: unit time area control of M 2 period motion by M 1 potential.

S\&T2 CSDA parametric machine discovery curve is half magnitude of displacement radicand integer.

Nuclear quantum level parametric CSDA machine has discovery/independent curve as $\mathrm{Z} \mathrm{\#}$ of element. Period curve (b) is placed beyond the construction. ME curves now work entirely within the electron cloud.

Period time curve (b) is always CSDA present. Kepler's constant area principal applies (if and when) element gravity hook is required in a spin rotation assembly of like atoms.

Nuclear level CSDA will be explored with S\&T3.


Carbon
ALEXANDER

| No. | Name | Description | Value |
| :--- | :--- | :--- | :--- |
| 1 | Curve a | Curve $(6 \cos (\mathrm{t}), 6 \sin (\mathrm{t}), \mathrm{t},-5,5)$ | discovery |
| 2 | Curve b | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-24+6, \mathrm{t},-1.5,12.5\right)$ | Nuclear gravity hook |
| 5 | Curve c | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-6+6, \mathrm{t},-6,6\right)$ | Binding energy parabola |
| 12 | Curve f | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-2+6, \mathrm{t},-3, \operatorname{sqrt}(12)\right)$ | Solution curve $(\sqrt[2]{12})$ |
| 13 | Curve g | Curve $(\mathrm{t}, 11 / 2, \mathrm{t},-1,1)$ | Latus rectum chord |
| 14 | Curve i | Curve $(\mathrm{t}, \mathrm{t} /-2+11 / 2, \mathrm{t}, 0,11)$ | LR median |
| 15 | Curve h | Curve $(\mathrm{t}, \mathrm{t} /-2+10 / 2, \mathrm{t},-1,10)$ | $(-)$ LR endpoint |
| 16 | Curve j | Curve $(\mathrm{t}, \mathrm{t} /-2+12 / 2, \mathrm{t}, 1,12)$ | $(+)$ LR endpoint |

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Kepler's constant area principal applies (if and when) element gravity hook is required in a spin rotation collective of like atoms.

Thermodynamic control of state is essential to perception; solid, Liquid, and gas.



## Sulfer (Z\#16); ALEXANDER

| No. | Name | Description | Value |
| :--- | :--- | :--- | :--- |
| 1 | Curve a | Curve $(16 \cos (\mathrm{t}), 16 \sin (\mathrm{t}), \mathrm{t},-5,5)$ | Discovery curve |
| 2 | Curve b | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-64+16, \mathrm{t},-10,32\right)$ | Nuclear gravity hook |
| 3 | Curve c | Curve $\left(\mathrm{t}, \mathrm{t}^{2} /-2+16, \mathrm{t},-4\right.$, sqrt(32) $)$ | Solution curve $(\sqrt[2]{32})$ |
| 4 | Curve d | Curve $(\mathrm{t}, 31 / 2, \mathrm{t},-1,1)$ | Latus rectum chord |
| 5 | Curve e | Curve $(\mathrm{t}, \mathrm{t} /-2+15, \mathrm{t},-1,30)$ | $(-)$ LR endpoint |
| 6 | Curve f | Curve $(\mathrm{t}, \mathrm{t} /-2+31 / 2, \mathrm{t}, 0,31)$ | LR median |
| 7 | Curve g | Curve $(\mathrm{t}, \mathrm{t} /-2+16, \mathrm{t}, 1,32)$ | $(+)$ LR endpoint |

## Created with GeoGebra

Readings from the SB

Changing L of S (Z\#16) hypotenuses
Changing control of space/area.


Kepler's constant area principal applies (if and when) element gravity hook is required in a spin rotation collective of like atoms.

Thermodynamic control of state is essential to perception; solid, Liquid, and gas.

Readings from the SB

oxygen registration

## ALEXANDER

| No. | Name | Description | Value |
| :---: | :---: | :---: | :---: |
| 1 | Curve a | Curve $(4 \cos (t), 4 \sin (t), t,-5,5)$ | discovery curve |
| 2 | Curve b | Curve(t, $\left.\mathrm{t}^{2} /-16+4, \mathrm{t},-3,8.25\right)$ | Nuclear gravity hook |
| 3 | Curve c | Curve(t, $\mathrm{t}^{2} /-2+4, \mathrm{t},-\mathrm{sqrt}(8)$, sqrt(8)) | $\sqrt[2]{8}$ |
| 4 | Curve d | Curve(t, $7 / 2, \mathrm{t},-1,1)$ | Latus rectum chord |
| 5 | Curve e | Curve(t, t/-2 + 3, t, -1, 6) | (-) LR endpoint |
| 6 | Curve f | Curve(t, t/-2 + 3.5, t, 0, 7) | LR median |
| 7 | Curve g | Curve(t, t/-2 + 4, t, 1, 8) | (+) LR endpoint |

Created with GeoGebra

Readings from the SB

| 1.1 RAD $\times \sqrt{\left(\frac{7}{2}\right)^{2}+(8-1)^{2}}$ | *Doc |
| :---: | :---: |
| $\sqrt{\left(\frac{7}{2}\right)^{2}+7^{2}}$ | $\frac{7 \cdot \sqrt{5}}{2}$ |
| $\sqrt{\left(\frac{7}{2}\right)^{2}+(6--1)^{2}}$ | $\frac{7 \cdot \sqrt{5}}{2}$ |



Readings from the SB

INTEGER(8) square space; RADICAND(8) curved space.


Cross over detail (ABC):
(A): $\quad\left(1, \frac{7}{2}\right)$.
(B): $\quad\left(\sqrt[2]{8}, \frac{7}{2}\right)$.
(C): $\quad(\sqrt[2]{8},(4-\sqrt{2}))$

Hyp:

$$
\left\{c \rightarrow \frac{1}{2} \sqrt{5(9-4 \sqrt{2})}\right\}: \operatorname{leg}(A C)
$$

Area:

$$
\frac{9}{4}-\sqrt{2}
$$

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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

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

## ALIXAND 2 ;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.


Figure 10: 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 $\mathbf{N}$ pole and one at the $\mathbf{S}$ pole of spin; just as a bar magnet. When exploring changing acceleration energy curves of $\mathrm{M}_{2}$ orbits, we will use the N curve as our planet group approaches high energy perihelion on the north time/energy curve.

## ALIXAND $\Sigma$ R

