Two points in Euclidean space make a line. In Gaussian and Reimann space, when two points act as radius and curvature we still have a two-point linear connection (radius of curvature) defining a curve with square space metrics. When one point suffers specific mathematical operation, being  $(point)^2$  and  $\sqrt[2]{point}$ , we can read specific happenings across the linear connection linking square space with curved space. We begin defining Curved Space mechanical manipulation of our Square Space Being using square and inverse square.

Finding number fields of Curved Space.

7/6/24

I believe there are two number fields writing Central Force Gravity field maps on falling and orbit motion. One #field operating on the domain of central force curved space and one #field fixed on what I refer to as Curved Space Directrix, a limit on curved space range, marked at unit(1) on spin as unit range/unit space. To fix a limit on central force range mapping changing domain space requires such a number field be parallel with the central force domain and define both time needed to get there (range) and required energy to stay there (domain) space. A collated assembly of first second space-time tile(s) from (F) to (t^2).

Number Fields of Curved Space

If we want to learn how to construct curved space mechanical energy of central force fields, it is necessary to learn the shaping phenomena of exponents in square space and inversed exponents of curved space.

ALEXANDER; CEO SAND BOX GEOMETRY LLC (7pages; 1500words)

Allow me to use an essential calculus moniker. Independent curve will be called discovery and dependent curve definition.

I call the unit circle and unit parabola a unit entity because the curves are constructed using a pre-determined unit of square space: (Euclid's Perpendicular Divisor: (magnitude/2)). Half to discovery and half to definition.

Now, let's look at a construction I've been dealing with for three or four days.

Some background. The construction is that of a Uniform Acceleration Field discovered and studied by Galileo. It will have a Central Force (F) and its accretive numbered(line) domain. And a Central Force Curved Space Directrix with Cartesian number line produced as consecutive counting integers 'captured' under an indexed(2) radical. We now have two parallel Cartesian number lines.

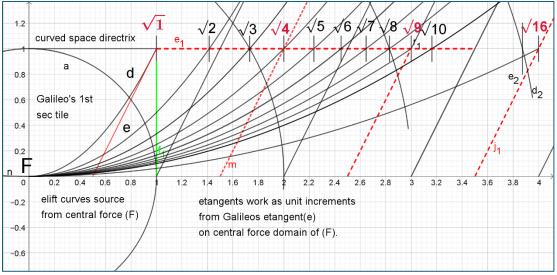


Figure 1. Galileo's 1<sup>st</sup> second tile mapping Uniform Acceleration using two numberfields, one for curved space and one for square space.

I had shown, using Galileo's spacetime, that position above surface acceleration with respect to time of freefall is composed of two curves. One a degree(2) curve I reference as lift energy. The other a linear curve I reference as (e)tangent for energy tangent. Both curves ultimately determine that place in space where time curve<sup>2</sup> provides sum of Galilean energy tiles required to achieve sustainable height/second rise. In other words, tiles needed to get there and stay. Let us filter the busy. The degree(2) lift energy curves source from (F) as flat line (0slope) events, indicating a start from rest energy. They pass across altered Cartesian counting integers on the curved space directrix. Let's do sequential time roll up a degree(2) lift curve and see what an accompanying (e)tan does.

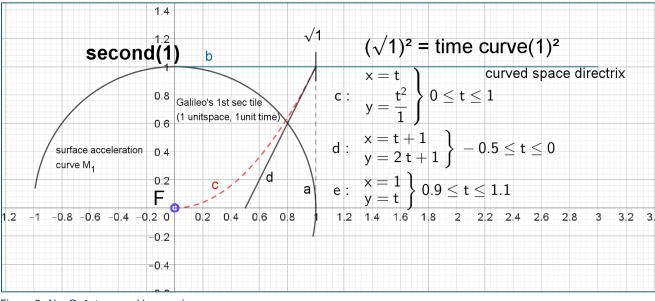


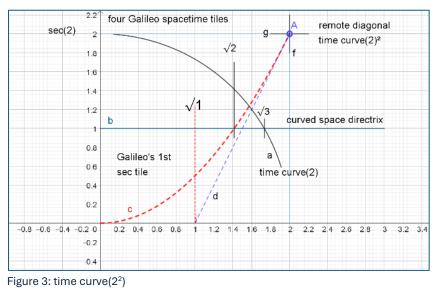
Figure 2; AlexG; 1st second happenings.

Time  $Curve(1)^2$ : Galileo and DeCartes, an algebraist and analytic geometer, laid out the foundation math for algebraic space-time tiles. Each SpaceTimeTile is metered as ft/sec on domain side and each one-unit time metered on range side. Figure 1 is my parametrics for the squaring of time curve(1). Tile(1) of my construction belongs to Galileo, it's his space-time tile.

Time curve(1)<sup>2</sup>. A uniform accelerations frame. Each lift energy curve(c) will source from central force (F) with (0)slope, rest energy, no work being done. The lift energy curve(c) will find the most remote corner of Galileo's first second tile, *coordinates*(1,1). A reach, a climb out, above the surface acceleration curve(a) of ( $M_1$ ). (e)tangent(d), will always step along the central force domain in 1/2 units of space. (e)tangent(d) will connect with lift energy curve(c) at a constant slope(+2) at coordinates (1,1) in square space.

A uniform acceleration lift energy curve can only achieve sustainable continuity (somethin' has got to hold it there) with support of an energy tangent intercept, a slope (m = +2) event.

A necessary uniform acceleration support structure is always at hand. As the lift energy curve climbs, an accompanying (e)tangent is always moving (1/2) step increments along the domain of central force (F) to assure sustainable support for the assigned degree(2) time curve<sup>2</sup> connection. With the (e)tangent intersection at a slope (m = +2) event, we will be at a remote



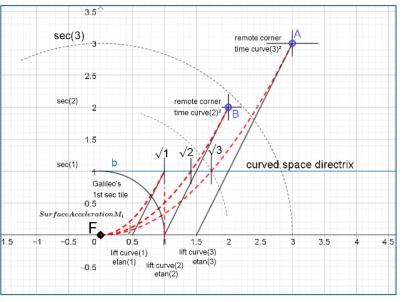
diagonal of space time<sup>2</sup>.

SUMMARY: Lift energy curves(c) all source from Central Force F with zero slope as an indication of rest energy. (e)Tangent's(d), always move along the Central Force domain in 1/2 step increments. (e)tangent(1) will start

from <u>below</u> M1's surface acceleration curve at 1/2-unit space on the Central Force domain, move  $(\frac{1}{2} + \frac{1}{2})$  to (e)tangent(2) on domain space(unit1) of central force F and rise to the most remote corner of the time-curve(2)<sup>2</sup>.

The etangent read, curve(d), enabling intercept of time curve( $n^2$ ) using incremental steps from spin, is quite intriguing. etangent(d) connection with the first second tile lift curve(c), both start below the surface acceleration curve of ( $M_1$ ), definitely small space quantum world as defined by the unit circle circumference defining separation of our Infinities.

As the first second etangent(d) steps off 'place' 1/2 on the domain of (F), the first half step takes us out of the quantum world of ( $M_1$ ) surface acceleration, onto the unity curve of our two infinities, free to climb macro space of classic big beginning with time curve(2). Galileo seems to be the first human to cross from the world of Quantum Small into the world of Classic Big.

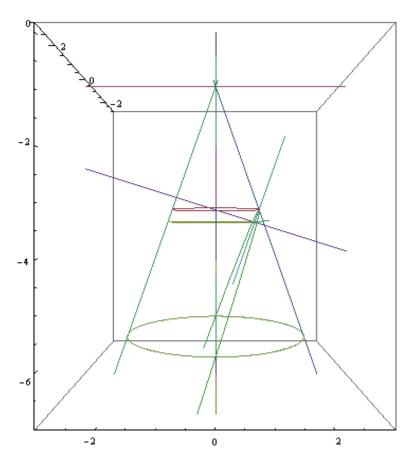


Not sure what is happening here. I sense curved space is using two number lines to solve uniform acceleration mechanical energy problems. The first number line is a standard cartesian number line running on the domain rotation plane with respect to spin. The

Figure 4: time curve(3<sup>2</sup>)

second number line I see is perplexing. Remove the radicand from the radical and the index working the radicand and we have a collection of cartesian sequenced counting integers, not in unit space marching order, but some sort of slide rule mechanical compression seeking 'square root' of its 'square'. As the curve space number line working the domain of (F) is produced out into infinity it is a definite one to one correspondence of cartesian integers. However as the curved space directrix number line extends out to Infinity there is a physical dimensional contraction happening here. The time curve under consideration will still be squared but the lift energy curve will have to travel greater distances after touching the sequential indexed radicand integer tagged as head of the lift curve when freed of radical and index in essence becoming time curve(n). The (e)tangent will step along central force domain of (F) in 1/2 increments to that place on the line where  $\left(\frac{timecurve(n)}{2}\right)$ will place the etangent in a (m = +2) posture to support and define the most remote diagonal of the time  $curve(n^2)$ . My personal QED opinion!

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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

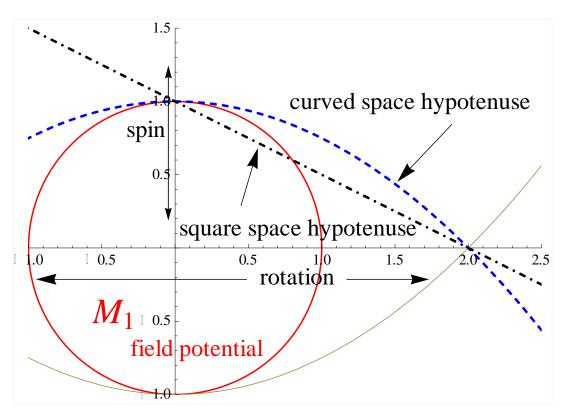
does not appear at all... Sir Thomas Heath: "A HISTORY OF GREEK MATHEMATICS" page 119, book II.

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. <u>alexander@sandboxgeometry.com</u>

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

## 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<sub>2</sub> 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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