

Readings from the Sand Box

Nuclear Fields of the (Mendeleev's) Periodic Table.

ALEXANDER; CEO SAND BOX GEOMETRY LLC

10 pages 1100 words

CONSTRUCTING NUCLEAR
GEOGRAPHY of FIELDS

July 29
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Parametric tools and machine technology needed to
construct mechanical energy curves of nuclear fields.

Arithmetic
progression of
nuclear mechanical
energy curves.

This paper began: Thursday, July 29, 2021. 23:54.

Rough draft collective finished: Friday, July 30, 2021. 01:11.

I will open two new sites soon.

readingsfromthesandbox.com and readingsfromthesandbox.tech

(.com) will be for middle school and HS STEM curious. Especially those using
machine technology to explore the human knowledge base.

(.tech) will be for the erudite. Papers will now cost. I got to live too.

Some (.com) will be free. Some at very reasonable pricing for what these papers
offer.

(.tech) will also be reasonable. Pursuit of knowledge should always be available,
especially 21st century philosophies.

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Initial focal radius binding parabola:

$$(Table[(1/4) * Z, \{Z, 20\}])$$

$$\left(\left\{\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, 1, \frac{5}{4}, \frac{3}{2}, \frac{7}{4}, 2, \frac{9}{4}, \frac{5}{2}, \frac{11}{4}, 3, \frac{13}{4}, \frac{7}{2}, \frac{15}{4}, 4, \frac{17}{4}, \frac{9}{2}, \frac{19}{4}, 5\right\}\right)$$

$(Table[(1/4) * Z, \{Z, 20\}])$: this table is the size of initial focal radius (p) as $\left(\frac{\pi}{2}\right)$ spin axis of ecloud for first twenty elements.

Z#1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$\frac{5}{4}$	$\frac{3}{2}$	$\frac{7}{4}$	2	$\frac{9}{4}$	$\frac{5}{2}$	$\frac{11}{4}$	3	$\frac{13}{4}$	$\frac{7}{2}$	$\frac{15}{4}$	4	$\frac{17}{4}$	$\frac{9}{2}$	$\frac{19}{4}$	5

Reference figure1:

The binding parabola (b) is our survey tool:

$$\{t, \frac{t^2}{-Z\#} + Z\#\}$$

Next, we need location of Focus (p), its size and +LR end point.

Since the initial focal radius goes from focus to vertex we need subtract (p) from ($Z\#$) to find ordinate. Focus protium cartesian location: $\left(0, \frac{3}{4}\right)$.

+LR end point: $\left(\frac{1}{2}, \frac{3}{4}\right)$. All +LR end points: $\left(\frac{Z\#\#1}{2}, \frac{Z\#\#3}{4}\right)$

Neighborhood (J) $(1/4 \text{ Cos}[t] + 0, 1/4 \text{ Sin}[t] + 3/4)$

Neighborhood (K) $(1/4 \text{ Cos}[t] + 0, 1/4 \text{ Sin}[t] + 0)$

Unity-tan and unity-tan normal, where primitive 1st Q latus rectum end point:

protium $\left\{\frac{1}{2}, \frac{3}{4}\right\}$, and new element configuration +latus rectum end point will be:

$\left\{\frac{Z\#\#1}{2}, \frac{Z\#\#3}{4}\right\}$. and tan slope is always ($m = -1$), tan normal slope is always ($m = 1$).

$$Solve[y - 9/4 == -1(x - 3/2), y] \rightarrow 1/4(15 - 4t)$$

$$Solve[y - 9/4 == +1(x - 3/2), y] \rightarrow 1/4(3 + 4t)$$

Means to find nuclear corner (C) of primitive ${}^1\text{H}$ Protium.

1. Let (p) be initial focal radius neighborhood (j). Then, shaping curve (k) of nucleus will be focal radius (p).
2. If we let a radius (p) be aligned (co-incident on) with nuclear squaring asymptote, we have a right triangle having hypotenuse = (p_2) , and $2t^2 = (p_2)^2$, where $(p_2) = \frac{1}{4}$. solve $\left(2t^2 = \left(\frac{1}{4}\right)^2, t\right) t = \frac{\sqrt{2}}{8}$, binding energy radius (l).
3. Repeat same exercise for abscissa and ordinate of binding energy radius $\frac{\sqrt{2}}{8}$ alignment with squaring asymptote within nuclear binding energy curve to find abscissa of nuclear transition square.

$$4. \text{ solve } \left(2t^2 = \left(\frac{\sqrt{2}}{8}\right)^2, t\right) = t = \frac{1}{8}$$

5. ordinate will be $(Z\# + abscissa) = (8/8 + 1/8) = 9/8$.

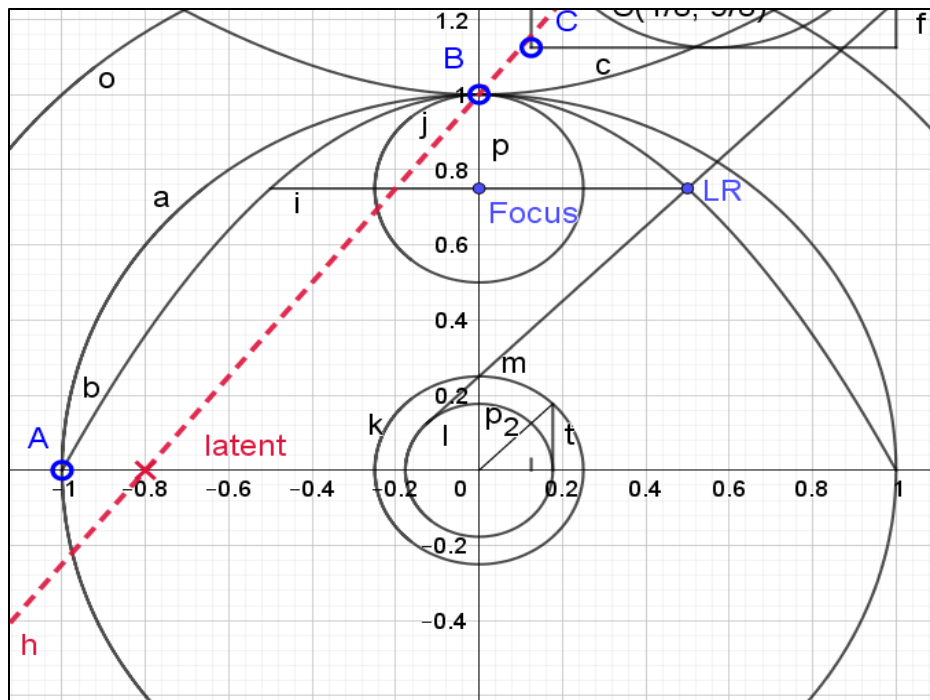


Figure 2: Nuclear corner is pre-requisite to construct nuclear S&T3.

QED Presentation 2018; ALXANDER; CEO SAND BOX GEOMETRY LLC

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Finding sides of S&T square (c, d, e, f) Protium, Z#1.

Curve (c, e) are abscissa sides.

Curve (c); ($t, 9/8, t, 1/8, 1$)

Curve (e) ($t, 2, t, 1/8, 1$)

Curves (d, f) are ordinate sides.

Curve (d); ($1/8, t, t, 9/8, 2$)

Curve (f); ($1, t, t, 9/8, 2$)

These constructions are nuclear only. Dynamics of a CSDA Latent Heat Thermometer are not covered.

I follow with two constructions from my WVTC of October 2020. Both are of Li Z#3. 1st is a single atom with its bond plane. All atoms possess an electromagnetic bond plane and have a natural propensity to hook-up.

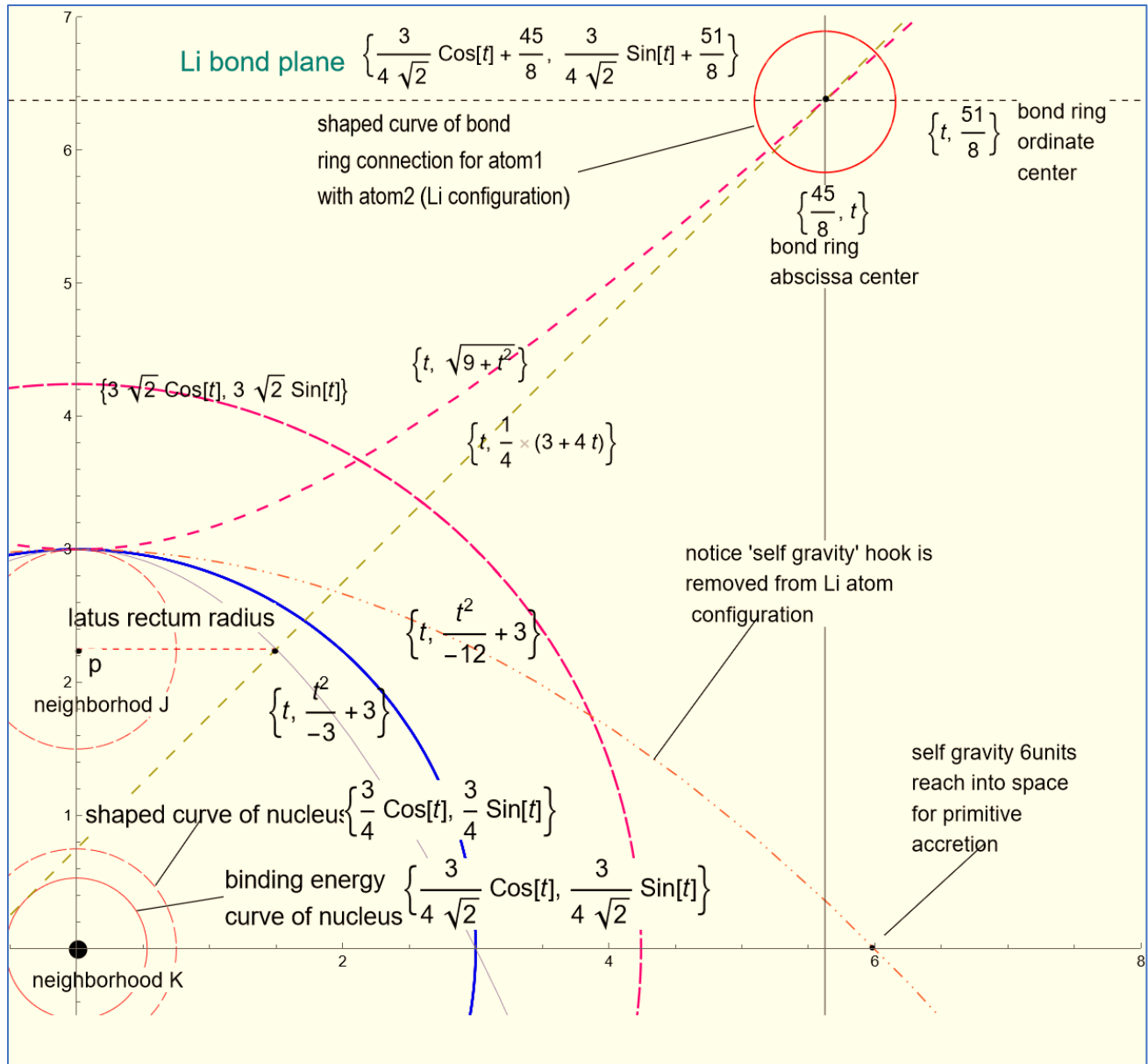
2nd is a two atom get together,

Parametric geography is embedded so each construction is without mapping.

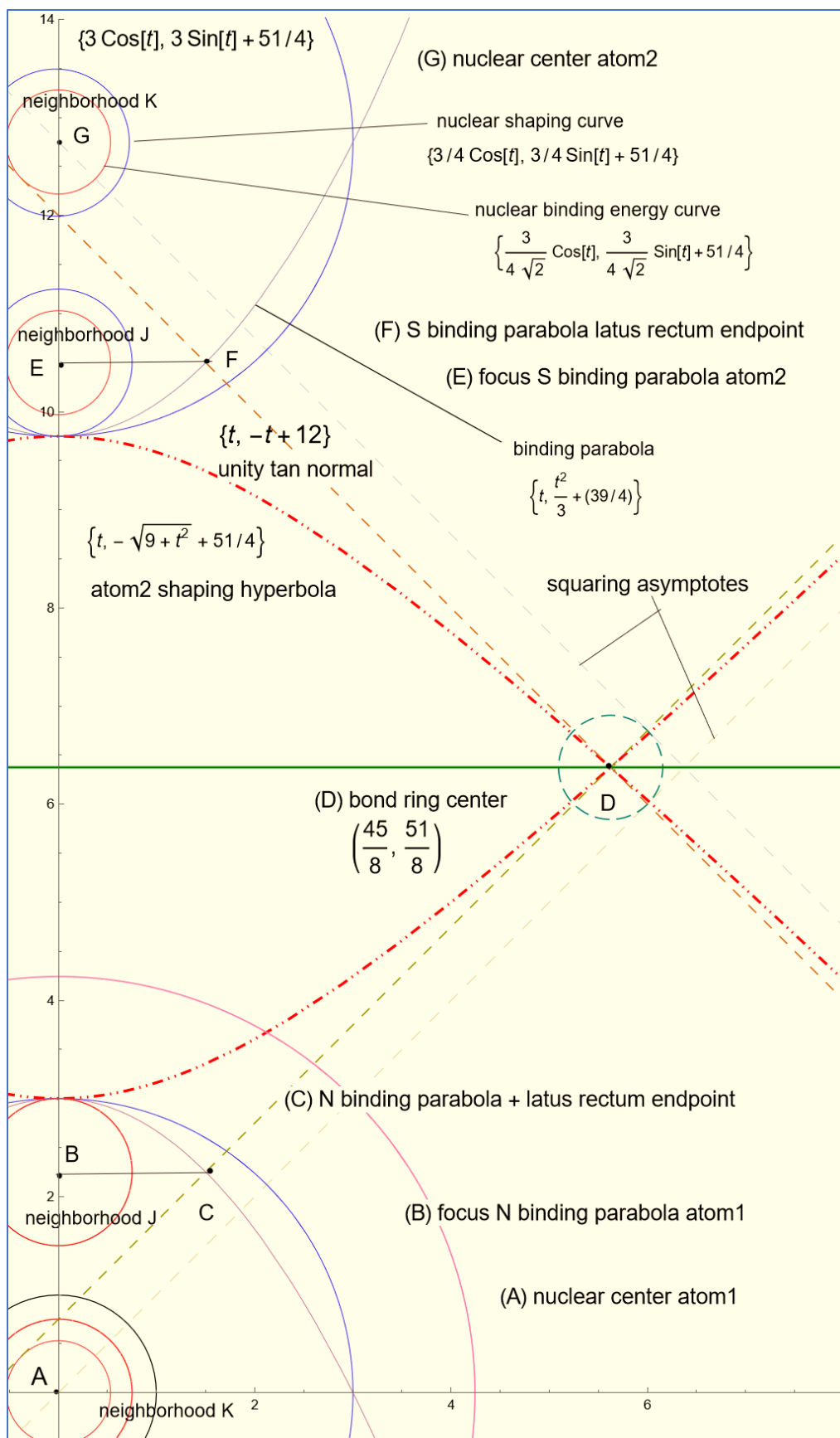
Constructing atom3 into a nuclear assembly requires reflection on state. I go simple. One atom is a gas assembly, two will be liquid and three? The start of primitive accretion of solid perceptions.

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CONSTRUCTING ATOM 1 (LI); Lithium (Z#3) and N BOND PLANE



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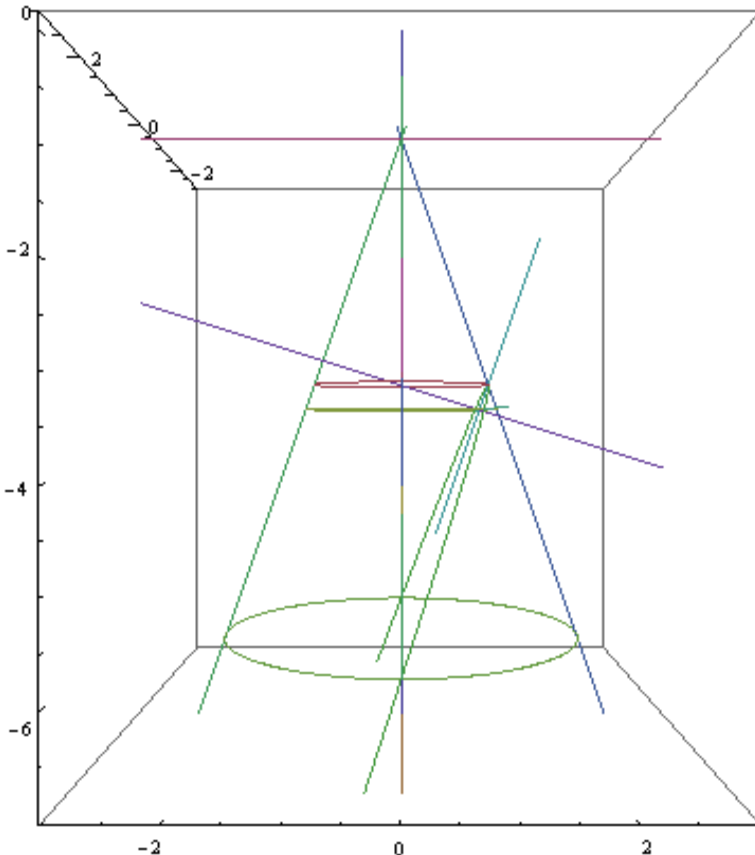


Construct atom2 N of atom1; connection with bond plane (Li Z#3))

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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.

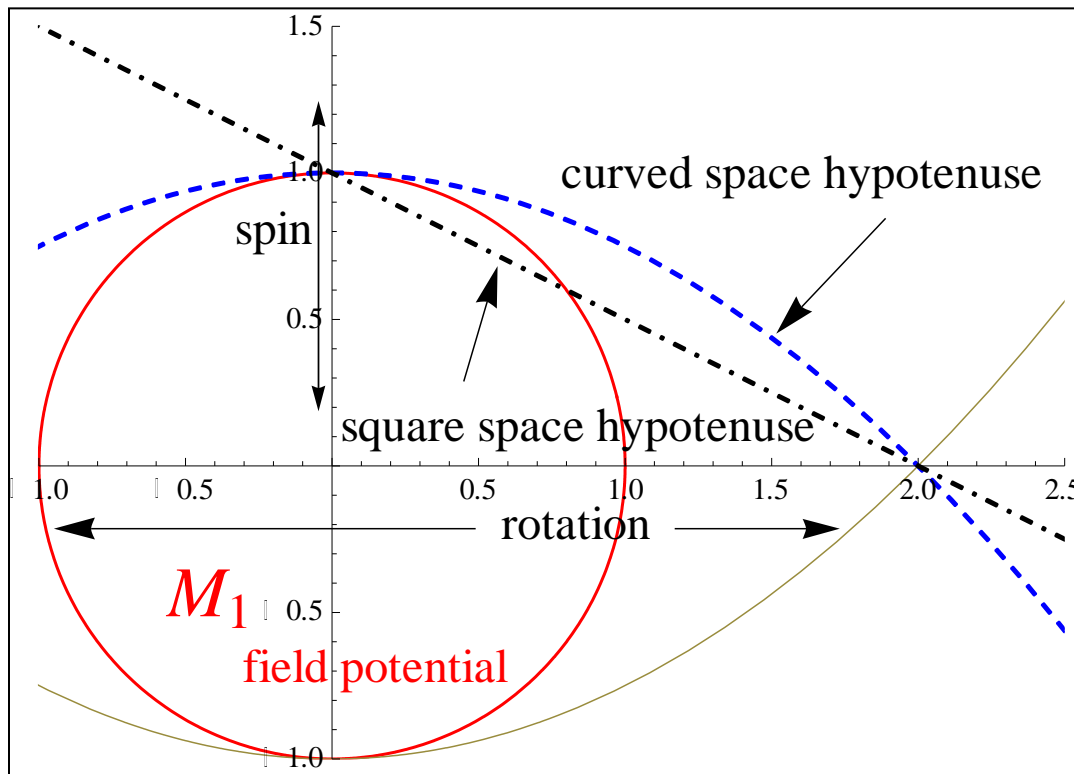
Utility of a Unit Circle and Construct Function Unit Parabola may not be used without written permission of my publishing company Sand Box Geometry LLC Alexander; CEO and copyright owner. alexander@sandboxgeometry.com

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

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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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