

Mayan Treasure Supplement 2004 -- SECTION III: Abstract



- 1.) A series of 5 numbers -- 288, 48, 216, 96, 36 -- is given by key STU dimensions in four different sectors of Teotihuacan [see Maps, pp.10, 11.]
- 2.) A 1926 study of the Greek Parthenon, in Pythagorean Diatonic Units, presents 5 key numbers--288, 48, 216, 96, 36 [Part 6,p.20-23;Fig.8-A;Tabulation 8.]
- 3.) Teotihuacan's architecture is based on factorials 1! through 16! [Part 1, p.2 - 4] Squares, cubes and decimals appear as dimensions [Part 2, p.5 - 6.]
- 4.) Mayans knew decimals and could have known, via factorials, the natural logarithmic base "e." By raising e to the exponent "twelfth root of the number 2" a unique series is obtained: 2.88 48 216 96 36 [Part 3, p.7 - 9.]
- 5.) Mayan data interlocks when organized as a multidimensional matrix. With an intentionally inexact, rational P_i , Mayan STU's and a rotating sphere, integral relationships are defined for lines, degrees, area & volume of a scale model of earth, plus time: days, synodic counts and repeating events [Part 4, p.12 - 14.]
- 6.) Five ancient systems -- Hebrew Qabala, Greek Gematria, Egyptian hieroglyphs, Hindu and Chinese astronomy -- identified many of the same numbers as significant. These have not been found to link Jupiter, Saturn and other planetary reappearances as do Mayan parameters that unify space/time in Teotihuacan's architecture, a time-model of the solar system [Part 5, p.15 - 19.]
- 7.) The Qabalist *Sepher Yetsira* confirms ancient Hebrews knew the first seven factorials [Part 5, p.17.] Qabalists view the number "6" as a key to creation [p.16.] Mayans held "6" to be of primary importance for multidimensionals [p.14.] The number "6" would be the sixth number in Mayan and Greek structures.
- 8.) Mayan iconography communicates counts with geometric codes [pp.25-26.]
- 9.) Future research is suggested [p.24-27A.] Additional bibliography is given [p.29.] Additional conclusions are presented [p.28.]

MAYAN TREASURE SUPPLEMENT 2004 -- SECTION III
PART 1: FACTORIALS

Mathematicians define a "factorial" as the product of all the consecutive positive integers from 1 to any given number "n!" For example, 3! is (1)x(2)x(3), equal to 6, and 6! becomes (1)x(2)x(3)x(4)x(5)x(6), equal to 720.

In the early 1980's the first six factorials (1,2,6,24,120 and 720) were recognized as exhibited by Teotihuacan's dimensions in Standard Teotihuacan Units (STU) of 1.0594(6) meters. The spacing on the Grand Avenue of the two largest pyramids marks 720 STU, underlining its importance.

"720" counts reappearances of the planet Jupiter (399 days) required for it to travel around one-third of the Zodiac's circle: 287,280 days, or 786-1/2 solar years. To travel the complete Zodiac takes 2,359-2/3 solar years of 365.2422 days. That is 2,160 synodic orbits of Jupiter. 2,160 STU is the elevation above mean sea level of the "secret lava tunnel" under the No.1 pyramid (now said to be the "Sun.") This fact was published in 1984 (see Bibliography, "*The Keystone*.")

Mathematic factorials lay dormant until 2003, when those beyond 6! were examined. Correlations appearing under Tabulation I, p.4 below, suggest that the Mayan calendar system and the Teotihuacan design is based on factorials up to at least 16! Factorial 16! has 14 digits: 20,922,789,890,000.

In Tabulation I numbers in red are measurements that confirm that basic Ceremonial Zone dimensions display Mayan knowledge of space and time, planetary and solar system relationships. Some of the latter are:

<u>Mayan Count</u>	<u>Days in the Cycle</u>	<u>Factors of the Count</u>
<i>Uinal</i>	20	2 x 2 x 5
<i>Tun</i>	360	(3) x (2x3x4x5)
<i>Katun</i>	7,200	(2x5) x (2x3x4x5x6)
<i>Baktun</i>	144,000	(2x2x2x5x5)x(2x3x4x5x6)
<i>Oxlahkatun</i>	1,872,000	(13)x(2x2x2x5x5)x(2x3x4x5x6)
73 <i>Oxlahkatuns</i> =Era	136,656,000 ~	divided by 365 = 374,400 <i>Haab</i> =52x <u>7200</u>

To explain the appearance of the number "**216,000**" we may study Venus. The Mayans observed the planet's position in the celestial tapestry, and knew that Venus moves from morning to evening star and back over a time period seen from earth (the synodic orbit) of 584 days. It does not return to the same sky location, but appears at a different location, downward and to the left. Five orbits moves it to new spots that describe an invisible 5-pointed star (a pentacle) whose zero origin every 2,920 days is not precisely the same as its beginning reference.

SUPPLEMENT 2004 - PART I: FACTORIALS

This difference is 2.468 days, so that Venus's pentacle rotates one-half a circle in **216,000** days, plus a correction of 80 days.

Mayan systems used easily recognizable counts, later corrected after the appropriate lapse, by a day-adder. Hence, a complete circle would take **432,000** days, plus 160. In vague years of 365 days, this is 1,184 (Haab,) also equal to 148 cycles of 2,920 days. The distance "148 STU" is marked by the first wall south of the E/W centerline of the Great Pyramid, and also serves as a third multiplier for long term eclipse counts (148 x 9 = 1,332 days. "1,332 STU" marks the Zone's South limit wall.

Factorials tabulated include repeating multiples necessary to follow planetary counts, as well as for calculations of areas and volumes. (Also see the Multidimensional Matrix Tabulation, Part 4.) It can be seen that 9! encloses eight Earth model areas: **45,360** sq. STU; 10! encloses four Earth model volumes: **907,200** cubic STU.

Red numbers have been used to illustrate basic design distances of **60, 216, 378** and **756** STU. Violet numbers point out **288** STU for 12!, 13! and 15!. In green is the perimeter of the "Citadel," the Saturn Quadrangle, as a factor (**1,512**) for 9! through 16!, plus showing that **151,200** days is a repeating count for **400** Saturn orbits (see Page 16 of the first Research Summary, March 21, 2002.) We are reminded that the *Halach* wears double circle earpieces: two circles of "378" are **756**; four are **1,512**.

A principal factor of 16! is the *Oxlahkatun* [**1,872,000** days (in blue)] dimensioned in Teotihuacan as "**1,872**" -- the sum of two sectors of "**936**" (enclosed by 13!) My tabulation does not include a large number of other alternate factors that would require many more columns if enumerated. The principal N/S distance of **2,268** STU is a prime factor of 9! $362,880 = 2,268 \times 160 = 378 \times 960$.

These correlations demonstrate that the Mayan calendar system was laid out by competent astronomer/mathematicians, who achieved high precision in following repeating cycles with integral factors using minimum corrections. Their knowledge was converted to an architectural design with no equal anywhere in ancient times.

I believe it is reasonably probable that Mayan mathematicians could have known \underline{e} based on their knowledge of factorials. When six terms (to + 1 / 5!) are calculated, the value of \underline{e} is 99.64% of 2.718281828... At 6! (+ 1 / 720) the calculation is 2.7180555..., or 99.94% of the conventional value, above. In Part 3, it will be seen that Mayan counts include hundreds, thousands and millions, which exhibit their knowledge of powers of ten.

**FACTORIALS AT TEOTIHUACAN SHOWN BY DIMENSIONS IN STU
MAYAN TREASURE SUPPLEMENT 2004**

<u>X</u>	<u>X! FACTORIAL</u>	<u>FACTORS</u>	<u>OTHER FACTORS</u>
1	<u>1</u>	<u>1</u>	
2	<u>2</u>	<u>1</u> x <u>2</u>	
3	<u>6</u>	<u>1</u> x <u>2</u> x <u>3</u>	
4	<u>24</u>	<u>1</u> x <u>2</u> x <u>3</u> x <u>4</u>	
5	<u>120</u>	<u>1</u> x <u>2</u> x <u>3</u> x <u>4</u> x <u>5</u>	
6	<u>720</u>	<u>1</u> x <u>2</u> x <u>3</u> x <u>4</u> x <u>5</u> x <u>6</u>	
7	<u>5,040</u>	<u>20</u> , <u>252</u> ; <u>42</u> , <u>120</u> ; <u>5</u> , <u>7</u> , <u>144</u> ...	<u>2</u> x <u>63</u> x <u>40</u>
8	40,320	<u>360</u> x <u>7</u> x <u>16</u>	<u>2</u> x <u>5</u> x <u>7</u> x <u>24</u> x <u>24</u>
9	362,880	<u>1,512</u> x <u>24</u> x <u>10</u>	<u>8</u> x <u>45,360</u>
10	3,628,800	* <u>151,200</u> x <u>24</u>	<u>4</u> x <u>907,200</u>
11	39,916,800	<u>151,200</u> x <u>24</u> x <u>11</u>	<u>48</u> x <u>756</u> x <u>100</u> x <u>11</u>
12	479,001,600	<u>151,200</u> x <u>288</u> x <u>11</u>	<u>60</u> x <u>60</u> x <u>231</u> x <u>576</u>
13	6,227,020,800	<u>151,200</u> x <u>208</u> x <u>18</u> x <u>11</u>	<u>93,600</u> x <u>288</u> x <u>231</u>
14	87,178,291,200	<u>151,200</u> x <u>312</u> x <u>231</u> x <u>8</u>	<u>14,400</u> x <u>312</u> x <u>21</u> x <u>231</u> x <u>4</u>
15	1,307,674,368,000	<u>1,512</u> x <u>216,000</u> x <u>4</u> x <u>1001</u>	<u>45,360</u> x <u>288</u> x <u>7</u> x <u>11</u> x <u>13</u>
16	20,922,789,890,000	<u>1,512</u> x <u>1,872,000</u> x <u>462</u> x <u>16</u>	<u>907,200</u> x <u>256</u> x <u>1001</u> x <u>9</u>
		(Note: <u>7</u> x <u>11</u> x <u>13</u> = <u>1,001</u>)	
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- NOTES:** (1) Underlined numbers are marked in STU at Teotihuacan.
(2) Two double-circle earpieces are 1,512 = four sides of the Saturn Quadrangle (The "Citadel") = 4 x 378 STU = 1,512.
(3) 15! is equal to 1,872,000 (a Mayan *Oxlahkatun*) x 99 x 49 x 144.
(99=9x11 also in murals; 49 is given by steps (on "Sun" Pyramid)
144 = dimensions in the "Citadel," on the Avenue, and at the "Moon"
(4) *See Research Summary Sect. I, P.16, Fig.5, 400 Saturns, XII-2001.

MAYAN TREASURE SUPPLEMENT 2004 -- SECTION III
PART 2: SQUARES, CUBES AND "e"

Mayans at Teotihuacan were familiar with squares and cubes, evidenced by their measurements in STU. Some of these are listed in Tabulation 2, page 6. The use of square platforms and square pyramidal complexes is another confirmation.

In 1665 Isaac Newton recognized that a series of reciprocals of factorials, namely $1 + 1/1! + 1/2! + 1/3! + \dots 1/n!$ will approach a limit that was designated "e," the natural logarithmic base 2.71828... In the 18th century, Euler discovered the relationship of e raised to the power of (i)(Pi) plus e to the power zero is a sum equal to zero. In the same century both Pi and e were proved to be irrationals. In the late 19th century both e and Pi were shown to be transcendental, meaning that the numbers are real, and not algebraic.

The pre-Christian Greeks are believed to have developed algebra without negative numbers and without factorials. What they really knew is conjecture, but not what they may have known and kept secret, as for example by Pythagoreans. We cannot say what they did not know. This will remain forever speculatively unprovable.

Egyptian, Hindu, Chinese and Islamic mathematicians are in the same category. Today's researchers say that Mayans knew zero before the Arabians. However, others say that Mayan "zero" is not the same as the Arabian; that is, Mayan zero can mean "nothing is missing; my abacus box is complete." This may change when more evidence has been found. New evidence at Teotihuacan forms the factorials listed under Part 1. For example:

6! (720) contains integral factors of Mayan day counts: 1, 20, 360 (*K'in, Uinal, Tun.*)

8! (40,320) accomodates 28, the day count for stellar months (Paris Codex.) Note that $28 \times 13 = 364$, the year count for thirteen Mayan constellations.

9! (362,880) can be factored by 36, 48, 96, 144, 162, 216, 288, 252, 378, 756, 2268 and 45,360, the area of a scale model of Earth. Here is a strong reason for Mayan preference for "9," number of *Hunab Ku*, giver of movement and meurement.

10! (3,628,800) allows us to divide by 907,200, volume of the Earth model with radius of "60." The result is four earth volumes.

13! (6,227,020,800) permits division by 93,600 (13 *Katuns.*) When we reach:

15! (1,307,674,368,000) we can divide by the *Oxlahkatun* of 1,872,000 days, as well as by the Venus long cycle pentacle count of 216,000 days, and volume of the Holy Black Cube of Mecca, that measures 60 units per side. Also see Part 1, pages 2,3.)

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TABULATION NO. 2
SQUARES AND CUBES AS TEOTIHUACAN DIMENSIONS

<u>No.</u>	<u>Squared</u>	<u>Cubed</u>			<u>NOTES</u>	<u>No.</u>
1	1*			1**		1
2	+3x1 = 4*	+7 =	1+6 =	8**		2
3	+5x1 = 9*	+19 =	7+12 =	27**	* <i>NumericalArk</i>	3
4	+7 = 16*	+37 =	19+18 =	64~	63x756x2268	4
5	+3x3 = 25	+61 =	37+24 =	125	=divisible by	5
6	+11 = 36*	+91 =	61+30 =	216**	these squares	6
7	+13 = 49°	+127 =	91+36 =	343**		7
8	+3x5 = 64	+169 =	127+42 =	512	° <i>NumericalArk</i>	8
9	+17 = 81*	+217 =	169+48 =	729**	13x756x2268	9
10	+19 =100	+271 =	217+54 =	1000	=divisible by	10
11	+3x7 =121	+331 =	271+60 =	1331**	these squares	11
12	+23 =144*	+397 =	331+66 =	1728~	(V=22,289,904)	12
13	+5x5 =169	+469 =	397+72 =	2197		13
14	+3x9 =196°	+547 =	469+78 =	2744**	** <i>Numer.Ark</i>	14
15	+29 =225	+631 =	547+84 =	3375	h=63= divisible	15
16	+31 =256	+721 =	631+90 =	4096	by these cubes	16
17	+3x11=289	+817 =	721+96 =	4913	(V=108,020,304)	17
18	+5x7 =324*	+919 =	817+102=	5832**		18
19	+37 =361	+1027 =	919+108 =	6589	~ <i>Ark</i> : h=60 =	19
20	+3x13=400	+1411 =	1027+114 =	8000	divisible by ~	20
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NOTES

These 20 squares are sums of odd numbers, a series of 19: 3,5,7...39. Cubes follow a series of adders: 6,12,18,24... 114, functions of "6." Ten squares and eight cubes are dimensions in STU, suggesting that Mayans were aware of these functions.

If a vertical structure measures ten STU it may mean we can use its cube--"1,000"--as a multiplier; e.g., a square of 312 STU in the Saturn Quadrangle ("Citadel") with area 97,344 can signify 97,344,000 vague years of 365 days = 35,530,560,000 days. This is equal to a *Tzolkin* (260 cycles) of Eras, each being 73 *Oxlahkatuns* (136,656,000 days,) known Mayan counts. Furthermore, 52 *Oxlahkatuns* are 97,344,000 days. [edited 10-august-2006]

MAYAN TREASURE SUPPLEMENT 2004: SECTION III
PART 3: A UNIQUE POWER OF "e"

It can be coincidental, or perhaps deliberate, that the Teotihuacan STU can be expressed in meters as the twelfth root of the number two: 1.059463094..., or abbreviated as simply 1.0594(6)...one meter plus 5.946 centimeters. One-half a millimeter can be distinguished with normal vision.

We believe that advanced Mayan mathematicians discussed relationships among themselves, without ever sinking to the level of primitive mentality alleged to be the case for several centuries of domination by ignorant invaders from Europe, whose major interests were greed, sex and proselytism. With this in mind, a test was made raising logarithmic base e to roots of the number two. Twenty-four roots are tabulated on Page 9, although the test was made for forty-eight, as noted.

There is only one root of 2 that produces a series of numbers unique to the basic Teotihuacan design: 1.059463094... The result is: 2.88482169636... When expanded, i.e., multiplied by 100,000 million, the product is:

288 48 216 96 36 ...

These numbers are redundant dimensions in four sectors: in the Great Quadrangle of Saturn (the "Citadel"); at the Great Pyramid of Jupiter/*Hunab Ku* (now designated the "Sun" Pyramid); at the northern stellar observatory (at present called the "Moon" Pyramid); and on the Grand Avenue (no named the "Street of the Dead.") A marked-up version of the "Citadel" (see map, P.10) shows how these numbers are defined. The spacing of the three eastern pyramidal platforms leaves no question that the logic is Mayan, since the spaces total 312 STU(see below.)

When the official Teotihuacan Map was published in 1973 (see Bibliography) there were errors and, as in any research, guesses. The group of three eastern platforms, (officially labelled P, Q and R) carry a speculative overlay, showing a larger base (27.5 m. by 29m.) in the center (Q), and two smaller ones north (P) and south (R) measuring 23 x 24m. But when the three structures were excavated, it was found they have the same bases: 23.3 m. square; that is, 22 STU by 22 STU.

The width of the Quadrangle is 378 STU. The stone platforms are separated by 48 STU, the space between each pair being 26 STU. The centerpoints of the outer platforms mark 96 STU, leaving each side spacing at 130 STU, a total of 260 STU, the *Tzolkin*. The inner space between the platforms totals 52 STU, and the total for the four spaces is 312 STU, a repeat exhibition of the short count of six 52-year periods (see map, P.10.) The sum of the three platforms is 66 STU, repeated twice at the so-called "Moon" pyramid, as 128 + 4 (the first add-on or *adosado*.) These dimensions were published in *The Keystone*, 1984, pp.121 (see Bibliography.)

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In the Saturn Quadrangle are two rows of platforms, 24 x 24 STU, KLMN to the north, STUV on the south, whose centers are spaced 144 STU east to west. These two dimensions register 288 STU. The west baseline of the No.3 Pyramid (now called "*Quetzalcoatl*") marks 216 STU from the western reference line. Vertical structures have measures of five and seven STU, as well as four and nine. These factors give 35 and 36. The "Citadel's" western face marks 7 STU from the zero reference line, which is at the foot of the four platform staircases: WXYZ.

Dikes were constructed to the north and south of the Great Pyramid, spaced on its east/west centerline, to mark 144 STU twice: 288 STU, that also measures the distance to *Tepantitla* (the "*Tlalocan*" mural.) These dimensions are plotted on Map 2, "Ceremonial Zone," p.11, below. The drawing appeared in my Summary Number 3, March, 2002, and was originally published in *The Keystone*, 1984.

The northern star observatory (the "Moon") is 144 STU wide, or 288 / 2. The center of the pyramid lies 216 STU south of the north limit. From the center to the south edge of the second *adosado* (add-on) measures 96 STU, a distance given three times (Map 2,) a total of 288 STU. The number of steps up the 5-body 2nd *adosado* is 48 for a height of 16 STU. The main pyramid itself is five bodies 42 STU high, or 6 x 7. From the "Moon" centerpoint to the "South Complex" marks 288 STU, followed by 216 STU, dimensioned twice before arriving at the centerline of the Great Pyramid (also see maps published in *The Keystone*, 1984, pp.121-123)

If 16! is factored, one of its series will be:

$$\underline{378} \times \underline{756} \times \underline{73216000}$$

The third term: 73 216,000 presents the multiplier "73" for Mayan calculations of Earth and Venus (73 x 5 = 365 days; 73 x 8 = 584 days.) This is also the multiplier for an Era: 73 x 1,872,000 = 136,656,000 days. An Era divided by 365 (the vague year, or *Haab*) is 374,400 (see Footnote, Tabulation 2.) The half-cycle of the Venus pentacle is 216,000 days, plus a corrector of 80 days (see pp.2-3, Part 1.)

Mayans exhibit their knowledge of tens, thousands and millions. Dimensions include 6, 60, 6000; 72, and 720. Day counts give numbers such as 7,200; 144,000; 288,000; 1,872,000...which shows that they handled multiplications by tens. We believe that they also knew how to raise selected significant numbers to powers by using inherited intuitive genius. It is intriguing to find combinations as shown above. Is it possible that concepts involving multidimensional relationships have not been visualized by moderns in the past, but can now be seen as a fresh field for future research?

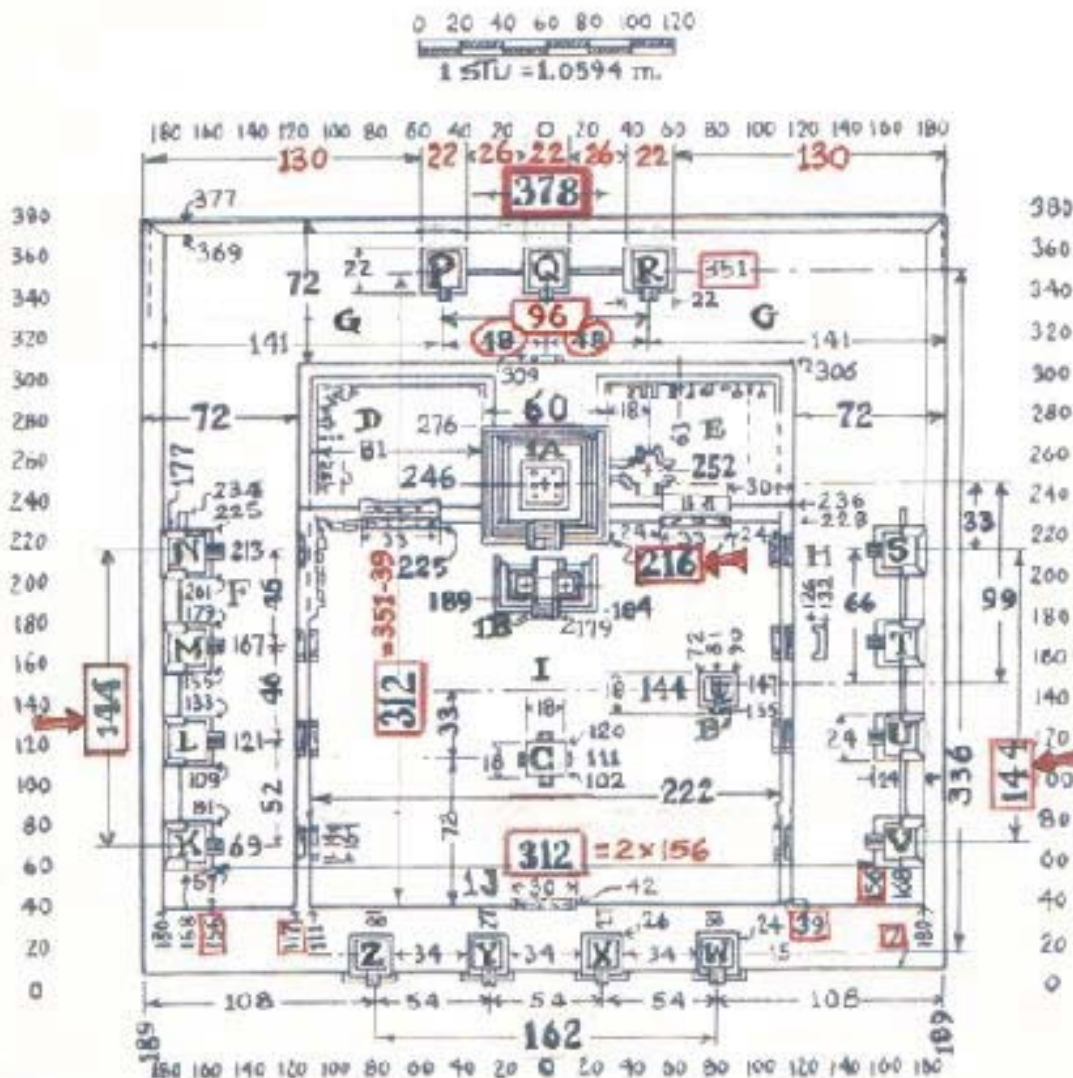
[edited 10-VIII-2006]

SUPPLEMENT 2004 -- SECTION III: POWERS OF "e"

TABULATION NO. 3
24 POWERS OF e AS FUNCTIONS OF ROOTS OF "2"

<u>"X"TH ROOT = (DECIMAL ROOT)</u>		<u>"e" TO THE "X"TH POWER</u>
1/2	1.414213562...	4.113250379...
1/3	1.259921050...	3.525143166...
1/4	1.189207115...	3.284475963...
1/5	1.148698355...	3.154084738...
1/6	1.122462048...	3.072409319...
1/7	1.104089514...	3.016476757...
1/8	1.090507733...	3.975784592...
1/9	1.080059739...	3.944855468...
1/10	1.071773463...	3.920554404...
1/11	1.065041089...	2.900958180...
1/12	1.059463094...	2.88482169636...
1/13	1.054766076...	2.871303410...
1/14	1.050756639...	2.859814146...
1/15	1.047294123...	2.849929117...
1/16	1.044273782...	2.841334347...
1/17	1.041616011...	2.833792755...
1/18	1.039259226...	2.827121980...
1/19	1.037155044...	2.821179456...
1/20	1.035264924...	2.815852123...
1/21	1.033557783...	2.811049168...
1/22	1.032008280...	2.806696811...
1/23	1.030595545...	2.802734492...
1/24	1.029302237...	2.799112035...
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- NOTES:** (1) e = 2.718281828...
(2) The 25th to 48th roots of 2 also generate random sequences.
(3) e to the 12th root of two, multiplied by 100,000,000,000 is 288 48 216 96 36... key factors in the Teotihuacan design (refer to text, pp.7-8.)



MAYAN TREASURE SUPPLEMENT 2004 - PART 3 - A UNIQUE POWER OF e

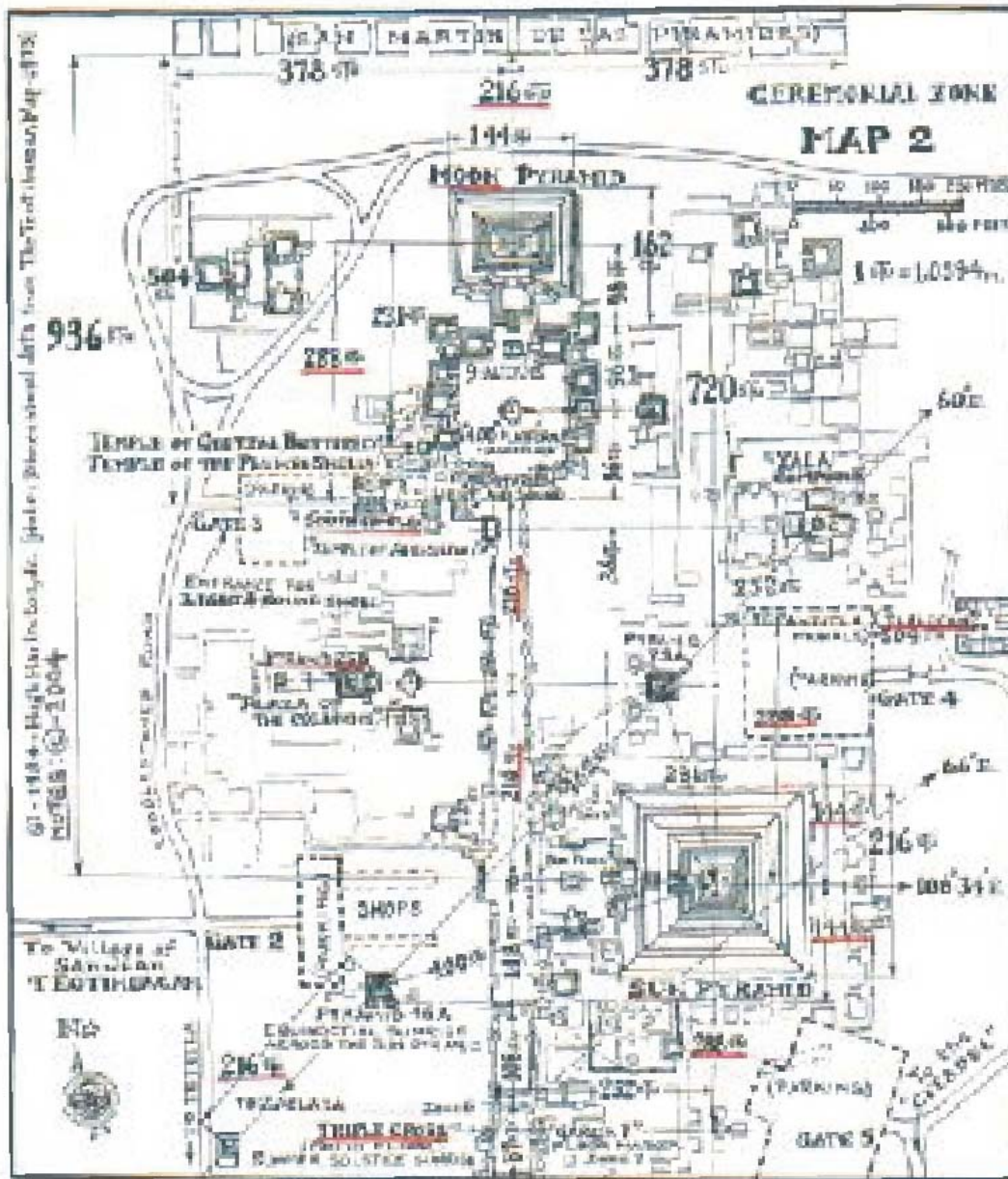
MATHEMATICAL MODEL OF THE "CITADEL" IN STU

[Letters from *Teotihuacan Map*, 1973, p.76, Section N1E1]

P,Q,R (excavated 1980's): $(130+26+26+130) = (312) = (378 - 66) = (351 - 39)$

K-L-M-N = 144 STU; S-T-U-V = 144 STU; TOTAL = 288 STU

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MAYAN TREASURE SUPPLEMENT 2004 -- PART 3 -- A UNIQUE POWER OF 2

- DIKES AT 144 STU N. ANDS. OF "SUN" CENTERPOINT = 288 STU
- TRIPLE CROSS SO. OF "SUN" CENTERLINE = 288 STU
- "TLALOCAN" MURAL, TEPANTITLA N. OF "SUN" = 384 STU
- "MOON" CENTERLINE TO SO. COMPLEX CENTERLINE = 384 STU
- "MOON" CENTERLINE SO. OF NORTH LIMIT = 116 STU
- PYRAMID 25B SO. OF CENTERLINE "SO COMPLEX" = 116 STU
- "SUN" CENTERLINE SO. OF PYRAMID 25B = 116 STU

MAYAN TREASURE SUPPLEMENT 2004 -- SECTION III
PART 4: A MAYAN MULTIDIMENSIONAL MATRIX

What is multidimensional? "Multi-" means "many;" "dimensional" means "a manner of measurement." A matrix can show a series of concepts that are related. What is the Mayan bar-and-dot system for handling numbers (not their calendar)?

A series of boxes, one above the other, form an abacus, to add, subtract, multiply and divide numbers. We can use a stack of four boxes. One dot in the lowest box stands for the number "one;" a dot in the next higher box means "twenty;" in the third box, it's "four hundred;" and in the fourth box "eight thousand." In each case the next higher dot is multiplied by the number twenty. This number, four times five, is a key to many Mayan counts. We can see why on p.14.

Now put another four-box column next to the first stack, and instead of the number "one" we put the number "thirty-six." This could be a square whose sides measure six units. It does not matter what the units are: centimeters, inches, or whatever. The answers will be the same numbers. The second box will then be twenty times the first number, or seven-hundred-twenty.

Move up to the third box. The multiplication by twenty gives us fourteen thousand-four-hundred: twelve times twelve, times one hundred. This, in days, is two Mayan Long Counts, called "*Katuns*." The fourth box will be twenty times two *Katuns*: two Long Counts called "*Baktuns*," (or *Niktekatuns*), the fifth Mayan Long Count in days. Remember that "days" are really revolutions of the planet Earth on its axis. What could be a new relationship of these numbers?

A third column of four boxes is added. We now have twelve boxes. The lower box on the right is obtained by multiplying thirty-six by an intentionally inexact value of Pi, the ratio of a circle's circumference to its diameter. The Mayans used seven times nine (63), divided by four times five (20.) $36 \times \text{Pi}$ is the area and volume of a unique universal sphere: 113.4, with diameter of six units, and a radius of three.

We move up to the second box, multiplying by twenty: 20×113.4 is the design length of Teotihuacan's Ceremonial Zone in Mayan STU: 2,268. Simultaneously this number is the count in *days* of six orbits of the planet Saturn. Furthermore, the number tells us the length of six Earth circumferences, as well as the area of a spherical triangle, a measure of our planet divided into twenty equal triangles.

Again multiply by twenty. We get the Total Area in square STU of a rotating earth model reduced one hundred thousand times: 45,360. When we again multiply by twenty, we have the Volume of our earth model: 907,200 cubic STU.

[edited: 10-august-2006]

SUPPLEMENT 2004 -- SECTION III: PART 4
A MAYAN MULTIDIMENSIONAL MATRIX

First we outline the MATRIX separately, in words:

MAYAN MULTIDIMENSIONAL MATRIX
[TABULATION 4]

° A dot is <u>eight thousand</u> (a cube twenty per side)	Two <i>Baktuns</i> , fifth Long Count-- earth revolutions	<u>Volume</u> of Earth, reduced 100,000 times
° A dot is <u>four hundred</u> (a square twenty per side)	Two <i>Katuns</i> , fourth Long Count in days	<u>Area</u> of Earth, reduced 100,000 times
° A dot is <u>twenty</u> (fingers and toes)	No. of orbits for Jupiter to <u>cross one-third of Zodiac</u>	Six Saturn orbits (days); <u>Area, spherical triangle</u>
° A dot equals <u>one</u>	A square with sides of six; <u>A thirty-six spoke wheel*</u>	Area and Volume of a <u>Universal Sphere, D=six</u>
Ref: 04-01/TEO	© -Hugh Harleston,Jr- 2006	21-January-2004

- NOTES:** (1) The intentional inexactitude for the Mayan $\pi = 63 / 20 = 3.15$. This value permits correlations to become visible as integral numbers.
 (2) *Teotihuacan artefacts include thirty-six spoked wheels.
 (3) "Orbit" refers to synodic reappearance, seen from earth. This meaning applies throughout this research document. However, Calderon showed that sidereal orbits were known by Mayans, by clocking positions as the planet crosses the Pleiades (Mayan *Tzab*, rattler of *Kan*.)

MAYAN π PRODUCES INTEGRAL VALUES. THIS CANNOT BE DONE WITH MODERN UNITS -- FRENCH METER, EGYPTIAN CIRCLE, BABYLONIAN SECOND. WHEN THE DECIMAL VALUE FOR π IS USED RESULTS ARE DECIMAL IRRATIONALITIES. FOR OTHER RELATIONSHIPS, SEE SECTION I, RESEARCH SUMMARY OF MARCH 21, 2002, PP.11 & 18.

[edited 10-august-2006]

SUPPLEMENT 2004 -- SECTION III: PART 4
A MAYAN MULTIDIMENSIONAL MATRIX

A MAYAN MULTIDIMENSIONAL MATRIX
[TABULATION 5]

<u>NUMBERS</u>	<u>MAYAN COUNTS</u>	<u>RELATED VALUES</u>
<p>(20x400) (dot) = 8,000</p>	<p><u>288,000</u> x <u>Pi</u> = (= 14,400 x 20)</p>	<p>907,200 (= 45,360 x 20)</p>
<p>(20x20) (dot) = 400</p>	<p><u>14,400</u> x <u>Pi</u> = (= 720 x 20)</p>	<p>45,360 (= 2,268 x 20)</p>
<p>(20x1) (dot) = 20</p>	<p><u>720</u> x <u>Pi</u> = (= 36 x 20)</p>	<p><u>2,268</u> (= 113.4 x 20)</p>
<p>(dot) = 1</p>	<p><u>36</u> x <u>Pi</u> =</p>	<p>113.4</p>
<hr/> <p>REF: 04-01/TEO</p>	<hr/> <p>© -Hugh Harleston, Jr.-2004</p>	<hr/> <p>21-January-2004</p>

NOTES:

These numbers correspond to the text of Tabulation 4, page 13. The Universal Circle must have a radius of 3 and a diameter of 6; area and volume are found using $Pi = 63 / 20 = 3.15$, so that $36Pi = 113.4$ units. The World Model is of Radius 60 and Diameter = 120 STU, or 6 times 20. The circumference of the rotating dynamic earth sphere model will be an averaged 6 times 7 times 9 = 378. Underlined numbers are found at Teotihuacan as dimensions.

If a bar is used in the lower box, it signifies five times the dot, or 5; up one box, it is 100. In the third box, a bar's value is 2,000. The preceding applies to a mathematical abacus. Mayans also used a calendar abacus, in which the third box will have a value for one dot that equals 20 x 18, or 360 (the Tun.) One box higher, this value becomes 20 x 360: the Ka'l-tun of 7,200 days.

MAYAN TREASURE SUPPLEMENT 2004 -- SECTION III
PART 5: ANCIENT SYSTEMS

Comparison of sacred numbers in areas and time periods contemporary with Mayans include India, Egypt, Greece, China, Tibet and ancient Israel. Some estimates go to 4,500 B.C. Recent archaeology dates Mayans to at least 8,000-9,000 B.C. There is new evidence that dates could be moved back to 16,000 B.C.

In India sacred numbers are in Vedantas, Upanishads and the Mahabharata. The "Life of Brahma" may have been altered to conceal real figures: 12 hours of Brahma is 4,320,000 "years;" a "night" is the same number. Twenty-four hours become 8,640,000. A "year" of Brahma is 360 "days." When multiplied, the product of 8,640,000 x 360 is 3,110,400,000, three billion "years," if accepted.

Why is an English day 86,400 Babylonian seconds? Why are 21,600 English nautical miles a trip around the world? 21,600 is a Mayan day-count for triple Jupiter/Saturn conjunctions. Why 60 seconds, 60 minutes? Why is the "Black Cube" of Mecca 60 units per side, its volume 216,000...a Venus day-count for Mayans ?

Without "thousands" 8,640x360 is 3,110,400; 4,320 is twice 2,160, the time in vague years for a constellation to precess. Plato labelled 12 precessions a "Great Year."

If errors applied to Egypt's Great Pyramid are corrected for *parabolic* faces and the corner-to-corner dimension (230.96 m., equal to 218 STU,) the original structure measured 216 STU, face-to-parabolic-face. The apothem, *speculated* as a straight line by Egyptologists, may have curved to a height of 152.6 meters: 144 STU.

This tells us the pyramid was designed with a 3-4-5 triangle: 108 by 144 by 180 STU on the apothem, its face area 19,440 square STU (108 x 180.) Four faces are 77,760 square STU, a figure given at least three times at Teotihuacan by carved murals.

China's Great Pyramid at Urumchi was some 432 STU (2x216) on its base and 288 STU in height. Each face: 216 x 360 = 77,760 square STU. Total area: 311,040 square STU. The "Life of Brahma" at 360 x 8,640 = 3,110,400 ("years"?) These data suggest a common ancient source for India, China, Egypt and Mexico.

Stonehenge and Tiwanaku, Bolivia are linked with Sumerian and Babylonian time counts via the Nineveh Constant: 2,268. Gnostic Egyptian sources form part of these correlations. Hebrew Qabala and Greek Gematria exhibit similar numbers.

Qabalists recognize a non-verbal reality formed from states of structured energy, symbolized by numbers. Pythagoreans are said to have believed that "everything is number." Egyptians also saw significant numbers: 21 pylons on a pathway to immortality; 42 "weighings of the heart." 21 and 42 are lag times of Jupiter behind Saturn as they reappear in the sky, identified with precision by Mayans.

[edited 10-august-2006]

SUPPLEMENT 2004 --SECTION III, PART 5: ANCIENT SYSTEMS (Contd.)

The Egyptian "Book of the 'Dead' is mistranslated. *Maat* was said to mean "truth" instead of "a non-verbal state of awareness." *Neter* was translated "god," *Neteru* "gods," instead of "a multidimensional communication." With these changes the text speaks to those who have awakened from hypnosis. It describes zombies in the jaws of a crocodile, a time-thought cage. Sunk in a swamp of unconscious people living in virtual reality, the translation conveys the opposite of its intended meaning.

Why does an ancient Egyptian "Book" contains phrase after phrase of expressions from the Hebrew Old Testament? The "Book" was the papyrus of *Ani*, carved in hieroglyphs on walls dated 1,400 B.C. There are also many New Testament phrases.

Tabulation 6 shows thirteen Hebrew Qabalist and thirteen Greek Gematria numbers. Meanings appear alongside for comparison. These same numbers appear as Teotihuacan dimensions (p.19, below.) Locations are four major Teotihuacan demarcations: the Quadrangle of Saturn ("Citadel"); the Great Pyramid of Jupiter/*Hunab Ku* ("Sun"); the Northern Circumpolar Star Observatory ("Moon"); and the Solar Avenue ("Street of the Dead.")

The *Zohar* affirms the creative value of "6" as do Mayans, whose key to multi-dimensionals is $36 \underline{Pi}$, if $\underline{Pi} = 63/20$. There are many references to 60, 600...600,000. Fifty pages cite numbers duplicated at Teotihuacan, but not linked to planetary orbital counts, nor to integral multidimensionals. Six are the directions of space, the Great Unknown. The Sephiroth become a reflected image of the eternal.

THE HEBREW QABALA: Tabulation 6, p.18

The meanings of number sequence 9, 22, 26, 90, 207, 216, 222, 270, 378, 462, 600 are: primeval female energy; cosmic energy structures; unpronounceable inner light; evolved woman; light; holiest of holies; organic movement of the universe; friction (bad); the material world; awareness of existence (good); whirlwind. We point out that *Myrim M'gadla* became "Mary Magdalene," with numerical value of $40.10.200.10.40$ & $40.3.1.4.30 = \underline{378}$, the whirlwind of the material world, a rotating sphere of illusion and external identification.

In STU at Teotihuacan, meanings can be: *Hunab Ku*'s number; two Saturn orbital counts to be corrected; two times 13 or half of a 52-year count; the factor 23 for the solar eclipse double cycle; long-term solar cycles; Saturn orbital day-count of 378 -- circumference of Earth in dynamic rotation -- angular degrees, -- a universal circle -- spherical icosahedral triangular area divided by 20; measure of a Mayan second of arc of earth rotation; 10 times 60, north/south demarcation on the Grand Ave ...

The text of Verse IV,12 of the *Sepher Yetsira* (cf.bibliography, p.109,) states:

SUPPLEMENT 2004 --SECTION III, PART 5: ANCIENT SYSTEMS (Contd.)

"Seven Doubles. (This is) in what manner has combined them: two stones build two houses; three stones six houses; four stones twenty-four houses; five stones one hundred and twenty houses; six stones seven hundred and twenty houses; seven stones five thousand and forty houses, founded..."

The author explains that the above are permutations of objects from 2 to 7 in a general meaning relating them to everything in the seven spheres of cognizable space-time, beyond which the (mouth cannot speak nor the ears hear; i.e., they are non-verbal.) He cites seven "heavenly bodies," seven "days," seven "energies," etc.

If numbers are substituted for this text, and the possible translation of "seven doubles" changed to "seven multiples," we see that: 2, 3, 6, 24, 120, 720, 5040 are clearly the first seven factorials (see p.4, Tabulation 1.) Ancient Hebrews were aware of mathematical factorials, keys to cosmic design.

THE GREEK GEMATRIA: Tabulation 6, p.18

The Greek Gematria follows the Hebrew format. For 19, 22, 128, 312, 360, 432, 486, 576, 720, 1080, 1184, 2268 we find (in Greek) sacred Christian concepts, in the sequence: face dots of a cube of 3; titles for the Virgin Mary; Beyond the Mind; Saviour; manifest; spatial projection; to become manifest; the rock of faith; spirit; surface; Holy Ghost; Lord Cosmopolitan; Joshua Cristos Son of Man.

Teotihuacan communicates a completely different set: a multiplier for Jupiter's orbit (21 x 19); a factorial that includes the count of 400 Saturn orbits; width of the "Moon" pyramid = two raised to the seventh power; short count that covers six planetary alignments, once each 52 vague years; day count of eighteen *Uinals* named one *Tun*; index to long-term Venus pentacle count; volume of a truncated 9-cube, base of 9, height 6*; two counts of 288, a square 24 units per side; 2 *Tuns*, a count of Jupiter orbits to move through one-third of the Zodiac, and 6!; sum of 720 and 360 = three *Tuns*; vague years in a Venus pentacle circular rotation (432,000 days plus 160;) six Saturn orbits -- twenty universal sphere areas or volumes = one-twentieth of the spherical area of a planetary scale model with radius 60, diameter 120.

(*with a box 9x9x6, an exact 3-4-5 scale model of Egypt's Pyramid can be drawn.)

=== 000 === 000 === 000 ===

It seems that neither Egyptians, Greeks, Chinese, Hindus, Babylonians, Sumerians, Arabians nor Hebrews identified universal geometry and mathematical factorials involving Jupiter/Saturn orbital counts and Solar System chronology. Only Mayans produced data for a multidimensional matrix. We believe a still more ancient system was conserved in Mexico. More research may clarify or correct this conclusion. [edited 10-august-2006]

**SUPPLEMENT 2004, SECTION III -- PART 5: ANCIENT SYSTEMS
 TABULATION 6: SACRED NUMBERS**

H E B R E W Q A B A L A

G R E E K G E M A T R I A

<u>NUMBER</u>	<u>WORD(S)</u>	<u>MEANING</u>	<u>Number</u>	<u>Word(s)</u>	<u>Meaning</u>
9	TAYT	Primeval Female Energy	19	(= cube of 3	visible face dots)
22	(Letters)	Cosmic Energy Structures	22 (x22) +1 = 485	(titles for the Metanoia	Virgin Mary) Beyond the Mind
26	YWHW	Unpronounceable Inner Light	128 (x11)	Soter (=1408)	Saviour
30	YEHUDA	Jew	312	Dhlos	Manifest
90	TSSADE	Evolved Woman	360	Probole	Spatial projection
207	AWR	Light	432	Aporroia	become manifest
216	DBIR	Holiest of Holies	486	Petra	Rock; the basis of faith
222	BAYT-KAF	Organic Movement of Universe	576 (24x24)	Pneuma	Spirit
270	RAYSH RAA	"bad"=Friction	600	Kosmos	Universe; mind of God.
378	MYRIM MGADLA	The World as Prostitute	720	Topos	Surface
400	TAV	400 "soldiers" 400 "shekels"	1080	To'Agion Pneuma	Holy Ghost
462	TAV-VAV-VAYT	"good"= aware of existence	1184	Theos kosmopolis	Lord Cosmopolitan
600	MEGGA-DAM	East of Eden: the material whirlwind.	2268	Iesoue Kristos (& Iesoue Anthropos)	Joshua Cristos (& Jesus, Son of Man)
<u>All numbers:</u>	<u>are dimensions</u>	<u>at Teotihuacan</u>			
Ref:	04-01/TEO	21-Jan.-04	©-- Hugh	Harleston Jr	-- 2004

Notes: (1) Numbers 1 to 9 also appear as states of energy in the Qabala, and as symbolic names in the Gematria. (2) See Tabulation 7, p.19, dimensions in STU. (3) Only Mayans appear to have arrived at mathematical factorials, planetary orbital counts as factors, and integral multidimensionals. Their use of an intentionally inexact *Pi* may have been recognized elsewhere. There has been no evidence of any foreign presence in Teotihuacan before the Aztecs [edited 10-august-2006]

SUPPLEMENT 2004, SECTION III -- PART 5: ANCIENT SYSTEMS

TABULATION 7: TEOTIHUACAN DIMENSIONS

[see the Teotihuacan map, 1973, Biblio.Sect.I, p.24]

<u>DIMENSION</u>	<u>MAP LOCATION</u>	<u>DIMENSION</u>	<u>MAP LOCATION</u>
9	C, M, S,GA <u>Hunab Ku#</u> , orbital factor	360 one <u>Tun</u> , days	C Basic upper N/S width
19	M (elevations) Jupiter orbital factor	378 (6x7x9)	C, GA (module, repeats)
22	C (3 east platforms) (area 22x22)+1=485	400 (area 20x20)	S, M (center of S to pyr.46A)
26	M (elevation) (=2x13; 52/2;etc.)	432 (Venus cycle)	GA (center C to crosswall)
30	C(East of pyramid) M (base 2 nd adosado)	462 (geo.sec. arc)	W.toE.crossing GA (pyr.46A to pyr.73A)
90	C: main pyramid (also 360/4; 540/6;etc)	486 (Venus cycle)	M Plaza, plumed shells mural to S pyramid
128	M -- base of pyramid (& 7 th power of 2)	576 (2x288;24x24)	C (area of eight platforms)
207	GA, from C c/l to So.lim. (=9x23; eclipse factor)	600 (5x120;10x60)	GA from M to S (altar platform to c/l)
216	C, GA (repeats) (A=V cube of six)	720 (Jupiter count)	GA c/l to c/l (from "Sun to Moon")
222	C: N/S of main patio (222x1.414= <u>Pi</u> x 100)	1080 (2160/2;9x120)	GA, N.lim.to edge 1 st crosswall S.of "Sun"
270	C: (diagonal in patio) (solar cycle / 100)	1184 (Venus count)	GA, from So.limit: (to c/l crosswall So.of S)
312	C: defined as square <u>(Haab=short count)</u>	2268 <u>(six Saturns)</u>	GA (6x378) <u>(N. to S. design)</u>
<u>SYMBOLS:</u> C="Citadel";	M="Moon"; S = "Sun"; GA= -Grand Avenue Ref: 04-01/TEO	21-Jan.-04	[see text for NOTES] ©-HughHarleston Jr.-2004

Ref. Maps: Harleston, H., The Keystone, Character Composition, Bellaire, TX. 1984,Libraryof Congress LOCC#88-117575, pp.xix, xx; Citadel: pp.111, Fig.1; Sun.Pyr: p117, Fig.7;p118, Fig.8; 119, Fig.9; 120, Fig.10a; Moon: p.121, Fig.11; p122, Fig.12; GA: p.123, Fig.13.

SUPPLEMENT 2004, SECTION III- PART 6: THE PARTHENON

Atop the Acropolis at Athens a Greek architectural masterpiece was finished in 438 B.C. by Pericles, supervised by sculptor and architect Phidias. The use of the site, however, dates to circa 2,800 B.C. The marble temple was dedicated to Pallas Athena, Goddess of Wisdom, born virgin from the forehead of Zeus.

In 1926 an architectural drawing (Fig.8-A, p.22) was made by Ath.Georgiades to define the eight eastern columns of the Parthenon in Pythagorean Diatonic Units (PDU,) a measure derived from the monochord eight-tone whole-note octave. The PDU is equal to approximately one-third of a centimeter, or 300.49 per meter.

In 1981 I reproduced Georgiades' section for use in an audiovisual to show identical numbers had been identified at Teotihuacan, but at the time I did not see the full extent of the correlations. The numbers rested until March, 2004 for this report.

The north to south measurement of the eastern columns -- 9,216 PDU -- is given on a scale that is laid out with 32 intervals of 288 PDU. The first significant observations are that Teotihuacan exhibits nineteen correlations of the multiples of 288; including: 288, 576, 864, 1440, 2304, 2880, 3456, 3744, 4320, 7200 and 7776.

Another significant series constitutes 13 multiples of 216: 4, 5, 6, 8, 9, 12, 16, 18, 24, 27, 30, 36 and 40, corresponding to: 864, 1080, 1296, 1728, 1944, 2592, 3456, 3888, 5184, 5832, 6480, 7776 and 8640.

The eastern face width -- 9,216 -- is equal to 96×96 ; i.e., 96 squared. It is also 48×192 , dimensions that appear in Teotihuacan. To these correlations we can add $8 \times 96 = 768$, whose twelve multiples are defined in the second horizontal scale, above which appear other measures that include Teotihuacan correlates or duplicates: 1728, 1944, 2592, 2916, 3888, 5184 and 7776.

Below the twelve multiples of 768 are the radii of Column Nos. 1 and 8: 288. Their diameters are 576, a dimension given in the "Citadel" at Teotihuacan as eight square platforms with sides of 24 STU, whose areas are 576. Column Nos. 2 and 7 are spaced 1,080 PDU from the internal six columns, a distance marked at Teotihuacan in STU. The number "1,296 PDU" is 6×216 , found in Egypt as geographical cubits to circle the world: 129,600,000 cubits, each being $\frac{6}{7}$ ths of a "Royal" Cubit.

Immediately above the eight columns appear the spacing center-to-center, marking 1368; then "2664," equal to $2 \times 1,332$, the third Mayan eclipse count in days, at Teotihuacan. Following is "3960," or ten measures of "396." This STU-dimension at Teotihuacan marks $3 \times 11 \times 12 = 11 \times 36 = 3 \times 132$, the spacing to the No.3 Pyramid (*Quetzalcoatl*) vertical centerpoint in the "Citadel" from the east wall limit.

[edited 10-august-2006]

SUPPLEMENT 2004, SECTION III- PART 6: THE PARTHENON

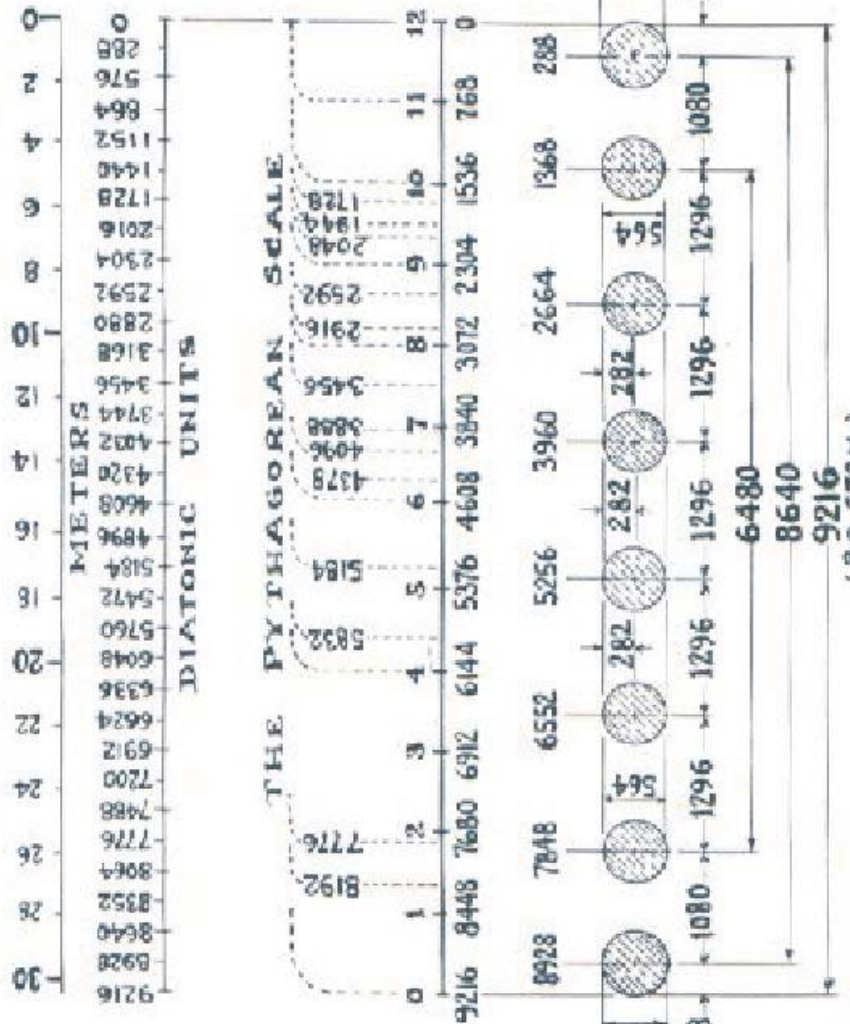
Below the eight eastern columns of the Parthenon are $2160 \times 3 = 6,480$; and also $2160 \times 4 = 8,640$. The number "**2,160**" is, in STU, the reference elevation above mean sea level of the subterranean cave under the Great Pyramid of Teotihuacan. In Greece it was the number of vague years in a twelve-cycle division of the Platonic Great "Year:" $12 \times 2,160 = \underline{25,920}$, that multiplied by 35 is the volume in cu.STU for the reduced scale spherical earth model: **907,200**.

A comparison of five world areas follows [Part 7, Tabulation 8, p.23.] We do not believe it coincidental that this information was retained by at least twelve sectors of the ancient world, tabulated in *Mayan Treasure* Section II, 2003, page 19, Tabulation 2: *Ancient Sacred Numbers (Factors of World Volume.)*.

When it is seen that the same six key numbers have been found at five ancient sites, and that they are derived in differing units of measure--Standard Teotihuacan Units, Pythagorean Diatonic Units, time measures in India, and philosophical and metaphysical correlations that do not include astronomical data, yet are related to mathematical derivations, it becomes necessary to reexamine the bases for current assumptions with respect to multidimensionals.

Profound wonder arises as a result of learning that the architectural masterpiece called *Teotihuacan* and a second masterpiece named *Parthenon* are founded on the same mathematical universals: spheres, cubes, tetrahedrons, areas, volumes. It is hoped that this will encourage other researchers.

[edited 10-august-2006]



MAYAN TREASURE
 SUPPLEMENT 2004
 ADAPTED FROM
 ATH. GEORGIADIS (1926)

FIG. 8-A
 THE EAST COLUMNS
 OF THE PARTHENON
 IN GREEK DIATONIC UNITS

METERS
 0 2.4 4.8 7.2 9.6

DIA TONIC UNITS
 0 720 1440 2160 2880

P.22

CHARLESTON (81)

SUPPLEMENT 2004 , SECTION III-- PART 6A
TABULATION 8: COMPARATIVE SIGNIFICANT DIMENSIONS

<u>MEXICO</u>	<u>EGYPT</u>	<u>CHINA</u>	<u>INDIA</u>	<u>GREECE</u>
<u>STU</u>	<u>STU</u>	<u>STU</u>	<u>(TIME?)</u>	<u>P.D.U.</u>
288 (spacings)	288 / 2 (h = 144)	288 (= h)	288 / 2 (864 / 6)	288 (spacing unit)
216 (spacings)	216 (parabolic c/L)	216 (432 / 2)	216 (216x1440)	216 (6480 / 30)
48 & 96 (spacings)	48 (144 / 3)	48 & 96 (288 / 6 & 3)	48 (144 / 3)	96 & 48 (spacings)
36 (72 & 720)	36 (72/2 & 144/4)	36 (216 / 6)	36 (432/12&288/8.	36 (1296 / 36)
77,760 (math. Art & Venus)	77,760 (4x19,440 (=areas)	77,760 (216x360) (= areas)	77,760 (311,040 / 4) (&36x2160)	77,760 (10x27x288) (& 7776x10)
	© - Hugh	Harleston, Jr.	- 2004	

NOTES: [h=height;PDU=Pythagorean Diatonic Units; STU=Std.Teotihuacan Units]

- 1.) For other correlations please refer to Research Summary 1971-2001, MAYAN TREASURE: Space and Time Unified at Teotihuacan, March 21, 2002 and to SUPPLEMENT No.1, 2001-2003, April 12, 2003 (now titled "Section II.")
- 2.) Note that at Teotihuacan the number 7776 is seen by counting factors given by art designs (8 x 9 =72; x 18 = 1296; x 6 = 7776) on the columns of the patio now named "*Quetzalpapalotl*" which presents stylized falcons. At the Parthenon the numbers in PDU include 288, 576, 864, 1080, 1296, 1440, 1944, 4320, 5184* 7200, 7776 & 8640. (*see Part 7, Future Research, par.8, p.25, Cahokia areas.)
- 3.) For reference: e raised to the power 12th root of 2 = 2.88 48 216 96 36...
- 4.) 48,600 Venus orbits of 584 days = 28,382,400 days; divided by 365 = 77,760 Mayan *Haab*, i.e., vague years. 486 is a dimension in STU. It is also the volume of a cube of nine, truncated to a height of 6. Connecting the centerpoint of the upper square of 9 to each of the corners on the base of 9, describes a pyramid 1:24 to scale, a model of the Egyptian version. Its area is 216 and volume 162 (see notes p.17, par.5, Greek Gematria.) Major Mayan parameters are 162 & 216, which add to 378 = (3x6x9) + (6x6x6).

[edited 10-august-2006]

MAYAN TREASURE SUPPLEMENT 2004 -- SECTION III
PART 7: SUGGESTED FUTURE RESEARCH

Correlations made between August, 2003 and April, 2004, reported in this supplement, provide suggestions for future research:

1.) Teotihuacan:

(1a) Tunnels into the "Moon" pyramid confirmed the original base at its center measures 73 feet square =22.25 m.=21 STU.) "21" is the lag time (days) of Jupiter behind Saturn. More finds could confirm Mayan parameters in STU.

(1b) Original corners of the Great Pyramid were not sounded, except on the SE in the 1960's. There may be no corners underground; i.e., Mayans marked the reference level of their "secret cave," confirmed at 2,284.3 meters (2,160 STU.)

(1c) Measurements (1970's) show that the end of the lava tunnel is +/- 40 m. = 38 STU from the centerpoint of the pyramid. Soundings could be made with a borescope. Orientations are on 1984 drawings (cf. Biblio. Baker, et al.) It can be determined what is at the center: a chamber? a vertical tunnel? a staircase?

2.) China: Great Pyramid at Urumchi. Verify orientation north to south; azimuth to snow-capped volcano NE of Urumchi. Is distance significant? Inside characteristics: tunnels, structures, artefacts? Precise coordinates: Defense GPS data.

3.) Egypt: prove or disprove that counts of Jupiter/Saturn orbits and conjunctions were known to ancients. Are any bonafide astronomical systems similar to Mayan? Were factorials known? Long-term corrections for orbital counts (synodics or sidereals?) Are chambers under the Sphinx? Its real age?

4.) Greece: did ancients know Jupiter/Saturn counts? Any correlative multi-dimensional data? Did Pythagoreans know factorials? Could they have found logarithmic base e ? Why do diatonic units convert music to measurement? Systems at Teotihuacan fit infrasonic F-sharp, a fifth above B-natural, resonant infrasonic vibration of planet Earth (7.83 cps) whose fifth is 11.34 cps, the brain's *alpha*-frequency, tone of an open organ tube 1.0594 meters long.

5.) England: Egypt's "Book of the Dead" could show drastic changes in interpretation when two key words are translated correctly: *Maat* ="non-verbal awareness;" *Neter(u)* = "multidimensional communication." The 1,400 B.C. text has statements found in Hebrew Old and Christian New Testaments (Why?)

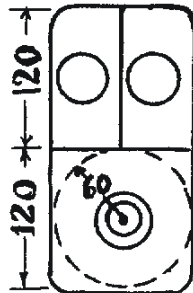
6.) Middle East: Identify data related to the "Nineveh Constant"-- 2,268. Is there connection to six Saturn orbits? Determine if Jupiter/Saturn orbital counts were registered in Sumeria/Babylonia. Was there knowledge of factorials? How was 2,268 used to find precession of the equinoxes? Was it known in 3,000 B.C.?

[edited 10-august-2006]

SUPPLEMENT2004-PART 7: FUTURE RESEARCH

- 7.) **Bureau of Standards:** Why have experimental determinations of the hydrogen fines constant turned out numbers very close to, but not equal to a quantum value for $1 / \alpha$ of $37 \times 100 / 27 = 1.37037037\dots$? Why is this modern physical constant not a product of integral numbers? Should it be?
- 8.) **Cahokia, Illinois:** An exact determination of the "mound" (i.e., pyramid) may show the original base was 216 by 216 STU, with an add-on of 72 by 72 STU. Areas are 46,656 plus 5,184, total 51,840 square STU, a multiple three times 17,280 (itself = $(2/3)(25,920)$.) An area of 216 by 288 = $2 \times 31,104$, numbers found in Mexico, India, Greece, China and Egypt.
- 9.) **General:** It is proposed that Mayan glyphs in sculptures, painted murals and Codices-- Dresden, Madrid, Paris --encode geometrical/mathematical knowledge based on a circle of radius "60," diameter "120," circumference "378" (see *The Keystone*, 1984, p.125-126, Iconography, Figs.15 & 16. For ready reference, Fig.16 is reproduced herewith as Supplement page 26, following.)

A Mayan sacred count was the *Tzolkin*: 260 days beginning with 1-*Imix* (Morley /de Landa.) The ending day was 13-*Ahau*, meaning "a ruler, an important personage." The *Ahau* glyph (see drawing below) is 2 squares forming a vertical rectangle, divided horizontally, having four rounded corners. The upper square is vertically divided into two rectangles. There are two circles above, a double circle below. *Ahau* can be imagined as a "face" -- two "eyes" and a "mouth."



Or we can apply knowledge of the symbol for *Hunab Ku* to find Mayan numerical values. A universal circle of radius "60" will have a dynamic circumference of 378. Its diameter: $1 \times 2 \times 3 \times 4 \times 5 = 120$. A square around this circle has an area of $120 \times 120 = 14,400$, two Mayan *Katuns*. A rectangle has a perimeter of 720, or 6×120 , factorial 6! Four circles represent $4 \times 378 = \underline{1,512}$, perimeter of the "Citadel." The perimeter of the square is $4 \times 120 = \underline{480}$.

13-*Ahau* can communicate mathematical combinations and astronomical correlations for at least three planets.

ICONOGRAPHY AT TEOTIHUACAN



Area of circle = $\frac{63}{20} \times (60)^2 = 11,340$

Area of triangle = $90 \times 52 = 4,680$

Area of segments = $6660/3 = 2,220$
 $= 20 \times 111$

One side of triangle is the Venus cycle: 104

Perimeter is 312, the Martian cycle.

Area is 13×360 , or 13 Tun, and also
 18×260 , or 18 Izolkin.



Perimeter = $4 \times 120 = 480$

Area = $120 \times 120 = 14,400 = 2$ Katun



Half-square = $7,200 = 1$ Katun



Quarter-square = $3,600 = 60 \times 60$

the base area of the Kukulcan Pyramid



Perimeter = $6 \times 120 = 720$

Area = $28,800 = 4$ Katun



Perimeters = $720 + 1680 = 2400$

Area = $10 \times 14,400 = 144,000 =$ Nicte Katun



Area = $240 \times 240 = 57,600 = 8$ Katun

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SUPPLEMENT 2004, SECTION III-PART 7: FUTURE RESEARCH

First, multiply to find:

$$\begin{aligned} \text{N-1: } 720 \times 1,512 \times 480 &= 522,547,200 = \underline{907,200} \times 576 \\ \text{N-2} &= 13 \times \text{N-1} = 6,793,113,600 = \underline{907,200} \times 52 \times 144^* \end{aligned}$$

*The Mayan volume of an earth model is 20 times its area = **907,200** cu.STU.

The synodic orbital times used by Mayans were Mercury 117 days, Mars 780 days and Saturn 378 days, to be fine-tuned after the appropriate number of "reappearances." A modern assumption is that Mayans could not possibly have known the concept "orbit," based on another assumption that no precolumbian could possibly know that the earth was revolving, nor that it went around the sun. These mistaken ideas remain solidly in place, except that with new discoveries they become less and less acceptable. Correlations at Teotihuacan make it probable that ancients kept certain knowledge confidential, in the style of modern militarists.

By dividing the N-2 count (above) by synodic orbital times we have:

Mercury	$\text{N-2} / 117 = 58,060,800 = 907,200 \times 64 = \underline{288} \times 63 \times 3200$
Mars	$\text{N-2} / 780 = 8,709,120 = 9072 \times 960 = \underline{288} \times 378 \times 80$
Saturn	$\text{N-2} / 378 = 17,971,200 = \underline{312} \times \underline{144} \times 400 = 104 \times 17,280^*$

*Numbers that have been identified in this Supplement.
See p.25, par.8, Cahokia, Illinois: $17,280 = (2/3) \times 25,920$.

In Mayan, an upper half-circle is called *Ka-K'an*, dual wisdom. The lower, unseen half is named *Ka-Baal-(Ah)*: hidden magna duality.

Could Mayan *ABLAM* -- "a net of measures" (*AB*, a net, *LAM*, a distance) be a source for *ABRAM* (in Hebrew: possessor *AB*; (of) cosmic dwelling, *RAM*)? For Druids, *RAM* is symbolized essence, behind the veil; for Egyptians *AHRAM* is "pyramid," basis of the world.

It is suggested that interested researchers extend the investigation of numerical messages encoded in Mayan glyphs.

SUPPLEMENT 2004-PART 7: FUTURE RESEARCH

10.) Mathematicians. Suggestions from verbal sources that the long-term cycle of cataclysmic catastrophes on planet earth might have been two-thirds of the Platonic "Great Year:" $(2/3) \times (25,920) \times (365) = 17,280$ vague years = 6,307,200 days (i.e., earth revolutions on its axis.) In the 1980's we found that this count, on observing it as it might have been seen by Mayan eyes, becomes 63 0 72 00. If its multiples are tabulated we can see the following (underlined numbers are architectural dimensions in STU at Teotihuacan):

$$\begin{aligned} \underline{63} \ 0 \ \underline{72} \ 00 \times 2 &= \underline{126} \ \underline{144} \ 00 \\ &\times 3 = \underline{189} \ \underline{216} \ 00 \\ &\times 4 = \underline{252} \ \underline{288} \ 00 \\ &\times 5 = \underline{315} \ \underline{360} \ 00 \\ &\times 6 = \underline{378} \ \underline{432} \ 00 \\ &\times 8 = \underline{504} \ \underline{576} \ 00 \\ &\times 12 = \underline{756} \ \underline{864} \ 00 \quad \dots \text{ and so on.} \end{aligned}$$

Since the Platonic "Great Year" is a submultiple of earth's scaled volume (35 x 25,920 = 907,200 cubic STU,) and since the overall design of Teotihuacan presents submultiples of numbers up to 16! (cf. pp.4 of this Section III, Supplement 2004,) then relationships known to Pythagorean Greeks and Mayans may have been derived from an ancient storehouse of mathematical knowledge. Long-term precision is given by easily correctable factorials' submultiples in whole numbers.

This implies that planetary orbital times may have been designed by a superior ancient technology that encompassed multidimensional relationships, including polar axis precession, linkage to our sun's galactic orbital positions, and other interacting fields as yet unknown to 21st century science. It is postulated that consciousness is a tachyonic field interacting with disciplined humans who transmit advanced knowledge dictated by cosmic universal intelligence.

It is hoped that researchers versed in mathematics will investigate these findings. Is knowledge of factorials one explanation of the appearance of these submultiples? Could other mathematical relationships explain correlations with solar system and galactic parameters? What could be extra solar-system energy relationships that may be related to earth's axial spin? What extragalactic interactions might be involved? How can these be determined? Do above-the-speed-of-light factors play a part? (cf. Bibliography, Magueijo, J., *Faster Than the Speed of Light*, 2003.)

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(Postscript added May 30, 2004; text edited 10-august-2006)

SECTION III, SUPPLEMENT 2004 -- PART 8: CONCLUSIONS

- 1) Teotihuacan's architecture is based on mathematics: factorials and universal geometric relationships, e.g., circle/sphere, square/cube, triangle/tetrahedron. Mayan Long Counts are submultiples of factorials.
- 2) Six key numbers appear in Mexico as STU's and in Greece as Pythagorean Diatonic Units (PDU). Many numbers appear in India, Egypt and China when conversion is made to STU's. Five numbers are obtained by raising natural logarithmic base e to the 12th root of 2, suggesting that factorials, used to find e , were inherited or deduced by Mayans and Greeks, and kept secret.
- 3.) The Mayan system of bars-and-dots for mathematical and calendric relationships permits construction of a multidimensional matrix using an intentionally inexact value of \underline{Pi} . The matrix exhibits integral relationships that register planetary synodic orbital counts and other parameters. The matrix' base is the number $\underline{6}$, a factor of 36, 48, 96, 216 and 288. The area of a scale model earth, 45,360 sq. STU= 7560 x $\underline{6}$; its volume is $\underline{6}$ x 151,200, the day-count of 400 Saturns. The universal tetrahedron's side is the square root of $\underline{6}$ x $\underline{6}$ x $\underline{6}$: 216. A dynamic circle's circumference is 63 x $\underline{6}$. This may explain why sacred texts say genesis, a continuous energy event, is defined by 6 measures (not "days.") This further explains the use of hexagons and six-multiples by Islamic sources. Matrix concepts lead to my conjecture: speculative "dark energy" is a name for evolving consciousness, a beyond -the-speed-of-light field that produces the universe continuously, possibly resolving contradictions of a "big bang" theory.
- 4) A multidimensional matrix cannot be obtained with modern values for angular rotation, length in meters and seconds of time, nor with an irrational value of \underline{Pi} (3.141592654...) Correctable flaws in today's units of measure may not necessarily lead to integral multidimensional values.
- 5) Conjecture; the earth was accelerated in the past from 86,503.04 seconds per revolution to today's 86,400 seconds.* A polar diameter of 12 million STU's is said to be approx. 12,713,528 meters. The speed of light changes from 300 million STU per Mayan second to today's 299,792,508 ...irrational French meters per modern second. It seems simpler with the speed of light as trinity = 3, making $E = m$ times (c-squared) read as: energy is proportional to 9 units of mass. $\underline{9}$ is the Mayan supreme entity's number:

Hunab Ku, Giver of movement, measurement and love.

[*Biblio.Sect.III, p.29, Sc.News, Apr.22, 2006: conflicting time measurements]

[NOTE: Research Summary (2002), Supplement No.1 (2003) and Supplement No.2 (2004) present 33 Conclusions and 24 Suggestions for future research. Also see Section V. (reedited under MAYTRESU-05T2ED.- 10-VIII-06) 28

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