ATLANTIS AFTER CRITIAS AND NUMBERS OF THE PLATONIC LAMBDA

Integers, used as modular multiples for diameters of the Atlantis rings according to Critias, are Pell numbers. They can be located in the Pell number pattern with the aid of the platonic lambda. They are in the same ratio as the planetary distances.

The Acropolis of Atlantis after Critias[1] was situated on a round island, 5 stades accross[2], surrounded alternatively by circular canals and dry rings, having diameters of 7, 11, 15, 21, and 27, stades. The listed numbers are terms of the following Pell series:

3 — 1 — **5** — **11** — **27** — . .
5 — 1 — **7** — **15** — . . .
6 — 1 — 8 — 17 — **42** — . . .

They can be detected with the aid of the numbres of the platonic lambda[3] in the similar way as the numbers of diameters of the Stonehenge rings[4]. (See illustration 1)

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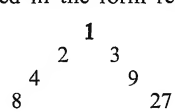
[1] Plato, *Critias*, with an English translation by the Rev. R. G. Bury; The Loeb Classical Library, London, William Heinemann Ltd, 1966.

[2] One stade of 600 feet equals 0,201 km, if the 'megalithic foot', found in the Stonehenge composition, is the basis. See the article T. Kurent, Stonehenge and the Vitruvian Amusium, *Architectural Association Quarterly* vol. 7 no. 3, London 1975.

[3] The platonic lambda is composed of the figured numbers 1, 2, 3, 4, 9, 8, 27 (in that order), usually arranged in the form ressembling the Greek letter:



One, two, three, four, and nine, pebbles stay for the first five numbers; number 8 is represented by four, double spaced apart, pebbles; number 27 is represented simply by nine stones. It would indeed be inconvenient to handle all of the twentyseven stones. For further reading:
— Plato, *Timaeus*, with an English translation by the Rev. R. G. Bury; The Loeb Classical Library, London, William Heinemann Ltd, 1966;
— Sir Thomas Heath, *A History of the Greek Mathematics*, Clarendon Press, Oxford 1921.

[4] T . Kurent, Stonehenge is a Copy of the Platonic Cosmos Described in the Timaeus, sent to *Architectural Association Quarterly*, London, in 1976.

Thus, if the first pebble covers the Pell term 5, the second one covers number 7, the third one hides 11, and the fourth one covers term 15. The ninth *calculus* starting at the term 15 its clockwise movement stops at 42 (which is but a double of the required number 21). Starting at 42, the figured number eight (or double-four) points to the term 27.

The wider Atlantis is enclosed in the circular walls, 127 stades in diameter. How can a figured number twenty seven, starting from the Pell term 27, find the number 127?

Starting at the term 27, which indicates the diameter of the largest Atlantis circular canal, the figured number twenty seven, replaced for practical reason with nine pebbles, can locate with either clockwise or counterclockwise movement four different numbers:

9, 53, 13, and 77.

The listed numbers stay in the following Pell number-pattern:

1 — 1 — 3 — 7 — 17 → 41 → 99
↑ ↓
2 — 1 — 4 — **9** — 22 — **53** — 128
↑ ↑ ↓
3 — 1 — 5 — 11 — **27** — 65 ← 157
4 — 1 — 6 — **13** — 32 — **77** — 186
5 — 1 — 7 — 15 — 37 — 89 — 215

We allready know that a Pell term means also its repeated doubles[5]. If this is so, the terms

9 — 53 — 13 — 77

stay also for numbers

144 — 106 — 104 — 154[6].

The required number 127 is the arithmetical mean of the listed numbers[7]:

$$(144+106+104+154) \ : \ 4 = 127.$$

The Pell numbers 5, 7, 11, 15, 21, 27, and the multiples of 9, 53, 13, and 77, implied in the term 127, defining Atlantis diameters, are in the same ratio as the planetary distances form the Sun. The planetary orbits are nearly circular, but those of Mercury, Mars, and

[5] A Pell term represents not only itself, but also its related numbers ,which are 2, 4, 8 ... and/or 10, 100, 1000 ... times larger or smaller. Since Pell numbers are integers, the half of an odd number or the arithmetical mean of two Pell numbers, one odd and one even, are rounded to a whole number.

[6] $9 \cdot 2^4 = 144$; $53 \cdot 2 = 106$; $13 \cdot 2^3 = 104$; $77 \cdot 2 = 154$.

[7] Number 127 is to be regarded in this case as the common name of the numbers 9, 53, 13, and 77.

Pluto, are more elliptical. Accordingly, the listed numbers are the mean planetary distances, except for the three elliptically orbiting planets, which are presented with their respective minimal and maximal distance form the Sun. (See illustration 2)

Diameters of Atlantis rings after Critias are

5, 7, 11, 15, 21, and 27, stades.

Their respective radii translated in metres are

502, 703, 1105, 1575, 2110, and 2713, m.

The minimal and maximal distance in 10^5 km of Mercury, mean distances of Venus and Earth, and both extreme radii of the Martial orbit[8] are practically in the same ratio[9]:

459, 697, 1082, 1498, 2067, and 2491, in 10^5 km[10].

Multiples of numbers 9, 53, 13, and 77, implied in the number 127, can result in the following dimensions:

36, 77, 144, 288, 424, 424, 576, and 832, stades, respectively.[11]

From the listed diameters in stades the following metric radii can be calculated:

3618, 7738, 14472, 28944, 42612, 42612, 57888, and 83616, m.

The mean distances of the Asteroid belt, of Jupiter, Saturn, Uranus, Neptune, and the minimal, mean, and maximal, distance of Pluto[8], are nearly in the same ratio[9]:

3600, 7780, 14270, 28696, 44966, 44250, 59000, and 73750 in 10^5 km[10].

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[8] See the excellent compendium in the *Scientific American* vol. 233 no. 3, september 1975, composed of the following articles:

— C. Sagan, The Solar System;
— A. G. W. Cameron, The Origin and Evolution of the Solar System;
— E. N. Parker, The Sun;
— B. C. Murray, Mercury;
— A. and L. Young, Venus;
— R. Siever, The Earth;
— J. A. Wood, The Moon;
— J. B. Pollack, Mars;
— J. H. Wolfe, Jupiter;
— D. M. Hunten, The Outer Planets;
— W. K. Hartmann, The Smaller Bodies of the Solar System;
— J. A. Van Allen, Interplanetary Particles and Fields.

[9] Atlantis diameters after Critias and the planetary distances are therefore in the ratio $1:10^8$, or in scale $1m=10^5$ km.

[10] The listed numbers of planetary distances are relatively slightly smaller than numbers of metric Atlantis radii. If for the Atlantis stade somewhat larger measure would be taken, the gap between the compared distances and radii would be narrower.

[11] $9\cdot2^2=36$; $77=77$; $9\cdot2^4=144$; $9\cdot2^5=288$; $53\cdot2^3=424$; $9\cdot2^6=576$; $13\cdot2^7=832$.

The seventh diameter of Atlantis, i.e. the number 127, decoded with the seventh number of the platonic lambda, implies the orbital radii of the outer planets. It is the 'pretty reason why the seven stars are no more than seven'[12].

The rotation of planets is simulated in the clockwise movement of lambda numbers accross the Pell number-pattern, with the exception for Venus and Uranus, revolving in the opposite direction. Their retrograde rotation is mirrored in the counter-clockwise movement of the figured number three, decoding the term 11, symbolizing the distance of Venus, and in the counterclockwise movement of the figured number twenty seven (nine pebbles) starting form the Pell term 27 and decoding the term 9, which stays for Uranus[13]. However, term 9 can be reached in the clockwise movement also. In this case its multiples symbolize the distance of Phaëthon, Saturn, and Pluto.

Atlantis is discussed by Plato not only in *Critias*, but also in *Timaeus*, devoted to the composition of Cosmos[14] with the aid of lambda numbers[15].

According to Plato „this Cosmos is beautiful ... (and) should be a Copy of something ... The Constructor of Cosmos ... fashioned it to be one single octagram (ἡ ψυχή, the Soul)... compounded out of... a circle (τὸ αὐτὸ, the Same)... a square (τὸ θάτερον, the Other) ... and an octagon (ἡ οὐσία, the third form of Being)... It has been constructed with the aid of Pell and lambda numbers (ὁ νοῦς καὶ ἡ φρόνησις, the reason and thought)"[16].

Illustration 1.

Diameters of the Atlantis rings, given by Critias in stades, are Pell numbers. Their location in the Pell number-pattern can be decoded with aid of the figured numbers assembled in the platonic lambda.

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[12] *Fool.* ... The reason why the seven stars are no more than seven is a pretty reason.

Lear. Because they are not eight?

Fool. Yes, indeed: thou wouldst make a good fool.

(King Lear, Act I, Scene V)

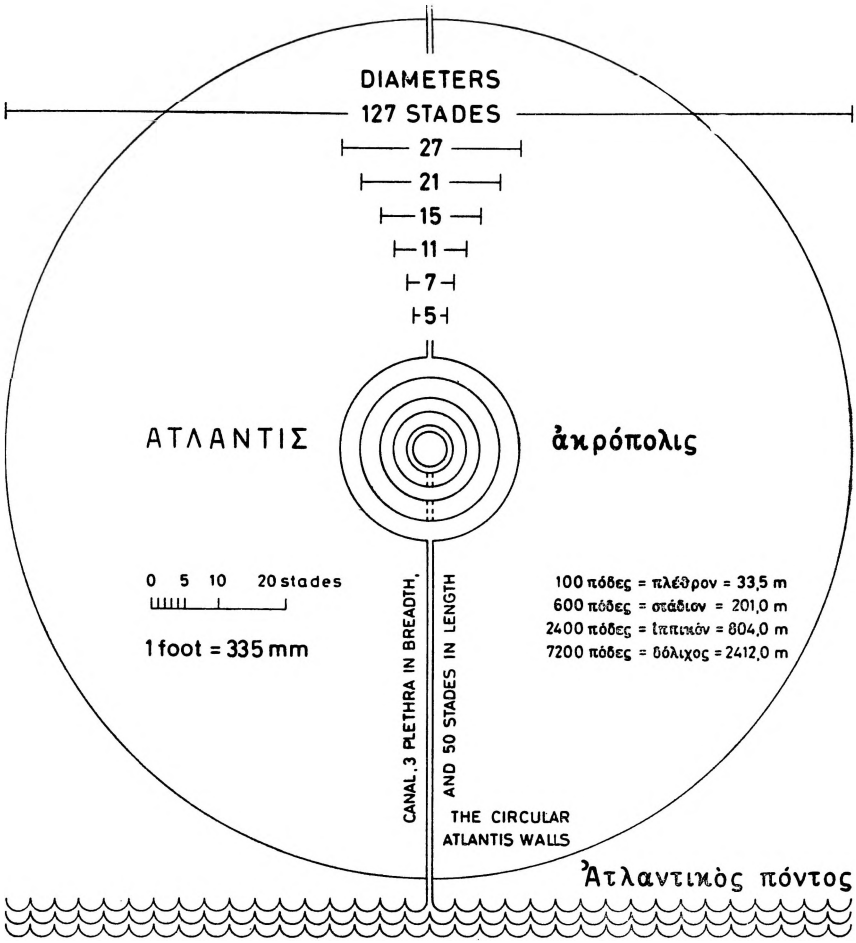
[13] The first of my students to explain the anomaly of the counterclockwise movement of the third lambda number was architect Jan Skoberne.

[14] The Greek word κόσμος means — according to Liddell — Scott — Jones, A Greek—English Lexicon, s.v. κόσμος (p. 985): 1. order; 2. good order; 3. form; 4. government; 5. ornament ,decoration; 6. world—order, universe etc. To this meanings, it should be added: „the way of building, modular coordination"; considering the aesthetic component in the meaning of the term, κόσμος can be translated also as „beautiful composition".

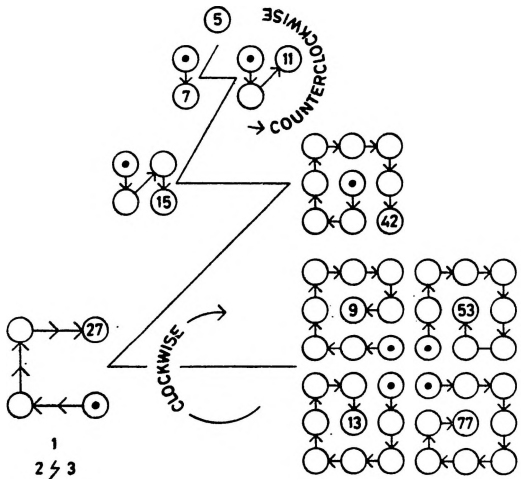
The Greek verb κοσμέω, of the same root, has no English equivalent. It means: to set in beautiful order.

[15] Compare the vocabulary and my unorthodox traslation of some key sentences of *Timaeus* in T. Kurent, Stonehenge is a Copy of the Platonic Cosmos Described in the Timaeus, sent to *Architectural Association Quarterly*, London, in 1976.

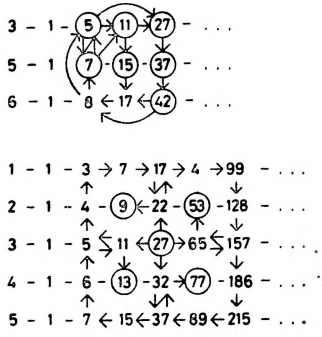
[16] In 1883 W. S. Blacket believed that there is a connection between Stonehenge, Atlantis, and Plato. See
— G. S. Hawkins, *Stonehenge Decoded*, Fontana/Collins 1975, page 46.

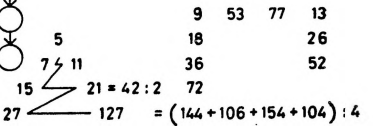


PLATONIC LAMBDA

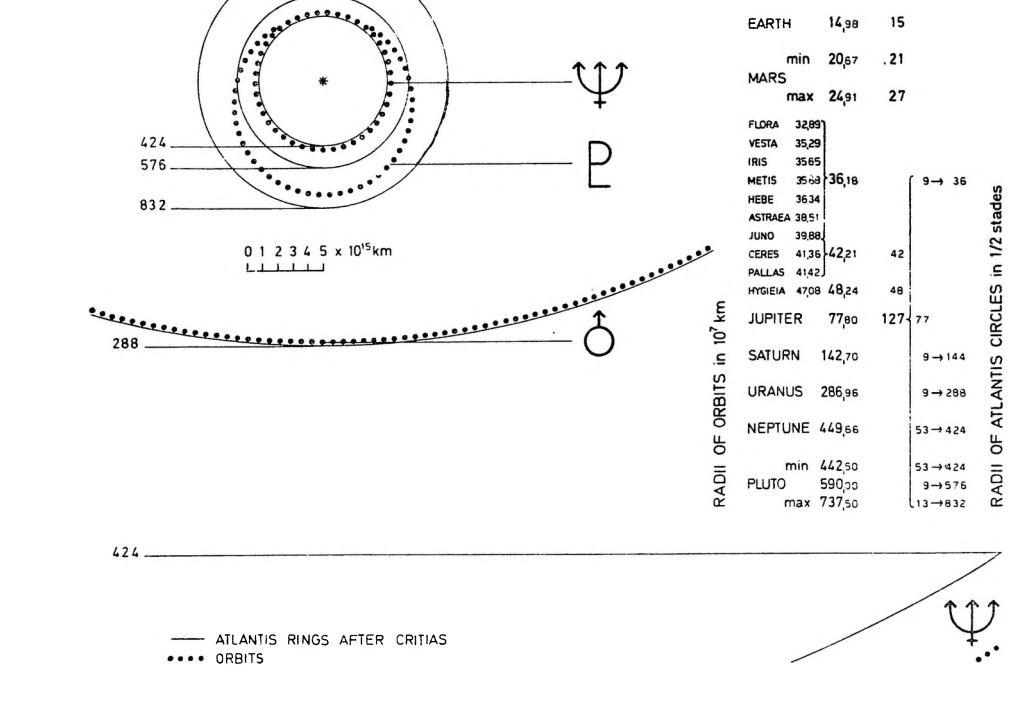


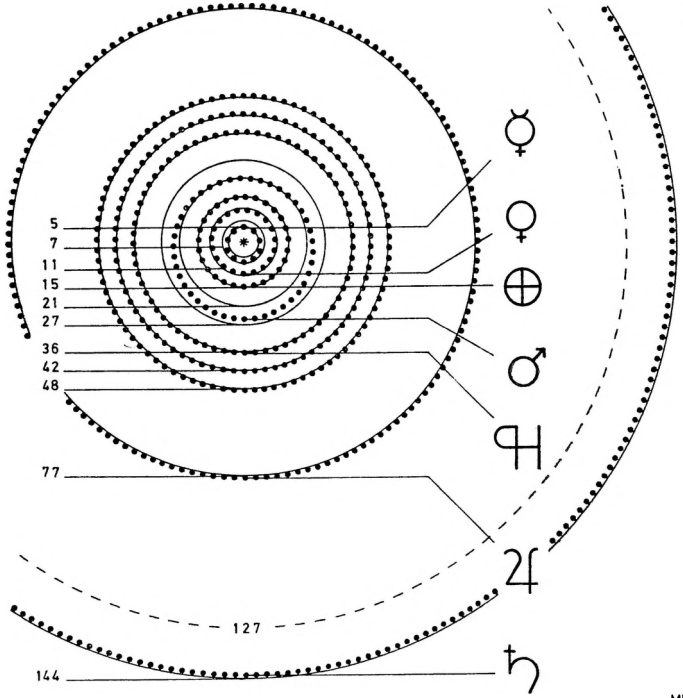
PELL NUMBER PATTERN





		ATLANTIS RINGS AFTER CRITIAS ⓐ			DISTANCE FROM THE SUN 10^5 km			DIFFERENCE ⓕ	
		DIAMETERS a stades	RADII b stades	c m ⓑ	d minimum	e mean	f maximum	absolute g = c·10⁸ − d / c·10⁸ − e / c·10⁸ − f	% h = g : c·10⁻²
minimum									
MERCURY	mean	6 ⓒ 5	2,5	502,5	459			43,5	8,657
maximum		7	3 3,5	603,00 703,5		579	697	24,0 / 6,5	3,980 / 0,924
VENUS	mean	11	5,5	1105,5	1074	1082	1109	23,5	2,126
EARTH	mean	15	7,5	1575	1471	1498	1521	9,5	0,630
minimum									2,061
MARS	mean	21	10,5	2110,5	2067			43,5	
maximum		24 27	12 13,5	2412 2713,5		2279	2491	133,0 / 222,5	5,514 / 8,200
minimum									
PHAETHON	mean	9 → 36	18	3618	EROS				
maximum					FLORA	3289	329		
					VESTA	3529	89		
					IRIS	3565	53		
					METIS	3568	50		
					HEBE	3634	− 16		
					ASTRAEA	3851	− 233	Σ/7 = 162,9	4,502
					JUNO	3988	− 370		
		21 → 42	21	4221	CERES	4136	85	Σ/2 = 82	1,943
		24 → 48	24	4824	PALLAS	4142	79		2,405
					HYGIEIA	4708		116	2,95
					HIDALGO				
JUPITER	mean	127 ⓒ 77	77	7738,5	7409	7780	8157	− 41,5	− 0,536
SATURN	mean	9 → 144	72	14472	13470	14270	15070	202,0	1,396
URANUS	mean	9 → 288	144	28944	27350	28696	30040	248	0,857
NEPTUNE	mean	53 → 424	212	42612	44560	44966	45370	− 2354	− 5,524
minimum		53 → 424	212	42612	44250			− 1638	− 3,845
PLUTO	mean	9 → 576	288	57888		59000		− 1112	− 1,921
maximum		13 → 832	416	83616			73750	9866	11,799

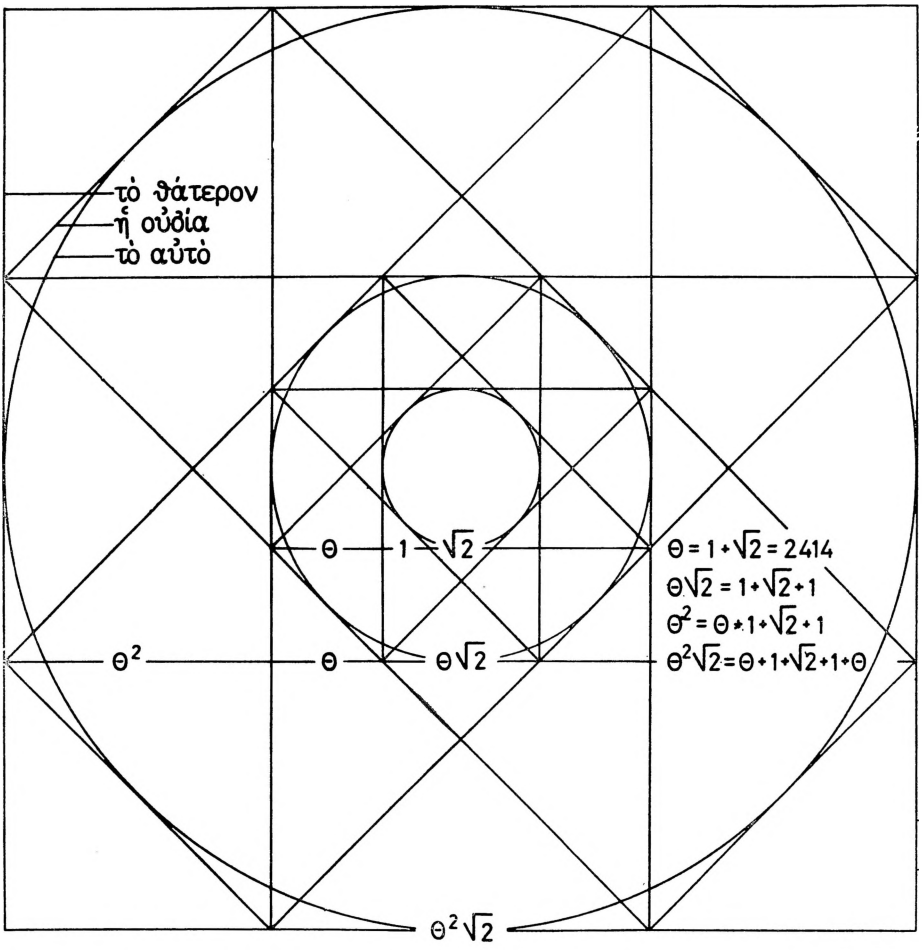

424
576
832
0 1 2 3 4 5 x 10^15 km
288
EARTH 14,98 15
min 20,67 21
MARS
max 24,91 27
FLORA 32,89
VESTA 35,29
IRIS 35,65
METIS 35,69 36,18
HEBE 36,34
ASTRAEA 38,51
JUNO 39,88
CERES 41,36 42,21 42
PALLAS 41,42
HYGIEIA 47,08 48,24 48
JUPITER 77,80 127 77
SATURN 142,70
URANUS 286,96
NEPTUNE 449,66
min 442,50
PLUTO 590,00
max 737,50
9 → 36
9 → 144
9 → 288
53 → 424
53 → 424
9 → 576
13 → 832
RADII OF ORBITS in 10^7 km
RADII OF ATLANTIS CIRCLES in 1/2 stades
424
ATLANTIS RINGS AFTER CRITIAS
ORBITS



	10^8	1
min	4,59	5
MERCURY		
max	6,97	7
VENUS	10,82	11

ἡ τοῦ παντὸς ψυχή (Timaeus 41d)

ἡ ψυχή (Timaeus 34b) = τὸ αὐτὸ (35a) + τὸ θάτερον (35a) + ἡ οὐσία (35b)



ὁ νοῦς καὶ ἡ φρόνησις (Timaeus 34a)

0 - 1 - 2 - 5 - 12 - 29 - 70 - 169 - ...
1 - 1 - 3 - 7 - 17 - 41 - 99 - 239 - ...
2 - 1 - 4 - 9 - 22 - 53 - 128 - 309 - ...
3 - 1 - 5 - 11 - 27 - 65 - 157 - 379 - ...
4 - 1 - 6 - 13 - 32 - 77 - 186 - 449 - ...
5 - 1 - 7 - 15 - 37 - 89 - 215 - 519 - ...
6 - 1 - 8 - 17 - 42 - 101 - 244 - 589 - ...
7 - 1 - 9 - 19 - 47 - 113 - 273 - 659 - ...
8 - 1 - 10 - 21 - 52 - 125 - 302 - 729 - ...

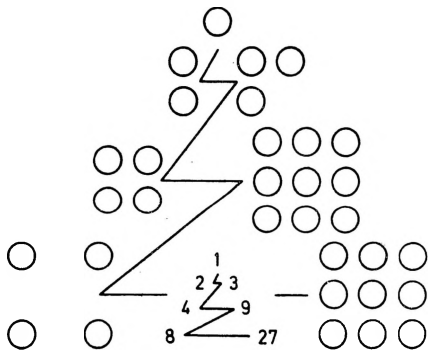


Illustration 2.

The numerical comparison between the radii of Atlantis and the orbital radiii of planets.

a. Sizes after Critias and distances of planets from the Sun are in the ratio $1 : 10^8$, or in scale $1m = 10^5$ km.

b. Critias gives diameters of the Atlantis rings in stades equal to 600 feet. Taking for a foot the length of 335 mm, which is the 'megalithic foot' of Stonehenge, one stade is 0,201 km long.

c. The mean distance between two extremes.

d. Phaëthon stays as a synonim for the ten central asteroids. Distances of asteroids closest to, and farthest from, the Sun are not taken in account.

e. The size of 127 stades, given by Critias as the diameter of the circumferential Atlantis walls, is, according to the platonic lambda, the arithmetical mean of the Pell terms 9, 53, 13, and 77:

$$(144 + 106 + 104 + 154) : 4 = 127.$$

f. The average difference between mean, minimal and maximal planetary distance from the Sun and the respective sizes of the Atlantis rings in the scale $1 : 10^8$ is $\Sigma/16 = 3{,}8\%$.

Taking in account only the mean distances, the inaccuracy of the platonic Atlantis is $\Sigma/10 = 2{,}5\%$.

Illustration 3.

The planetary orbits and the Atlantis circles practically coincide when relative scales are taken into account.

Illustration 4.

An octagram is composed of circles, squares, and octagons. It evokes the platonic „Soul" (ἡ ψυχή) and its substances, i.e. „the Same" (τὸ αὐτὸ), „the Other" (τὸ θάτερον),and „the Third form of Being, composed out of the Twain" (ἡ οὐσία).

Pell and lambda numbers have a role comparable to the platonic νοῦς καὶ φρόνησις („Reason and Intelligence"; all English translation of the terms by R, G, Bury).

Ljubljana. *T. Kurent.*