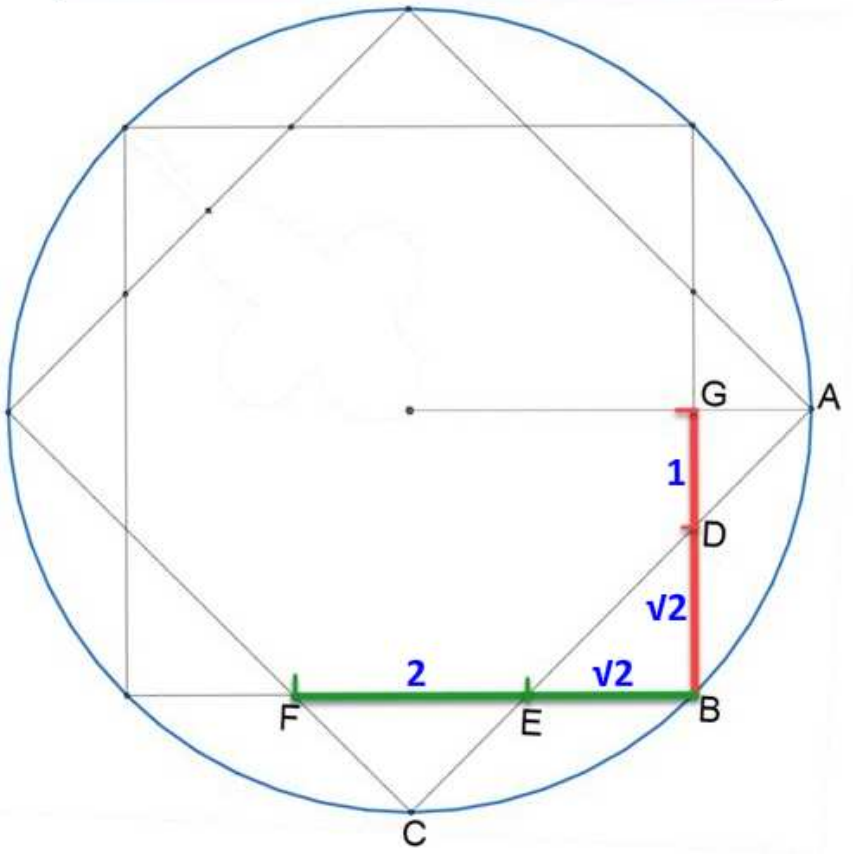
Arc of Earth	Angle °	Arc of Earth (meters)	1 SRC = 0.89386m
1/56th	6.42857	625702	800000
2/56ths	12.85714	1251404	1600000
4/56ths	25.71428	2502808	3200000
7/56ths	45	4379914	5600000
8/56ths	51.42857	5005616	6400000
14/56ths	102.85714	10011232	11200000
28/56ths	205.71428	20022464	22400000
56/56ths	360	40044928	44800000



The Ancient Measure of the Earth

A HYPOTHESIS CONCERNING THE SILVER RATIO BASIS FOR THE ROYAL CUBIT, MEGALITHIC YARD AND FOOT

Carl Balowski | November, 2024

Abstract

This study revisits the hypothesis that the Ancient Egyptians developed a sophisticated system of measurement known as the Silver Ratio Royal Cubit (SRC), rooted in a precise estimation of the Earth's average circumference. Their methodology parallels, though predates by millennia, the approach used by the French during the 18th century to define the meter as exactly 1/40,000,000th of the Earth's circumference. While the SRC shares a conceptual similarity with the meter in its relationship to Earth's dimensions, it is distinct in its derivation and application.

It is my hypothesis that the Ancient Egyptians divided the Earth's circumference into 64 equal segments, each further subdivided into 700,000 units, establishing the SRC as a foundational unit of measure. This unit, in modern terms, corresponds exactly to 0.89386 meters. This unit was then divided by √2 to yield the Royal Cubit (0.5236 meters) and the Remen (0.37026 meters). The resulting relationships between these measures mirror the inherent geometric properties of a square, with the Remen and the Royal Cubit corresponding to the side and diagonal, respectively, and the SRC encapsulating the Silver Ratio (√2 + 1) or 2.41414

The SRC framework not only informed Egyptian architecture, such as the Great Pyramid, but also resonates in the design and geographical positioning of Stonehenge. The Aubrey Circle at Stonehenge, with its 56 holes, reflects a deliberate integration of the binary system and 7-count system, aligning with the SRC's geometric and metrological principles. The ratio-based relationships of the Approximated Circle-Square Template (ACST) are similarly embedded in the positioning of Stonehenge and the Great Pyramid relative to the Equator. The latitudinal relationships between these sites—using the Equator as a baseline—correspond precisely to the Silver Ratio, suggesting an intentional alignment of monumental geography with cosmic principles.

This analysis also highlights a broader application of the SRC system, as the estimated Earth's average hemisphere aligns with precisely 24.141414 Megalithic Yards (MY), each measuring 2.72106 feet or 0.82938 meters. This value corresponds to 10,000,000 × 2.41414 MY, again emulating the Silver Ratio and reinforcing its geometric and symbolic significance. These findings suggest that the Megalithic Yard may have functioned as a complementary unit, or perhaps even a source unit, within an overarching system of universal measurement.

Finally, this study draws parallels between the SRC system and the much later Meridian Expedition of the 18th century, where the meter was standardized by dividing the Earth's circumference into 10 million segments. Both systems reflect a shared pursuit of universal measurement, uniting geometry, astronomy, and metrology to harmonize earthly dimensions with cosmic order.

Introduction

The Ancient Egyptians were not merely builders of colossal monuments; they were mathematicians, astronomers, and geographers with a profound understanding of the natural world. Their achievements reveal an advanced knowledge of Earth's dimensions, the relationship between the circle and square, and the fundamental significance of the silver ratio. Central to this understanding is the hypothesis that they determined the Earth's average circumference and utilized it to create a unit of measure called the Silver Ratio Royal Cubit (SRC). Remarkably, this ancient approach to determining a "standard" unit of measure based on the Earth's circumference foreshadowed the much later 18th-century French approach during the Meridian Expedition, where the meter was standardized by dividing the Earth's circumference into quarters by using the surveying tools, mathematics and astronomy available at the time.

The premise of this hypothesis is that the Earth's average circumference was estimated and then divided by the Ancient's into either 64 or 56 equal segments, with each segment assigned 700,000 units or 800000 units, creating the SRC (Figures 1 and 1-1).[1]

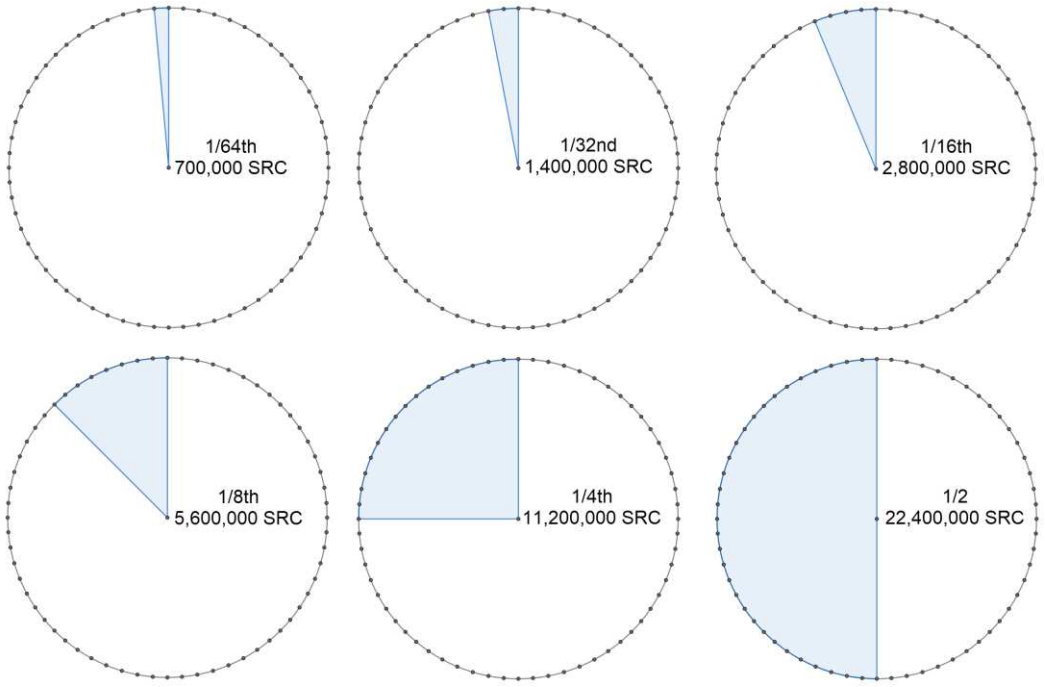


Figure 1

[1] Today the average (mean) circumference of the earth is reported to be 40,041,440 meters. The premise of this hypothesis is that the ancients thought it to be the equivalent of 40,044,928 meters (but of course they did not use meters). This makes their estimate to within 99.991% of the actual value.

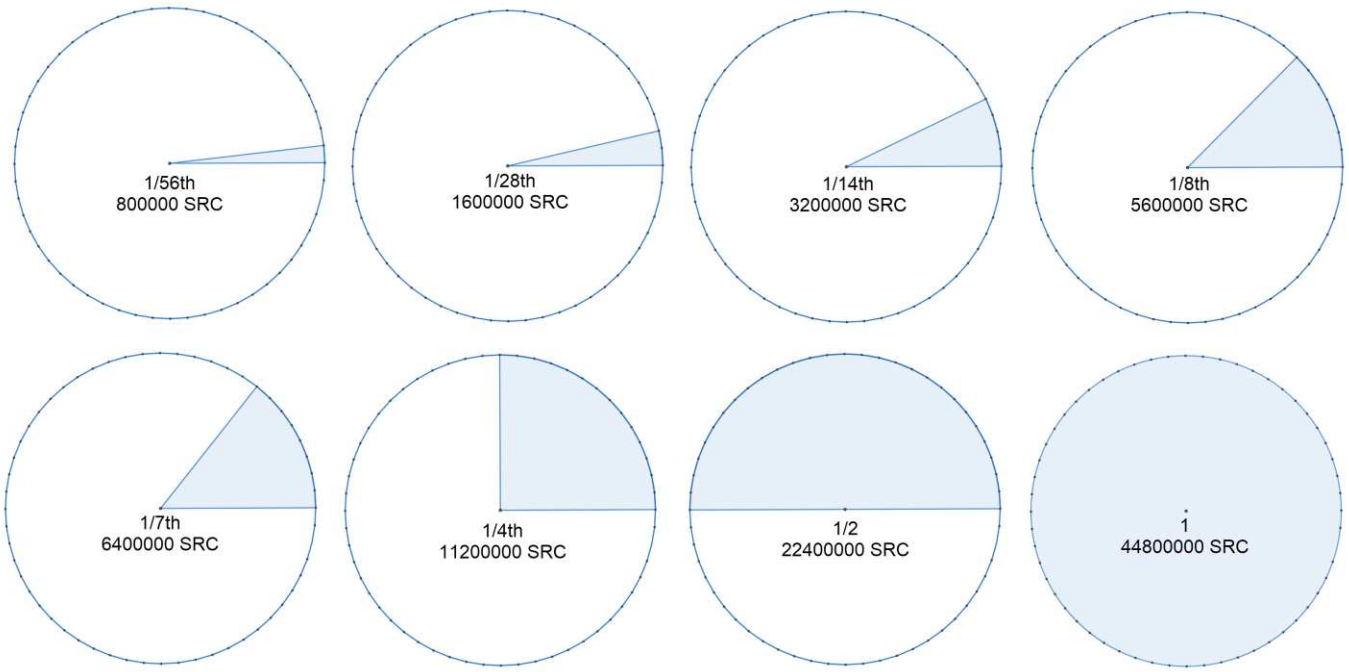


Figure 1- 1

Each SRC unit, measuring 0.89386 meters, was then divided by √2, analogous to the relationship between the side of a square and its diagonal.[2] This division resulted in two derived units: the larger segment, measuring 0.52360 meters, became the Royal Cubit, while the smaller segment, measuring 0.37026 meters, became the Remen (Figure 2).[3] The comparison of the Remen to the Royal Cubit is 1 : √2, and the comparison of the Remen to the entire SRC is 1 : (√2 + 1), or the Silver Ratio, at 2.41414.

[2] See my papers 'Cosmology Part 1' and 'Cosmology Part 2' which explain the method that the ancient Egyptians approximated both √2 and π, as 1.41414 and 3.14285 respectively.
https://www.academia.edu/124185959/The_Cosmology_of_the_Great_Pyramid_Part_1_Approximations_of_2_and_Pi_and_Initial_Formulation_of_the_ACST

[3] Verification of 0.52360 meters being used as the length of the Royal Cubit are found in the precise surveys of the Great Pyramid's base (by Dash) and the interior of the King's Chamber (by Petrie) of the Great Pyramid.
https://www.academia.edu/117323810/The_Great_Pyramid_of_Heliopolis_An_Osirian_Calendric_Unit_from_Khufus_Pyramid_used_for_Large_Scale_Metrology_LSM_

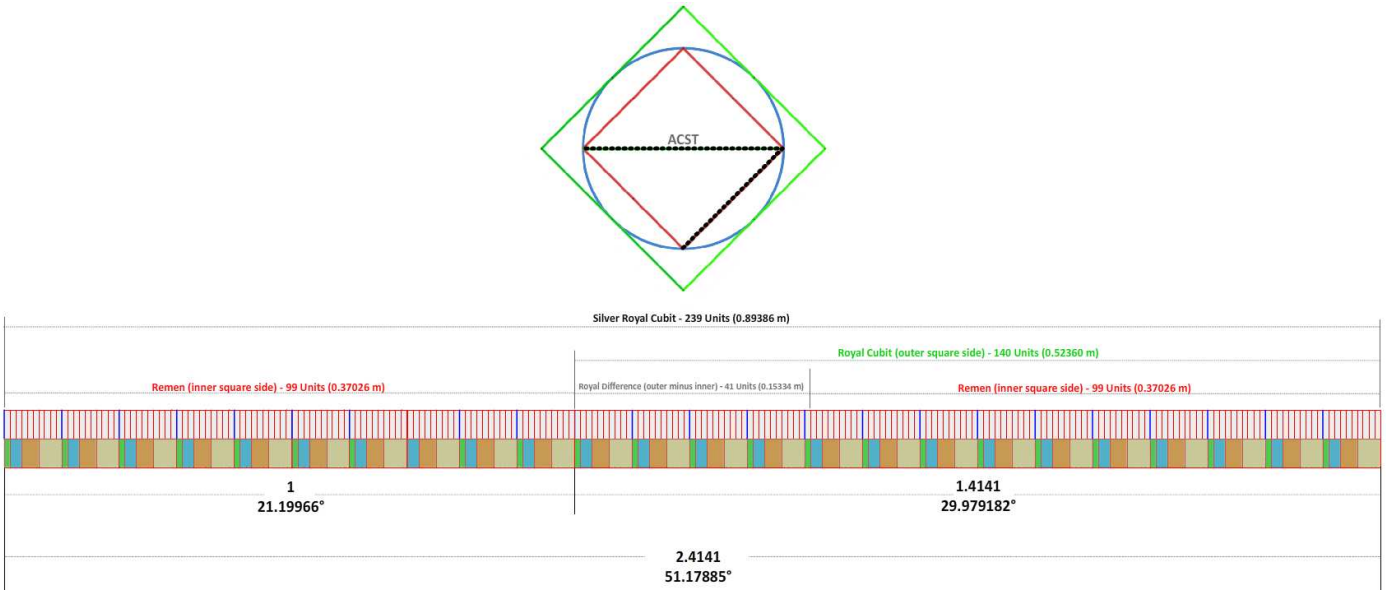


Figure 2

This segmentation of the SRC is embedded in the Approximated Circle-Square Template (ACST), a geometric framework connecting the circle and square, which was used to design not only the Great Pyramid of Giza but also the Station Stone Rectangle with Heel stone at Stonehenge. Moreover, astoundingly, this same SRC-based methodology was employed to position these monuments latitudinally. Using the equator as a baseline, the ratio of the latitudes between Stonehenge, the Great Pyramid, and the Equator perfectly matches the Silver Ratio, or SRC, as detailed in my previous studies.

Fascinatingly, this connection between Earth's dimensions and precise units of measure is not limited to the SRC. If the current Imperial Foot measured 1.000054 feet (or 12.000648 inches) instead of the standardized 1 foot (12 inches), it would align perfectly with this SRC hypothesis. This raises the possibility that, after undergoing several reassessments since antiquity and eventually being standardized in the 19th century, the ancient English foot—perhaps synonymous with a megalithic foot—was, over time, faintly shortened by an almost imperceptible 0.000648 inches, resulting in the Imperial Foot we use today. Consequently, this proposal suggests that the original ancient foot, at its inception, would have measured precisely 12.000648 inches. This measure corresponds to an Earth diameter of exactly 7920 (880 x 9) ancient miles or 41,817,600 ancient feet (each measuring 12.000648 inches), making the original ancient inch, if it existed, 1.000054 modern inches in length. Such a connection highlights the continuity of mathematical knowledge across civilizations and centuries, linking ancient metrology to the modern standard.

But the fascination deepens. By using the same average circumference of the Earth that determined the SRC, we also find that it contains precisely 48,282,828 Megalithic Yards (MY), each measuring 2.72106 feet or 0.8293824 meters in accordance with Thom's final estimation.[4] This total corresponds to exactly 20,000,000 x 2.41414 MY (or 10,000,000 x 2.41414 for half the circumference), again perfectly emulating the Silver Ratio (Figure 3). Such precision suggests an intentional integration of this ratio into both units of measurement and large-scale geodetic planning, linking ancient metrology to cosmic principles.

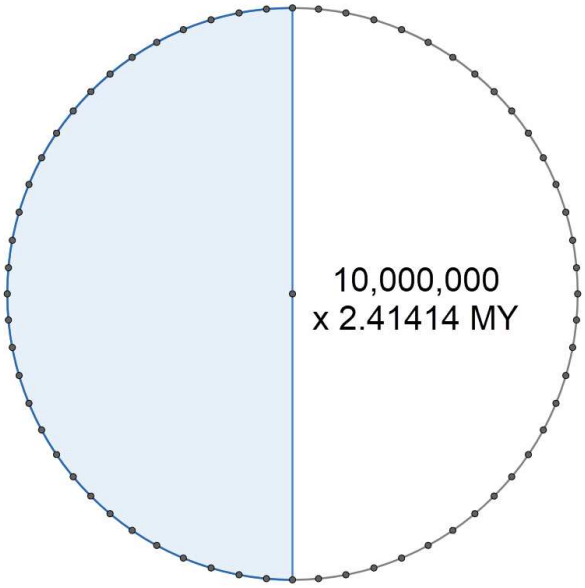


Figure 3

These insights were not isolated abstractions but were deeply integrated into the ancient's monumental architecture, practical methodologies of measurement, and even the geographical positioning of their sacred sites. Beyond the Great Pyramid, this narrative revisits the geographical relationship between Giza, Stonehenge, and the Equator, revealing how these sites are united by the silver ratio.[5] The precise alignment of latitudinal distances reflects the same ratios inherent in the geometry of the ACST and, as we will see, in the octagram—a symbolic structure that encapsulates the ACST and seen in the Aubrey Circle at Stonehenge.

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[4] Thom, A., Thom, A. S. (1978). Megalithic Remains in Britain and Brittany. Kiribati: Clarendon Press (p. 40-43)

[5] https://www.academia.edu/112364298/The_Giza_Stonehenge_Connection_Large_Scale_Metrology_LSM_

The Aubrey Circle, featuring 56 equally spaced holes, and its Station Stone Rectangle echo the geometric principles seen in the Great Pyramid. Like the 64 segments of the Earth's circumference partitioned into 700000 SRC, the Aubrey Circle, divided into 8 sectors with 7 units each, totaling 56, unifies a 7-count system with the binary doubling, based upon the geometry of the silver ratio. These design choices suggest a deliberate effort to unite mathematical elegance with metrological observations.

This introduction sets the stage for a detailed exploration of how the SRC, the silver ratio, and their associated geometric principles manifest in the architecture, geography, and symbolic language of ancient civilizations. By integrating these concepts, this narrative seeks to illuminate the timeless ingenuity of humanity's earliest efforts to harmonize the heavens, the Earth, and the built environment.

The SRC

The Silver Ratio Royal Cubit (SRC) is a hypothesized ancient unit of measurement derived from dividing the Earth's average circumference into 64 equal segments, with each segment further subdivided into 700,000 units. Each of these 700,000 units is an SRC, measuring exactly 0.89386 meters. The SRC is then divided by √2 into two primary units: the Royal Cubit, measuring 0.52360 meters, and the Remen, measuring 0.37026 meters. This segmentation reflects the intrinsic geometry of a square, with the Remen (1) and the Royal Cubit (√2) corresponding to the side and diagonal of the square, respectively. The Remen, when compared to the entire SRC, forms a perfect Silver Ratio. The SRC can also be halved, quartered, doubled, or quadrupled—or scaled by ratios inherent in the ACST, such as 1.2727 or 1.1111—to facilitate meaningful binary segmentation of the Earth's circumference.[6] This versatile approach offers both geometric and arithmetic (factoring) utility, as demonstrated in Figure 4.

Arc of Earth	Angle °	Arc of Earth (meters)	1 SRC = 0.89386m	1 Remen = 0.37026m	1 RC = 0.52360m	1 MY = 0.8293824m	1 SRC / 1.4141	1 SRC x 1.2727	1 SRC x 1.1111
1/64th	5.625	625702	700000	1690000	1195000	754419	990000	550000	630000
2/64ths (1/32)	11.25	1251404	1400000	3380000	2390000	1508838	1980000	1100000	1260000
4/64ths (1/16)	22.5	2502808	2800000	6760000	4780000	3017676	3960000	2200000	2520000
8/64ths (1/8)	45	5005616	5600000	13520000	9560000	6035353	7920000	4400000	5040000
16/64ths (1/4)	90	10011232	11200000	27040000	19120000	12070707	15840000	8800000	10080000
32/64ths (1/2)	180	20022464	22400000	54080000	38240000	24141414	31680000	17600000	20160000
64/64ths (1/1)	360	40044928	44800000	108160000	76480000	48282828	63360000	35200000	40320000

Figure 4

6 https://www.academia.edu/125498741/The_ACST_and_the_Giza_Grid_Circle_and_square_between_Khufu_and_Khafre_based_upon_Glen_Dashs_Mapping_of_GPMP_coordinates ; and https://www.academia.edu/125343132/The_ACST_and_the_Great_Pyramid_of_Stonehenge_The_Role_of_

Even the very first row indicating 1/64th of the Earth's circumference is very telling:

1 SRC = 1/700000th = factors (1, 2, 4, 5, 7, 10)

1 Remen = 1/1690000th = factors (1, 13)

1 Royal Cubit = 1/1195000th = factors (1, 5, 239)

1 SRC / √2 = 1/990000th = factors (1, 2, 3, 4, 5, 6, 9, 10, 11)

1 SRC x 1.27272 = 1/550000th = factors (1, 2, 4, 5, 10, 11)

1 SRC x 1.11111 = 1/630000th = factors (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

The SRC and the Octagon

The SRC emerges elegantly in various geometric contexts, particularly in the interplay between squares. One of the most striking ways to observe it is within the simple octagram (Figure 5). The intersection of two overlapping squares inscribed within a circle divides the circumference of the circle into eight uniform points labeled A, B, C, etc. As a note, 16 squares would produce 64 points.

Notice that the two squares intersect each other at eight distinct points, labeled D, E, F, etc. This is the SRC division. The radius of the circle, which is the half-diagonal of the square, bisects each side of the square, at point G.

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the Circle Square and Silver Ratio in Large Scale Megalithic Design Orientation and Astronomical Observation

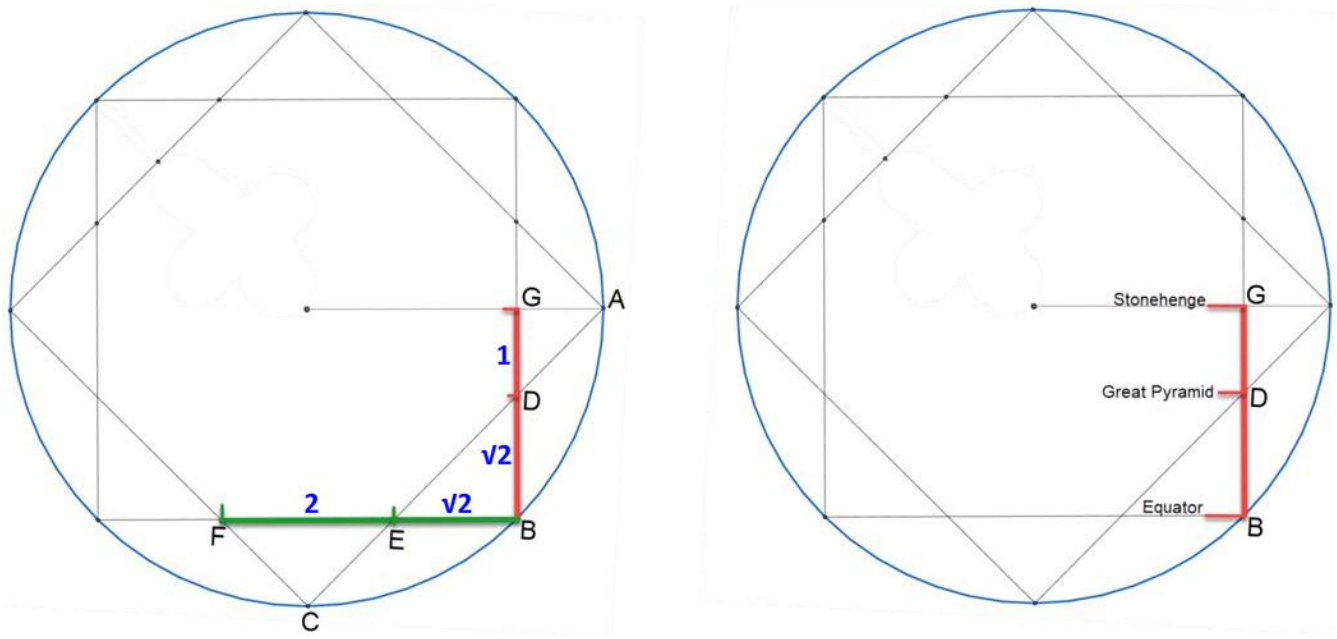


Figure 5

Using this basic configuration, the SRC can be identified as both line GB and line BF. How?

- If we assign line GB the value 2.4141, then:

  - Line GD = 1 (the Remen), and

  - Line DB = 1.4141 (the Royal Cubit).

- Alternatively, if we assign line BF the value 2.4141 (the SRC), then:

  - Line BE = 1 (the Remen), and

  - Line EF = 1.4141 (the Royal Cubit).

Since the ratio of line BF to GB is 1.4141 : 1, it follows that the sum of BF + GB also equals the SRC. Therefore the rectangle formed by BF : GB corresponds to a $\sqrt{2}$: 1 rectangle, and using the Pythagorean theorem, we see that its diagonal is $\sqrt{3}$.

$$BF = \sqrt{2}$$

$$GB = 1$$

$$BF^2 + GB^2 = \sqrt{(2+1)} = \sqrt{3} = FG$$

This √3 diagonal of the √2 : 1 rectangle is innate within the octagram and inherently associated with the silver ratio, indicating that an octagon inscribed in a circle provides a precise geometric depiction of the SRC.

The SRC and the Measurement of the Earth

Therefore, it was likely due to the impulse to synergize mathematics with metrology that the need to divide the Earth's average circumference into 64 equal segments, each represented by 700,000 units, emerged. This criterion, of course, required a combination of sophisticated understanding and meticulous attention to astronomy, arithmetic, and geometry to estimate the Earth's average circumference accurately. After this estimation, the Ancient Egyptians naturally produced the SRC strictly as a result of conforming to this criterion. Much like how the French articulated the meter, the SRC was not arbitrary; its length, now equivalent to 0.89386 meters, ensured that the entire circumference could be expressed as a harmonious marriage of the numbers 8 and 7, or 64 x 7:

64 × 700,000 × 1 SRC is equivalent to 40,044,928 meters.

This value of 700,000 SRC (40,044,928 meters) is remarkably close to the modern average circumference of the Earth, measured at 40,041,500 meters, with an accuracy of 99.991%. This level of precision strongly suggests that the Egyptians possessed a sophisticated understanding of the Earth's dimensions.

Using the SRC as a base unit, which equates to 1/700,000th of 1/64th of the Earth's circumference, the Egyptians were able to implement the SRC system of measurement, with its ratios found in the ACST, into both practical and symbolic constructions. By expressing the SRC in these terms, they ensured its integration into their broader geometric and cosmological framework, aligning their monumental designs with the dimensions of the Earth itself.

This approach is not so different from what is done today with the meter. Modern designers, often unwittingly, use the meter—representing 1/40,000,000th of the Earth's circumference—to create designs imbued with significant geometrical purpose. Even today, our standard A0 paper standard, based on the 1 : √2 proportioning of the meter with a diagonal of √3, is a strong echo of the SRC (Figure 6). How fabulous is that!

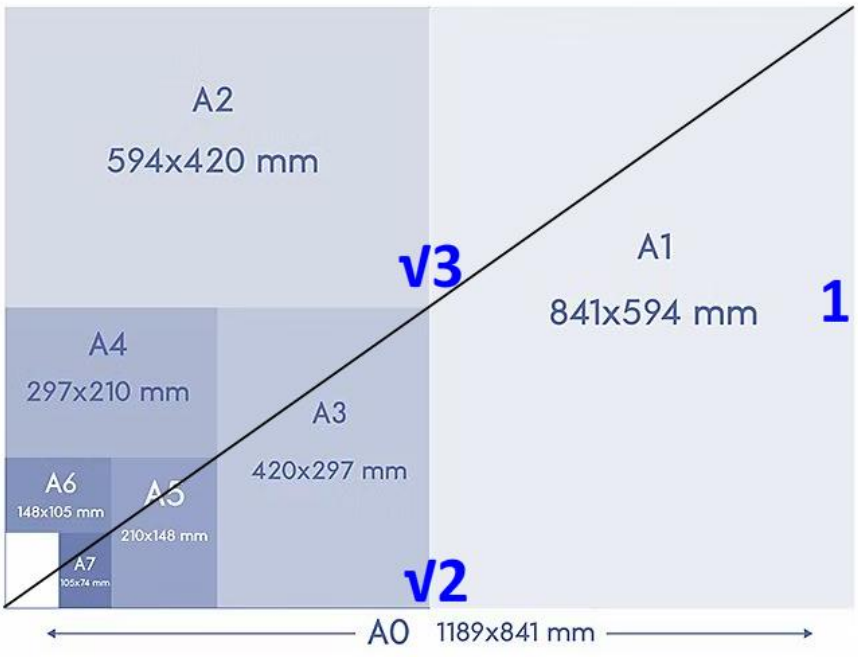


Figure 6

The Silver Ratio in Latitude: Giza, Stonehenge, and the Equator

It is clear to me that the Egyptians' mathematical prowess extended far beyond architecture into geography. As shown in my previous studies, the latitudinal relationship between the Equator, the Great Pyramid, and Stonehenge reflects the silver ratio.[7] To briefly recap, the latitude of Stonehenge, at 51.17885°, is divided into the Silver Ratio by the latitude of the Great Pyramid, at 29.979182°. The total latitudinal distance from the Equator to Stonehenge corresponds to the SRC and octagram, measured as 2.4141 (Figure 7). Within this framework, the distance from the Equator to the Great Pyramid aligns with the Royal Cubit (√2, or 1.4141), while the distance between the Great Pyramid and Stonehenge corresponds to the Remen, represented as 1.

7 https://www.academia.edu/125343132/The_ACST_and_the_Great_Pyramid_of_Stonehenge_The_Role_of_the_Circle_Square_and_Silver_Ratio_in_Large_Scale_Megalithic_Design_Orientation_and_Astronomical_Observation p.20-22

The calculations demonstrate this alignment, for the latitudinal distance of 21.19966° between Stonehenge and the Great Pyramid represents the Remen (1):

$$51.17885° - 29.979182° = 21.19966°$$

The latitudinal distance of 29.979182° between the Equator and the Great Pyramid represents the Royal Cubit (√2):

$$29.979182° / 21.19966° = 1.4141,$$

The total distance of 51.17885° between the Equator to Stonehenge represents the total SRC (√2+1):

$$51.17885° / 21.19966° = 2.4141,$$

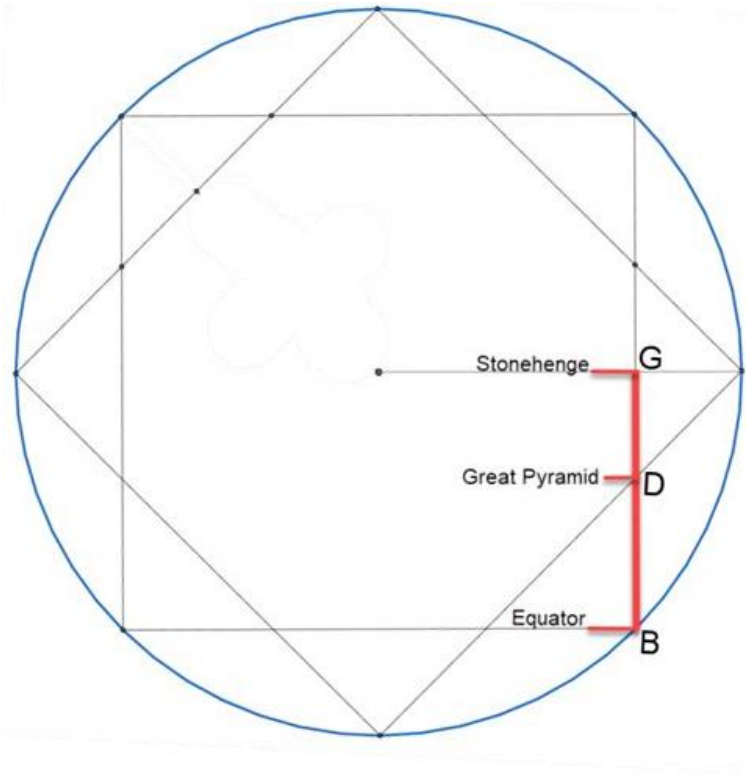


Figure 7

This demonstrates that the total distance from Stonehenge to the Equator, segmented by the latitude of the Great Pyramid, aligns perfectly with the Silver Ratio of the SRC, as reflected in the geometry of the octagram. Essentially, it is as straightforward as adding a Remen to the Royal Cubit. In this framework, the latitudinal distance between the Equator and the Great Pyramid corresponds to the Royal Cubit (√2) while adding the Remen (1) to this segment produces the Silver Ratio, aligning precisely with the latitude

of Stonehenge. Remarkably, the perimeter of the Station Stone Rectangle at Stonehenge, designed in the proportion of a Silver Ratio rectangle, aligns seamlessly with this theme. Its total perimeter, seemingly miraculously, matches the base side length of the Great Pyramid at 440 Royal Cubits.

This precise alignment and mathematics suggest that the builders of the Great Pyramid and the early phases of Stonehenge shared an interest in embedding the silver ratio not only in their monumental designs but also in their geographical positioning, uniting architecture and geography into a single, harmonious framework. The latitudinal distances mirror the same ratios found in the octagram, further emphasizing the universality of these geometric principles.

The Aubrey Circle and the SRC

At Stonehenge, the SRC is evident not only in its geographical and metrological relationship to the Great Pyramid but also in its foundational design elements. The Station Stone rectangle, in silver ratio proportion, and the Aubrey Circle, with its 56 holes, reveals a strong connection to the octagram (8-pointed star).[8] This circle is divided into 8 sectors, each further segmented into 7 units, producing a total of 56 holes ($8 \times 7 = 56$). The octagon, as explored in earlier studies, inherently embodies the SRC, with its geometry illustrating the relationship between the diagonal and the side of a square inscribed within a circle. This design raises intriguing questions, as it appears to echo, possibly inversely, the hypothesized division of the Earth into 64 segments of 700,000 SRC, reflecting a sophisticated 'sharing' of geometry and metrology with the Egyptians. In the table below (Figure 8), observe that dividing the Earth's circumference into 1/56th results in each segment containing exactly 800,000 SRC. Furthermore, 7/56ths, or 1/8th of the circumference, contains precisely 5,600,000 SRC, and we know that $1/8^{th}$ of a circle defines the octagon, or silver ratio rectangle.

8 https://www.academia.edu/124873285/The_Great_Pyramid_and_the_Approximated_Circle_Square_Template_ACST_at_Stonehenge

Arc of Earth	Angle °	Arc of Earth (meters)	1 SRC = 0.89386m
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14/56ths	102.86	10011232	11200000
28/56ths	205.71	20022464	22400000
56/56ths	360	40044928	44800000

Figure 8

The design of the Aubrey Circle, with its clear marriage of 7 × 8, perhaps neatly emulates the division of the Earth into 64 segments, each with 700,000 units in the SRC system, or alternatively, 56 segments, each containing 800,000 units. Either perspective suggests an intentional merging of the binary system (1, 2, 4, 8, 16, 32, 64) with a 7-count system, comprehended within a base-10 reckoning—all systems known to have been in use in ancient Egypt. This binary process of halving a circle—or a square—into halves, quarters, eighths, and so forth, represents the most natural computational method for humans. Halving produces straightforward and manageable results, making it an intuitive approach for partitioning shapes and values. The Ancient Egyptians, through their applications in the circle and square, demonstrated this process in their geometry, metrology, land partitions, and monumental architecture, most notably via the Remen and Royal Cubit. These measures, 'coincidentally' structured around the number 7 (palms) totaling 28 digits, exemplify their integration of these concepts.

The subdivision of each 1/2, 1/4, 1/8, etc., into 1/7ths might seem almost unnatural unless one was attempting to merge arithmetical approximations like 140/99 and 22/7 with geometric principles, like those found in the ACST.[9] By combining these systems, the Egyptians—or perhaps the Ancient Britons—may have sought to harmonize the binary geometric divisions of shapes with arithmetical calculations, ensuring both practicality and symbolic resonance. This alignment of geometry with approximated arithmetic also justifies the adoption of a linear measure based on 28 digits, such as the Royal Cubit. The

[9] https://www.academia.edu/125555554/The_ACST_Cubit_How_the_Geometrical_Relationship_Between_the_Circle_and_Square_Might_Be_at_the_Core_of_the_Egyptian_Royal_Cubit and https://www.academia.edu/125343132/The_ACST_and_the_Great_Pyramid_of_Stonehenge_The_Role_of_the_Circle_Square_and_Silver_Ratio_in_Large_Scale_Megalithic_Design_Orientation_and_Astronomical_Observation

measure of 56, equivalent to 28 × 2, is directly linked to 8 × 7, tying together the octagram's 8 sectors, each with 7 units, and the broader framework of the SRC system, which divides the Earth's 64 segments into 700,000 SRC each, or perhaps 56 segments into 800,000 SRC. The deliberate overlap of these systems underscores the genius of the Egyptians—or Ancient Britons—in synthesizing abstract mathematics with practical design principles. Indeed, the location Avebury Henge sits precisely on 51.4285°, pinpointing exactly 8/56ths of the circle relative to the Equator, an interesting correlation worthy of further exploration.

Constructing the Aubrey Circle of 56 Holes Using the SRC and the Octagram

The construction of the Aubrey Circle, divided into 56 equal segments, can be achieved by integrating the SRC and the octagram. While it is mathematically impossible to create a perfect 56-gon using only a compass and straightedge, this approach demonstrates a practical and symbolic method to achieve an extremely close approximation.[10] The construction merges the binary system (dividing a circle into halves, quarters, eighths, etc.) with the 7-count system, marrying geometry with arithmetic in a meaningful way.

[10] Johnson, A. (2008). Solving Stonehenge: The Key to an Ancient Enigma. United Kingdom: WW Norton. Anthony Johnson stated (p 212-216) that he was able to create a 'perfect' 56gon using an octagram, but upon my careful inspection it extremely close at 99.9973%. It was his attempt which inspired this abbreviated solution.

Step 1: Divide the Circle into an Octagon (Figure 9)

Start by dividing the circle naturally into 8 equal segments to form an octagon (as described in the earlier section on the octagram). This division aligns with the binary system, which halves shapes into increasingly smaller parts. The octagon divides the circle into eighths, each defined by the SRC and its relationship to the silver ratio.

To overlay the 7-count system, assign 7 equal segments to each 1/8th arc of the circle, resulting in a total of 56 segments (8 × 7 = 56). The challenge lies in geometrically subdividing each 1/8th arc into 7 equal parts.

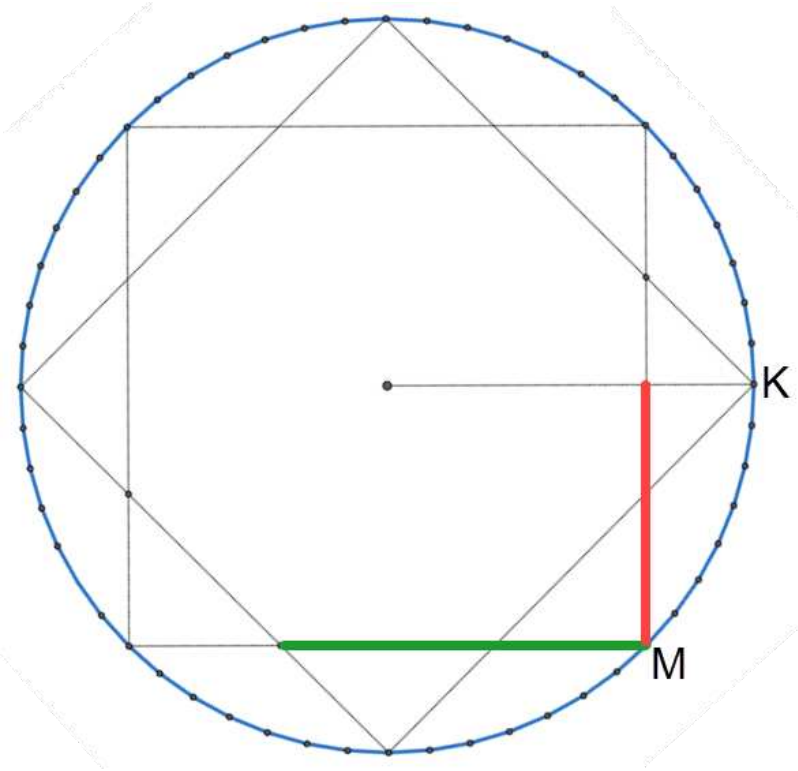


Figure 9

Step 2: Approximation Using the SRC Hypotenuse (Figure 10)

- Focus on one of the 1/8th arc segments, labeled KM.

- Use the hypotenuse of the SRC rectangle, equivalent to √3, as the radius of a new circle.

- Draw this circle with its center at K, creating an arc that intersects arc KM at a point labeled N.

This intersection divides the arc KM into two segments of approximately 3 parts and 4 parts, matching the initial subdivision of the 7-count system.

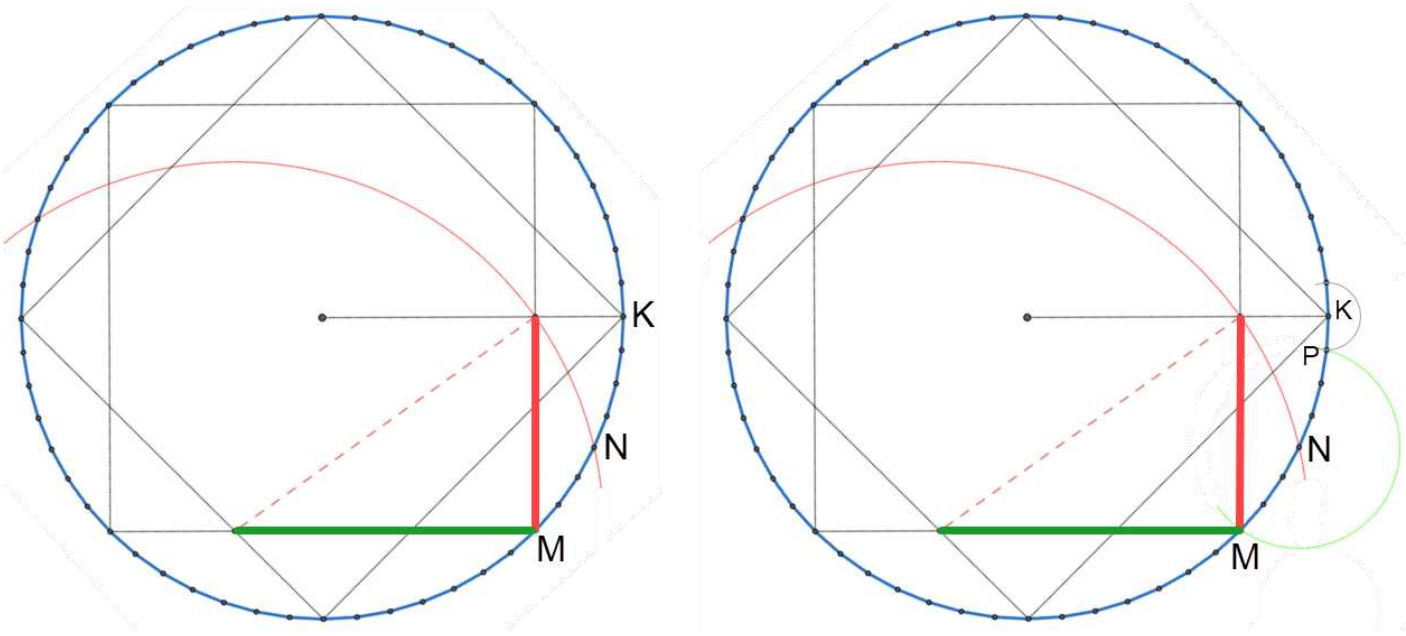


Figure 10

Step 3: Refine the Subdivision (Figure 10)

- Measure the distance between M and N (denoted as MN) and use it as the radius of another circle.

- With the compass set to MN, draw a second arc from M, intersecting arc KM at a new point labeled P.

The distance KP now represents a close approximation of 1/56th of the circle's circumference. [11]

[11] If the intent of 1/56th segment was to measure '7 units', then the actual measure from this construction would be 6.99981 units, so if the whole intended measure for the circumference was 392 units, then the actual measure would be 391.989 units. This 0.00003% discrepancy would be virtually unnoticeable except on the most massive of scales.

Step 4: Daisy-Chain the Division

Using the segment length KP, "daisy-chain" the division around the circle. Starting at K, place the compass at each new point and mark the next segment. Repeat this process 56 times to complete the circle, resulting in 56 equal segments that correspond to the Aubrey Circle.

Symbolic and Practical Significance

This construction achieves not only a practical approximation of the 56-gon but also a seamless unification of the 7-count system with the binary geometric division inherent in the octagon. The intentional use of the SRC rectangle's hypotenuse (√3) ensures a harmonious merging of geometric and arithmetic systems. By assigning 7 units to each 1/8th segment of the circle, this method reinforces the symbolic interplay between the numbers 7 and 8, as well as their deeper integration within the SRC framework.

Furthermore, the Royal Cubit's measure of 28 digits aligns directly with the 4 × 7 structure of the octagram's segments. This deliberate configuration underscores the practical and symbolic ingenuity of ancient builders, who adeptly incorporated arithmetic ratios such as 22/7 and 140/99 into their geometric constructions. The resulting Aubrey Circle illustrates how the SRC and octagram principles can be applied to approximate even mathematically impossible divisions, uniting the numbers 7 and 8 into a sacred and functional design. This design could serve as a baseline measure, potentially emulating the Earth's circumference, for calendrical systems based on astronomical cycles and the approximation of irrational numbers like 140/99 and 22/7.

The hypothesized use of the SRC to derive both the Royal Cubit and Remen, along with its connections to the Earth's dimensions, reveals a shared understanding of geometry and astronomy. By dividing the Earth's circumference into 64 or 56 segments—each represented by 700,000 or 800,000 SRC respectively—and integrating these measures with the ACST, the Ancient Egyptians may have developed a measurement system rooted in the Silver Ratio. This system connected the heavens, the Earth, and their monumental constructions and metrology, embedding universal measurement and cosmic principles into their architectural and practical designs. Such an approach parallels the efforts of the Meridian Expedition, where the French sought to standardize the meter based on the Earth's dimensions. Both systems reflect a timeless pursuit of universal measurement and observation of the heavens, encoded into everyday life—even in something as simple as folding an A4 paper airplane.