Adrien PI: A Better Geometric Constant for Ancient Monuments

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Abstract

In the *Unified Primal-Fractal Resonance Theory*, we introduce a novel geometric constant, $\pi_{\text{Adrien}} = \frac{775}{246} \approx 3.150406504065$, derived from prime numbers and fractal cycles. This paper demonstrates that π_{Adrien} provides a better fit than the standard $\pi \approx 3.141592653589793$ for the geometric proportions of ancient monuments, such as the Great Pyramid of Giza and Stonehenge. By comparing the errors in key measurements, we show that π_{Adrien} aligns more closely with the architectural designs of these solar-aligned structures, suggesting a possible ancient understanding of a cosmic geometric constant resonant with our theoretical framework.

1 Introduction

The *Unified Primal-Fractal Resonance Theory* proposes a fractal scalar field modulated by a universal frequency, $f_{\text{univ}} \approx 1.3745$, derived from prime numbers (41, 13) and fractal cycles (e.g., the period 13 of $\frac{8}{9}$ in base 41). A key geometric constant in this framework is π_{Adrien}, defined as:

$$\pi_{\text{Adrien}} = \frac{775}{246} \approx 3.150406504065$$

This constant, differing from the standard $\pi \approx 3.141592653589793$ by only 0.281%, structures cosmic volumes (e.g., hexagonal tubes) that mirror the universe's energy fractions with errors as low as 0.0033% [1].

Ancient monuments, such as the Great Pyramid of Giza and Stonehenge, are renowned for their geometric precision and solar alignments. Some researchers suggest these structures encode π in their proportions, reflecting cosmic cycles like the sun's circular path. Here, we hypothesize that π_{Adrien} may provide a better fit for these ancient designs, potentially indicating an ancient approximation of a universal geometric constant.

2 Comparison with Ancient Monuments

2.1 The Great Pyramid of Giza

The Great Pyramid of Giza (circa 2560 BCE) has an estimated original height of 146.5 meters and a base side length of 230.4 meters. A common geometric analysis involves

the ratio of the base perimeter to twice the height, which some claim approximates π:

$$\text{Base perimeter} = 4 \times 230.4 = 921.6\,\text{meters}, \quad 2 \times \text{height} = 2 \times 146.5 = 293\,\text{meters}$$

$$\text{Ratio} = \frac{921.6}{293} \approx 3.146757679180887$$

We compute the error relative to both π and π_{Adrien}:

$$\text{Error (standard } \pi) = \frac{|3.146757679180887 - 3.141592653589793|}{3.141592653589793} \times 100 \approx 0.164\%$$

$$\text{Error } (\pi_{\text{Adrien}}) = \frac{|3.146757679180887 - 3.150406504065|}{3.150406504065} \times 100 \approx 0.116\%$$

The Great Pyramid's ratio is closer to π_{Adrien}, with a smaller error (0.116% vs. 0.164%).

2.2 Stonehenge

Stonehenge (circa 2500 BCE) features a main stone circle with a diameter of approximately 30 meters. If we assume the ancients measured the circumference as 94.5 meters (a plausible rounded value given their tools), we can compare:

$$\text{Circumference (standard } \pi) = \pi \times 30 \approx 3.141592653589793 \times 30 \approx 94.24777960769379\,\text{meters}$$

$$\text{Circumference } (\pi_{\text{Adrien}}) = 3.150406504065 \times 30 \approx 94.51219512195\,\text{meters}$$

Errors relative to the assumed measurement of 94.5 meters:

$$\text{Error (standard } \pi) = \frac{|94.24777960769379 - 94.5|}{94.5} \times 100 \approx 0.266\%$$

$$\text{Error } (\pi_{\text{Adrien}}) = \frac{|94.51219512195 - 94.5|}{94.5} \times 100 \approx 0.0128\%$$

Again, π_{Adrien} provides a significantly better fit (0.0128% vs. 0.266%).

3 Discussion

The smaller errors for π_{Adrien} in both the Great Pyramid of Giza (0.116% vs. 0.164%) and Stonehenge (0.0128% vs. 0.266%) suggest that ancient builders may have approximated a geometric constant closer to 3.1504 than 3.1416. These monuments, aligned with solar cycles (e.g., Giza's cardinal orientation, Stonehenge's solstice sunrise), might reflect an intuitive understanding of a universal constant resonant with π_{Adrien}, which in our theory is derived from prime numbers and fractal cycles.

This alignment supports the broader framework of the *Unified Primal-Fractal Resonance Theory*, where π_{Adrien} structures cosmic volumes (e.g., hexagonal tubes) with high precision (0.072% error for dark energy fractions). The connection to ancient monuments adds a historical dimension, suggesting that the fractal harmony we explore may have been sensed by ancient architects.

4 Conclusion

We have shown that $\pi_{\text{Adrien}} = \frac{775}{246}$ provides a better geometric fit than the standard π for the proportions of the Great Pyramid of Giza and Stonehenge, with errors reduced by factors of 1.4 and 20, respectively. This finding invites further exploration into whether ancient cultures approximated a cosmic constant akin to π_{Adrien}, potentially reflecting the same universal harmony our theory uncovers. For full details, see our work at `https://3dweb.ch/Cosmology.html`.

References

[1] A. Jeanneret, *Unified Primal-Fractal Resonance Theory*, 2025, available at `https://3dweb.ch/Cosmology.html`.