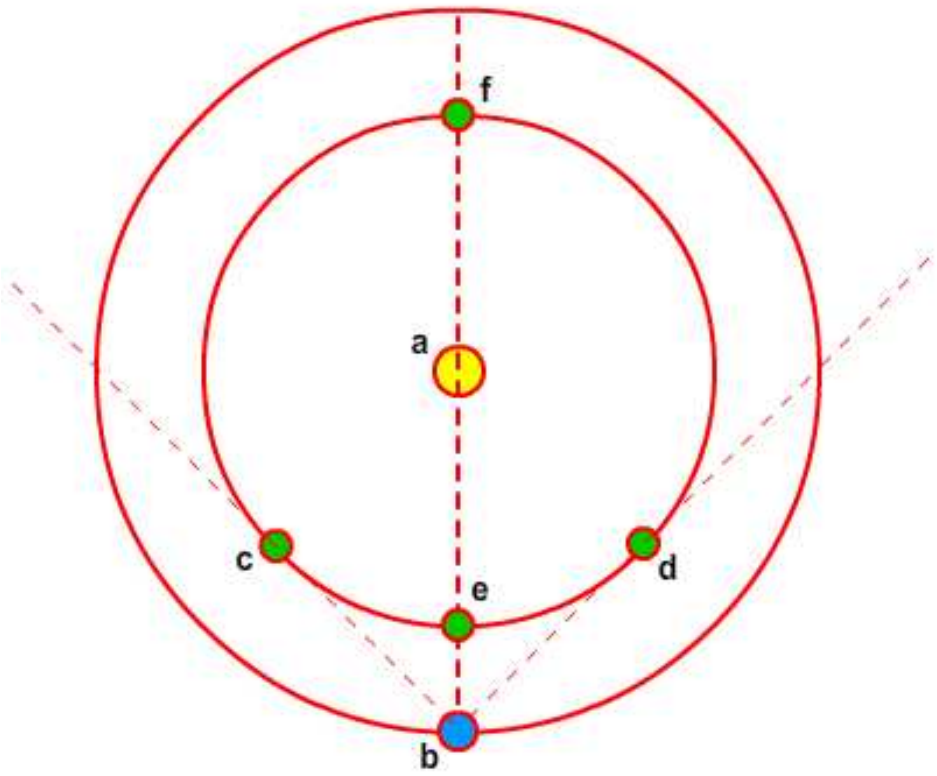


Venus’ Synodic Cycle in Ancient Egypt

A CONCISE ANALYSIS OF RESONANCE WITH HELIPOLITAN COSMOGONY

Carl Balowski | March 2024

Abstract

This text explores the synodic cycle of Venus, its significance in ancient Egyptian cosmology, and its potential symbolic representation in the Great Pyramid's design. The synodic cycle, characterized by Venus's alternation as the morning and evening star every 584 days, reflects a deep astronomical understanding, evident in the mathematical harmony between Venus and Earth's orbits—highlighting a sequence that aligns with the Fibonacci numbers. This celestial pattern, resulting in an encircled pentagram, signifies a cosmic rebirth and is intricately linked to Venus's appearances in the sky, mirroring themes of renewal prevalent in ancient mythologies.

Central to Egyptian mythology is the Benben Stone, symbolizing the universe's creation from chaos, akin to the Benu bird's (or Phoenix's) themes of creation and rebirth. Venus, associated with these symbols and Osiris, underscores its role in celestial and mythological cycles of renewal. The text delves into the nuanced interpretation of the cosmos by the ancient Egyptians, who integrated Venus's cycle, the Benben Stone, and the Benu bird into a comprehensive symbol of creation, rebirth, and cosmic order.

The Great Pyramid, aligned with Heliopolis and embodying the Golden Ratio in its design, serves as a monumental expression of these concepts. The pyramids' location on the plateau and proportions may reflect the ancient Egyptians' desire to harmonize architectural endeavors with celestial phenomena and mythological beliefs, encapsulating Venus's cyclical rebirth, the foundational myth of the Benben Stone, and the Benu bird's symbolism. This narrative suggests a profound Egyptian awareness of astronomy, geometry, and mythology, manifested in the enduring legacy of their monumental architecture.

Venus's Synodic Cycle: A Celestial Phenomenon

The synodic cycle of Venus, an astronomical event, captures the planet's alternation as the morning and evening star. This approximately 584-day cycle is marked by phases similar to the lunar cycle, showcasing the periodic visibility and disappearance of Venus. A noteworthy aspect of this cycle is the mathematical relationship between Venus and Earth's orbits: for every thirteen times Venus orbits the Sun, Earth completes eight orbits. This relationship underscores the synchronized movements of the two planets utilizing two sequential numbers of the Fibonacci sequence.

The Phases of Venus: From Evening Star to Morning Star

The cycle starts with Venus appearing in the evening sky after sunset, where it slowly ascends, reaching its peak brightness and 'elongation' from the Sun. As Venus moves through its cycle, highlighted by this precise orbital synchrony between Earth and Venus, it arrives at a phase where it is especially visible in the western sky after sunset. This phase, characterized by Venus's increased brightness, presents a notable display of Venus against the backdrop of the western horizon. This period of visibility offers a clear view of Venus's intense brightness, making it a significant moment in its synodic cycle.

As Venus continues its celestial journey, it approaches what is known as the superior conjunction, passing behind the Sun from our perspective on Earth. During this phase, Venus temporarily vanishes from our sight, engulfed by the Sun's overpowering glare (Figure 1 – point f). This period of invisibility marks a transition, a precursor to the planet's rebirth in the sky. Emerging from the Sun's shadows, Venus is reborn as the morning star, adorning the eastern sky before dawn. This phase mirrors its previous ascent in the evening sky but now unfolds in the pre-dawn hours, offering a symbolic reflection of renewal and continuity before it once again retreats into the Sun's brightness at the inferior conjunction (Figure 1 – point e).

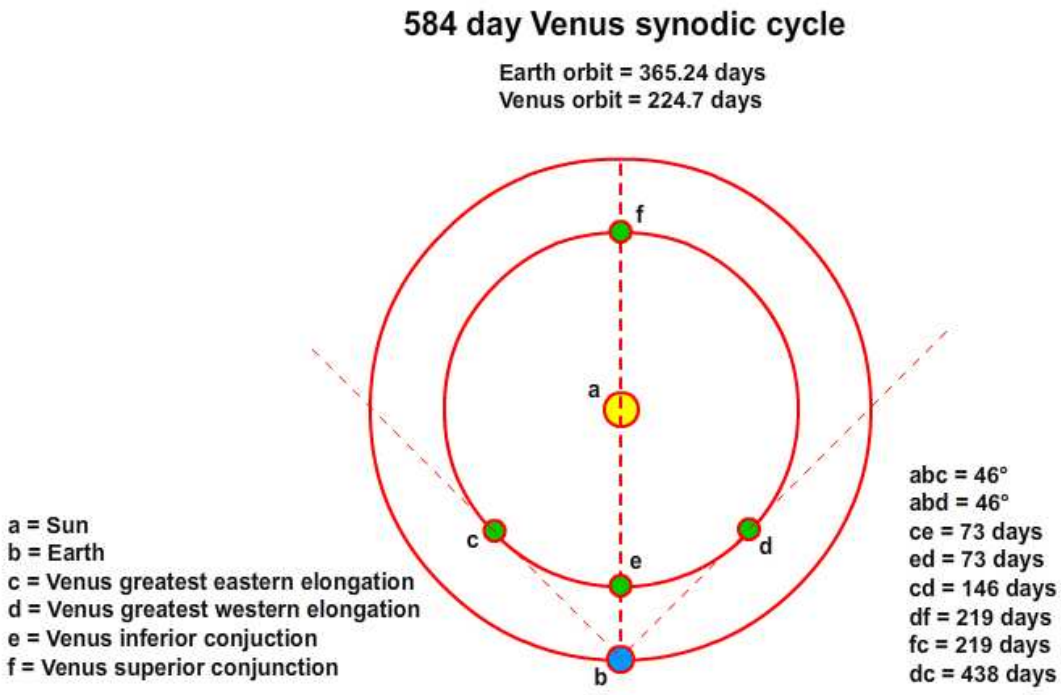


Figure 1 – Elongation and Conjunctions of Venus, Heliocentric View.

Superior and Inferior Conjunctions: Venus's Vanishing Acts

The inferior conjunction of Venus, a phase that may occasionally present the rare "transit of Venus". During this event, Venus appears as a small, dark silhouette moving across the Sun's face, a fleeting moment that connects modern observers directly with the mechanics of the cosmos.

The broader significance of Venus's synodic cycle extends well beyond the confines of astronomical observation, deeply influencing the mythologies, astrological systems, and calendars of various cultures. Ancient civilizations such as the Mayan, Babylonian and the Egyptians not only meticulously tracked Venus's movements but also imbued its cycle with profound symbolic meanings. To these cultures, Venus's appearances as the morning and evening star symbolized themes of beauty, harmony, and renewal—principles that were woven into their understanding of the cosmos and reflected in their religious and ceremonial practices.

The Encircled Pentagram: Venus's Dance in the Sky

From the vantage point of a heliocentric model, where Earth and Venus orbit the Sun, the synodic cycle of Venus unfolds a captivating geometric pattern in the sky—an encircled pentagram. This pattern emerges from the precise intervals of alignment between Earth, Venus, and the Sun every 584 days. After five of these Venusian synodic intervals, totaling about 2920 days, Venus and Earth realign in their orbits around the Sun, returning to their almost exact original starting positions. This celestial alignment, corresponding to roughly eight Earth years weaves a pentagram in the heavens, each conjunction point marking a vertex of the star, encapsulated within a continuous orbital loop.

This eight-year cycle, within which Venus completes 13 orbits to Earth's 8, not only showcases the elegance of planetary motion but also serves as a metaphor for rebirth and return. As viewed from both a heliocentric and earth centric model (Figure 2), the pentagram, completed at the end of the cycle, symbolizes Venus's return to its original point in the sky—a rebirth that echoes through the cosmos. The encircled pentagram, revered across cultures for its divine implications and its representation as 'life force', reflects that adoration of the planet Venus, as a celestial manifestation of a grand geometric principle, might be hard-wired in our collective consciousness.

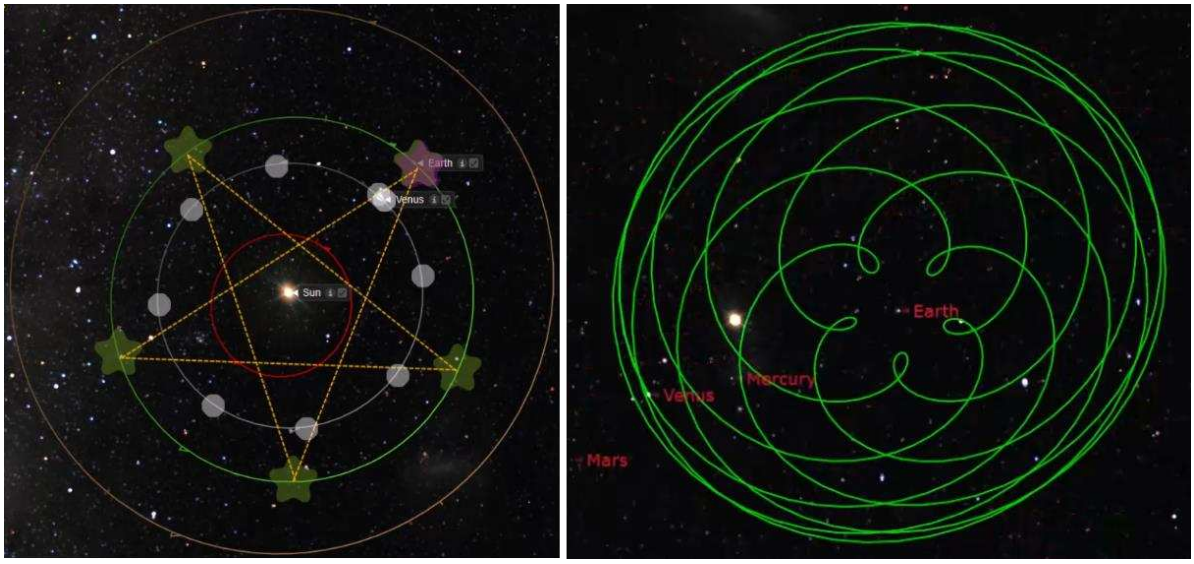


Figure 2 – The Synodic Cycle of Venus. Heliocentric (Left), Earth centric (Right)

Echoes of the Ancient World: The Tuat, Benben and Celestial Symbolism

To this end, the Egyptian concept of the Tuat (or Duat) stands as a particularly intricate and elusive element within Egyptian mythology. Invoking the name Tuat conjures up a myriad of enigmatic and often conflicting visions, the full significance of which remains somewhat elusive, even to contemporary scholars of Egyptology. Known as the enigmatic realm of the Egyptian afterlife, the Tuat represented a place shrouded in mystery, emblematic of both death and rebirth, chaos and order. It was simultaneously a realm of illumination, linked with the morning star (seba), dawn, and the diurnal hours, and a domain of obscurity, presided over by the jackal—a creature emblematic of chaos to the Egyptians.

The lexicon surrounding the Tuat frequently evokes imagery of stars and circles. Budge interprets the term ‘tua neter’ (meaning "god of the morning" or "morning star") as an allusion to a celestial deity. In his dictionary, one definition of Tuat refers to it as "the morning star," certainly a nod to Venus. Another definition presents the Tuat as "a circle within the Tuat," highlighting the thematic and artistic recurrence of a star within a circle motif. Consequently, it's not unexpected that the hieroglyphs associated with these terms prominently feature not only imagery of a five spoked star, but specifically a five spoked ‘encircled’ star (Figure 3).



Figure 3 – Relief of wedjat offering to Khepri in the Duat. Metropolitan Museum.

This is curious, for art enthusiasts understand that drawing a five-spoked star unaided presents a significant challenge, primarily because it is based on an odd number, unlike the more straightforward designs of six or eight-pointed stars, e.g. the Star of Ishtar and the Star of David, etc.. These even-numbered stars, aligning with cardinal and intercardinal directions, would seemingly offer a more intuitive symbol. Moreover, the natural phenomenon of sun halos, where sunlight refracts through atmospheric ice crystals to create circular or hexagonal patterns, echoes the geometric harmony of six-pointed stars. Yet, this backdrop only deepens the enigma of the ancient Egyptians' choice to prominently feature the five-spoked star in their glyphs, disregarding the seemingly more practical or natural six or eight-pointed alternatives. What is certainly telling is that Budge's analysis indicates that the Tuat (Duat), and its representative five spoked encircled star, is closely related to the planet Venus, in its role as the Morning Star rising from below the horizon. This is similar to the Heliopolitan cosmology of the pyramidal Benben rising from the watery abyss as articulated in my Giza Grid paper.

Within the rich cosmology of ancient Egypt, the interwoven narratives of Venus, the Benben Stone, and the Benu bird embody profound themes of creation, rebirth, and the perpetual renewal of the cosmos. The Benben Stone, a primordial symbol at the heart of Egyptian mythology, represents the original pyramidal mound from which the god Atum, or according to some accounts, the sun god Ra, catalyzed the creation of the universe. This venerable stone, upon which the mythical Benu bird is said to have descended, found its revered place within the sanctified confines of the sun temple at Heliopolis. It stands as an enduring emblem of life's emergence from the swirling chaos of the primeval waters, echoing both the first land's appearance at the dawn of creation and the life-affirming recession of the Nile's floods.

The Benu bird, entwined with the Phoenix of Greek and Roman mythologies, emerges as a vibrant symbol of creation, immortality, and rejuvenation within the pantheon of Egyptian mythology. This divine avian, associated with the life-giving rays of the rising sun, is celebrated for its mythic descent upon the Benben Stone or its birth from the essence of Osiris himself, embodying the sun's daily rebirth and its triumphant ascent each morning. In its representation of the initial spark of creation and the ongoing cycle of life's regeneration, the Benu bird captures the essence of the sun's passage across the sky—from its dawn emergence to its evening retreat, heralding the promise of its victorious return at daybreak.

Venus, lauded in the heavens as both the morning and evening star, serves as a celestial counterpart to these terrestrial and mythological motifs. Its emergence in the pre-dawn sky, preceding the sun, mirrors the Benu bird's role as the harbinger of daylight and the ongoing saga of creation. Just as the Benu bird and the Benben Stone are inextricably linked with the genesis of the sun and the inception of life, so too does Venus's periodic visibility in the sky reflect the timeless principles of renewal and the ever-turning wheel of beginnings.

Together, Venus, the Benben Stone, and the Benu bird weave a symbolic constellation that illuminates ancient Egyptian conceptions of the universe's genesis, the cyclical progression of time, and the cosmos's enduring dynamism. Venus's association with these potent symbols elevates its status beyond that of a mere planetary body, casting it as a pivotal figure in the celestial narrative of creation, destruction, and rebirth that underpins the ancient Egyptian worldview.

But the significance of Venus extends even further, transcending mythological narratives to embrace geometric harmony. Its synodic cycle of 584 days, marking the planet's celestial return and renewal, connects Venus to the Golden Ratio through the geometric precision of the encircled pentagram. This connection may not only deepen our understanding of Venus's role within Egyptian cosmology but also theoretically underscores the ancient Egyptians' sophisticated grasp of astronomical cycles and their profound appreciation for the interconnectedness of celestial dynamics, mathematical elegance, and mythological symbolism.

Cosmic Convergence: Architecture, Mythology, and Astronomy

Seen through this perspective, Venus, together with the enigmatic Benben Stone and the Benu bird, becomes a complex symbol reflecting the ancient Egyptians' sophisticated and deeply stratified view of the universe. This intricate interplay of celestial and mythological elements offers potential insights into the motivations behind the construction of the Great Pyramid. Positioned with exacting precision at a 45° angle towards Heliopolis, the pyramid's architecture—particularly the proportional relationship between its base and the height of its Benben Stone (capstone)—suggests a deliberate emulation of the Benu bird, and possibly even Venus itself. This architectural marvel, resonating with the symbolic essence of rebirth and cosmic harmony, aligns meticulously with the Golden Ratio. This alignment not only underscores the ancient Egyptians' probable mastery over geometry and astronomy but also their pursuit of

embedding the cosmos's order and beauty within the earth's fabric, epitomized by the pyramid's grandeur. Through this grand architectural gesture, the Great Pyramid stands as a testament to an advanced civilization's endeavor to mirror the celestial harmony and cyclical patterns of rebirth observed in the heavens, bringing the divine landscape into the terrestrial realm.

Conclusion

The synodic cycle of Venus, alongside its mythological associations with the Benben Stone and the Benu bird, highlights the ancient Egyptians' complex understanding of astronomy, mythology, and geometry. This connection not only underscores the themes of renewal and rebirth intrinsic to Egyptian cosmology but also reflects in the architectural precision of the Great Pyramid. The cyclic dance of Venus, creating a pentagram in the sky, ties directly to the Golden Ratio, demonstrating the Egyptians' keen awareness of celestial patterns and their mathematical underpinnings. Through the amalgamation of these celestial, mythological, and architectural elements, the ancient Egyptians encapsulated a worldview that harmonized the cosmic and the terrestrial, immortalizing their profound engagement with the universe's rhythm and order.

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