

“Mesopotamian man lived in a concrete world that he experienced directly.”<sup>1</sup>

## Introduction

The most prominent celestial bodies have fascinated mankind from time immemorial. Petroglyphs from the Neolithic period depict sun or star-like objects. Although these so-called “sun-images” occur in a wide variety of artistic contexts, it is not uncommon to find them associated with scenes of apparent worship and ritual. For example, archaic engravings depict people with upraised arms “offering salutations” to the sun-god. Of the rock art depicted in Camonica Valley—arguably the richest and most thoroughly excavated petroglyph-site in the world—Anati observed: “The carvings of the first period are limited to the depiction of one person praying, facing the sun—which is drawn as a disc with a dot in its center.”<sup>2</sup> Such scenes have led scholars to assume that the solar images served some sort of religious purpose for the Stone Age artists and their communities.<sup>3</sup>

Suns and stars also figure prominently in the earliest religions of the ancient Near East. The same was true of the religious systems of Egypt and Mesoamerica. In fact, there is much about the early astral religions that suggests an obsessive quality. It is as if the ancients felt compelled to watch the planets for signs of divine angst and impending cataclysm. Yet if this much is obvious, questions arise as soon as we descend to details. Wherever we look, especially in the oldest artworks and written texts, the sun, moon, and planets are described in a manner that is difficult to reconcile with their current appearance and familiar behavior. How are we to understand this remarkable state of affairs?

It is usually assumed that the anomalous descriptions of the sun and planets are to be explained as the product of religious symbolism or poetic metaphor. Yet this hypothesis

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<sup>1</sup> A. Oppenheim, “Man and Nature in Mesopotamian Civilization,” in C. Gillispie ed., *Dictionary of Scientific Biography*, Vol. 15 (New York, 1981), p. 634.

<sup>2</sup> E. Anati, *Camonica Valley* (New York, 1961), p. 47.

<sup>3</sup> *Ibid.*, p. 230.

fails to explain why these same celestial bodies were described in a similarly “anomalous” fashion around the globe. A possibility hitherto ignored is that the ancient artworks and literature faithfully describe the primeval solar system, albeit one radically different in order and appearance than that familiar to modern astronomers.

It is our opinion that a systematic review of the world’s earliest literary texts and artworks will establish beyond any reasonable doubt that ancient skywatchers viewed a fundamentally different sky. In the present monograph we intend to examine the testimony from ancient Mesopotamia in an attempt to learn how the cultures of that region conceptualized the heavens. Mesopotamian skywatchers were the first to practice systematic observations of heavenly phenomena, originally as a method of divination and later as a means for tracking the movements of the seven planets. The antiquity of its different cultures, coupled with its historical status as the birthplace of the science of astronomy, makes Mesopotamia a logical testing ground for someone attempting to reconstruct mankind’s earliest memories of the solar system.

## **Utu/Shamash**

It is well known that the various cultures of Mesopotamia, like ancient peoples around the globe, worshipped a sun-like form in the sky. The Sumerian sun-god was known as Utu. In the early hymn “Enki and the World Order” Utu is depicted as a powerful bull:

“The valiant Utu, the bull who stands secure, who proudly displays his power, the father of the great city, the place where the sun rises.”<sup>4</sup>

In early incantations Utu is celebrated as an all-knowing “judge” of the Netherworld.<sup>5</sup> Thus, a temple hymn describes him as pronouncing “judgment at the place where the sun rises.”<sup>6</sup>

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<sup>4</sup> Quoted from G. Leick, *A Dictionary of Ancient Near Eastern Mythology* (London, 1991), p. 161.

<sup>5</sup> G. Castellino, “Incantation to Utu,” *Oriens Antiquus* 8 (1969), p. 17.

<sup>6</sup> Å. Sjöberg & E. Bergmann, *The Collection of the Sumerian Temple Hymns* (Locust Valley, 1969), p. 46.

The Akkadian sun-god was known as Shamash. Like his Sumerian counterpart, the Semitic Shamash was venerated as a great judge. A serrated saw served as his most familiar symbol and by means of it the ancient sun-god was said to “cut” his decisions. In addition to his role as judge, Shamash was also regarded as a regent of the Underworld, as the Epic of Gilgamesh attests.

In order to reconstruct how the Mesopotamians’ conceptualized the ancient sun-god it is instructive to consider the countless artworks representing Utu/Shamash. Among the most durable and plentiful artifacts from the ancient Near East are the so-called cylinder seals, engravings cut into various types of stone that originally served as signs of property ownership. Deriving from earlier stamp seals, cylinder seals first appeared in the fourth millennium BCE and remained popular for some three thousand years.<sup>7</sup> Early cylinder seals show images thought to represent the solar orb (see figure one).<sup>8</sup> It remains an open question why the ancient artists would select this particular image to represent the Sun, as the current solar disc does not display a central dot. That said, the very same image is ubiquitous around the globe, occurring in both historic and prehistoric contexts.<sup>9</sup> In the earliest pictographic scripts in Egypt and China, moreover, this very sign served to denote the Sun.



**Figure One**

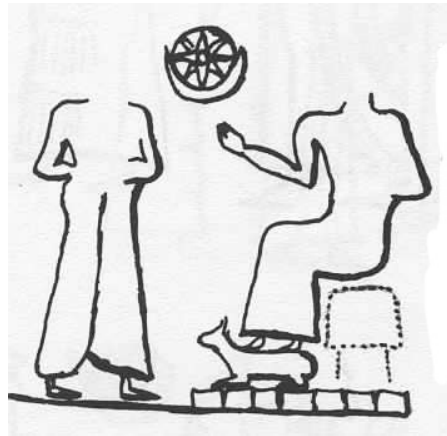
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<sup>7</sup> E. Porada, “Introduction,” in ed. E. Porada, *Ancient Art in Seals* (Princeton, 1980), p. 4.

<sup>8</sup> Adapted from figure 1041 in P. Amiet, *La glyptique mésopotamienne archaïque* (Paris, 1961). See H. Prinz, *Altorientalische Symbolik* (Berlin, 1915), figure 12:10. See also D. Wolkstein & S. Kramer, *Inanna: Queen of Heaven and Earth* (New York, 1983), pp. 30, 185.

<sup>9</sup> See the examples in P. Amiet, *La glyptique mésopotamienne archaïque* (Paris, 1961), figures 1583 and 1641.

Similar questions arise with regard to the image depicted in figure two, which shows a circular disc with a star inscribed in its center.<sup>10</sup> This particular image is well-attested in cylinder seals dating from the Old Akkadian period.



**Figure Two**

Other seals, equally common, depict the “solar” disc as a wheel-like form (see figure three).<sup>11</sup> Numerous examples show eight “spokes” or volutes emanating from the central “axle.” This image is also attested in prehistoric contexts.<sup>12</sup> A variation on the latter form would come to dominate in later times, the solar “wheel” comprising a familiar symbol on Babylonian kudurru. Like the sun-disc with central dot, this symbol could also be mounted on a pole as a sort of standard identifying the ancient sun-god.<sup>13</sup>

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<sup>10</sup> Adapted from Figure 3:5 in L. Werr, *Studies in the Chronology and Regional Style of Old Babylonian Cylinder Seals* (Malibu, 1988).

<sup>11</sup> Adapted from Figure 5:9 in L. Werr, *Studies in the Chronology and Regional Style of Old Babylonian Cylinder Seals* (Malibu, 1988).

<sup>12</sup> See the examples in A. von Wickede, *Prähistorische Stempelglyptik in Vorderasien* (München, 1990), figure 66.

<sup>13</sup> E. van Buren, *Symbols of the Gods in Mesopotamian Art* (Rome, 1945), pp. 90-91. See also H. Prinz, *op. cit.*, figure 15:2.



**Figure Three**

The renowned art historian Elizabeth van Buren offered the following commentary on the latter symbol, which she called the “sun disk on post”:

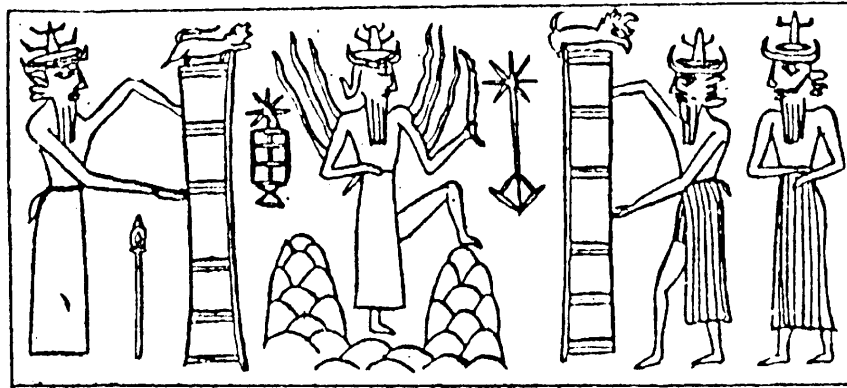
“Most of the examples of a disk on a post occur on cylinder seals of the Early Babylonian period and in seal impressions on ‘Cappadocian’ tablets. Rare examples depict a disk upon a post held by a divinity or standing free ‘in the air,’ in which case it is hard to be sure to what divinity the standard may belong. Otherwise, it may be considered almost certain that it is the sun-standard of Šamaš which is reproduced, especially as the post is often surmounted by a crescent above which the sun-disc rests. Usually one or a pair of bull-men hold the standard.”<sup>14</sup>

The ancient sun-god was also represented in anthropomorphic form. Akkadian cylinder seals show Shamash “rising” from a twin-peaked mountain (see figure four).<sup>15</sup> Such artworks form a perfect complement to early Sumerian hymns, which likewise invoke the sun-god in conjunction with a towering mountain. The following passage is typical in this regard:

<sup>14</sup> *Ibid.*, pp. 97-98.

<sup>15</sup> See the extensive discussion in E. van Buren, “The Sun-God Rising,” *Revue D’Assyriologie* 49 (1955), pp. 1-14. There van Buren notes that the theme is confined to the Akkadian period. See also H. Frankfort, *Cylinder Seals* (London, 1939), pp. 98-102.

“Šamaš, when you appear from the great mountain, from the great mountain, the mountain of the springs...there, where heaven and earth meet, from the ground of heaven you appear.”<sup>16</sup>



**Figure Four**

Why the Akkadian artists would depict their beloved sun-god in conjunction with a twin-peaked mountain is not obvious, as mountains are not prominent in Mesopotamia-proper, which occupies the alluvial plains around the rivers Euphrates and Tigris (there are mountain ranges to the North and East).<sup>17</sup> Nor, for that matter, is it known why this particular motif would be “limited exclusively to the Akkadian period.”<sup>18</sup> That said, Henri Frankfort noted that the mountain-setting was customary despite the relatively flat Mesopotamian geography: “[The mountain] is in Mesopotamia the ‘religious landscape’ par excellence, as the reed marsh is of Egypt and the mound of Golgotha in Christianity, and therefore the normal setting for the epiphany of the god.”<sup>19</sup>

In addition to the evidence to be found in the plastic arts and sacred iconography, literary hymns also celebrate the ancient sun-god. The hymns extolling the sun’s daily epiphany are particularly instructive here. From the conventional uniformitarian perspective,

<sup>16</sup> A. Schollmeyer, *Sumerisch-babylonische Hymnen und Gebete an Samas* (Paderborn, 1912), p. 37.

<sup>17</sup> W. Lambert, “The Cosmology of Sumer and Babylon,” in C. Blacker & M. Loewe eds., *Ancient Cosmologies* (London, 1975), p. 42, describes it as “a flat desert area.”

<sup>18</sup> E. van Buren, “The Sun-God Rising,” *RA* 49 (1955), p. 1.

<sup>19</sup> H. Frankfort, *The Art and Architecture of the Ancient Orient* (New Haven, 1954), p. 112.

which takes it for granted that the ancient skywatchers viewed the same celestial landscape as at present, it would naturally be expected that the Sun's familiar behavior would be a favorite subject for ancient poets in general. It is also to be expected that the language and imagery involved in descriptions of the Sun's daily cycle would follow a natural logic. Thus it follows that there should be numerous references to a brilliant orange orb first appearing from the eastern horizon, then rising to the ecliptic as it crosses the sky, only to sink and disappear beneath the western horizon. Yet such descriptions are nowhere to be found in the early Sumerian literature. Rather, we read that the ancient sun-god comes forth from the "midst" of heaven, in striking contradiction to the Sun's current behavior. The following hymn is representative in this regard:

"Šamaš, when you come forth from heaven, Šamaš, when you come forth from the midst of heaven..."<sup>20</sup>

The same observation is recorded in various other ancient texts as well. Witness the following passage:

"Šamaš, when you make your appearance in the midst of heaven, the bolt of the shining heaven gives you greetings; the door-wings of heaven swear homage to you."<sup>21</sup>

The phrase translated as "midst" of heaven is Sumerian *an.šà*, literally "heart of heaven." According to Wayne Horowitz, author of the most comprehensive study of Mesopotamian Cosmic Geography, the phrase in question has reference to the center of heaven, roughly corresponding to the modern concept of the celestial apex.<sup>22</sup> Yet in the solar system as currently configured, the apex of heaven has nothing to do with the Sun's daily epiphany. Hence the anomaly presented by the Sumerian testimony that the ancient sun-god was prone to appear from the "heart" or "midst" of heaven.

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<sup>20</sup> P. Schollmeyer, *op. cit.*, p. 104. [author's translation]

<sup>21</sup> *Ibid.*, p. 59. [author's translation]

<sup>22</sup> W. Horowitz, *Mesopotamian Cosmic Geography* (Winona Lake, 1998), pp. 238-239.

Far from being an isolated literary device, similar conceptions are met with in Mesopotamian ritual. Thus, a Sumerian incantation recited at sunrise included the following line: “Great Lord, when you rise from clear ‘Heaven’s Interior,’ hero, youth, Shamash, when you rise from clear ‘Heaven’s Interior.’”<sup>23</sup> The phrase translated as “Heaven’s Interior” is the aforementioned *an.šà*, the “heart” of heaven. Once again, it is painfully obvious that no sober-minded skywatcher would ever describe the current Sun as “rising” from the “midst” of heaven.

Equally disconcerting are statements to the effect that the sun-god dimmed or “set” in the very same place—the “midst” of heaven. Thus, in an incantation typically recited at sunset Shamash is addressed as follows: “O Sun-god, when you enter ‘Heaven’s Interior,’ may the bolt of the clear heavens say ‘hello.’”<sup>24</sup>

Now here is an interesting puzzle: How is it possible for the sun to both “rise” and “set” from the same place in the sky, however the “midst of heaven” is to be understood from an astronomical standpoint? A satisfactory answer to this question will likely necessitate a revolution in our understanding of the solar system’s recent history.

The Mesopotamian texts describing the sun-god’s daily behavior have never been subjected to a careful analysis from a comparative standpoint. Usually the anomalous descriptions are simply passed by in silence, with no commentary at all. Certainly the imagery in question has yet to be adequately explained from an astronomical standpoint. Wayne Horowitz, one of the few scholars to discuss these texts in detail, confessed his inability to explain the literary descriptions of the Sun’s daily behavior:

“Thus, according to one Sumerian tradition, the Sun-god apparently spent the night in *an.šà* instead of passing under the earth’s surface through the Apsu or underworld. It is

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<sup>23</sup> *Ibid.*, p. 248.

<sup>24</sup> Abel-Winckler 59 as quoted in W. Horowitz, *op. cit.*, p. 248.



not clear, though, how the Sun-god might have passed from the western to eastern horizon at night through an.šà.”<sup>25</sup>

It will be noted that Horowitz simply takes it for granted that the ancient sun-god “passed from the western to eastern horizon at night.” That he would make this assumption is entirely reasonable, needless to say, yet it is at odds with the evidence as the ancient Sumerian texts nowhere make this claim. Indeed, as we will document shortly, the earliest texts are quite explicit that the sun did not move at all during his daily cycle. It simply “flared up” and “dimmed” in the “midst” of heaven.

To his credit Horowitz admitted that such passages caused “severe problems” for ancient scribes attempting to understand the Sumerian language. How could it be otherwise, since they are impossible to reconcile with the familiar behavior of the current Sun? Not even a schoolchild would report that the sun “rose” and “set” in the same quarter of the sky, much less in the sky’s “midst.”

Horowitz states the obvious when he remarks that ancient references to the “midst of heaven” are problematic:

“The use of terms for the ‘middle of heaven’ as a part of the sky are problematic...Although it may be assumed that the “Middle of Heaven’ included the center of the sky around the apex of the celestial dome, it is not possible to determine how far the ‘Middle of Heaven’ extended downward.”<sup>26</sup>

Properly understood, the references to the sun-god’s “rising” and “setting” in the “midst” of heaven form a perfect complement to the aforementioned references to the sun-god “rising” over a towering mountain inasmuch as several texts place the mountain of sunrise in the “midst” of heaven. The following hymn celebrating Shamash’s daily epiphany attests to this idea: “You are mighty over the mountain, you gaze upon the

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<sup>25</sup> *Ibid.*, p. 248.

<sup>26</sup> *Ibid.*, pp. 238-239.

earth, you are suspended in the midst of heaven to the ends of the world.”<sup>27</sup> An old Babylonian hymn to Utu is of similar import: “Utu, when you come forth from the midst of heaven, when you ascend the mountain of the chaschur-cedars.”<sup>28</sup>

## **On the Nature of Sin**

Few sights are more familiar than the waxing and waning of the Moon. To our nomadic forebears traveling by its reflected light or camped out under the stars, the circumambulating satellite must have been a very impressive sight indeed, the brilliance of the full Moon far exceeding that of the brightest star or planet.

In the historical period, at least, observation of the Moon and its phases has long played an important role in the measurement of time and in the development of calendarical systems. The Sumerian calendar was lunar in nature, counting twelve (sometimes thirteen) “months” of 29-30 days, a year of some 354 days. The month itself was directly tied to the appearance of the lunar orb, beginning “at the moment when, following the period of invisibility due to nearness of the sun, the lunar crescent appears again briefly on the western horizon just after sunset.”<sup>29</sup> Even the Sumerian “day” was related to the lunar epiphany, being timed to coincide with the first appearance of the lunar crescent after the setting of the Sun.<sup>30</sup>

It remains an open question just how far back in time such lunar calendars can be traced. Early testimony attesting to the Moon’s role in setting the calendar, perhaps, was offered by Rim-Sin, the last ruler of the Larsa Dynasty (c. 1800 BCE): “[Nanna], fixing the month and the new moon, [setting] the year in its place.”<sup>31</sup> There is some evidence for lunar calendars from the Ur III period (c. 2000 BCE). Despite extravagant claims on

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<sup>27</sup> A. Schollmeyer, *op. cit.*, p. 87. [author’s translation]

<sup>28</sup> A. Falkenstein & W. von Soden, *Sumerische und Akkadische Hymnen und Gebete* (Zürich, 1953), p. 222. Author’s translation from the original German.

<sup>29</sup> M. Cohen, *The Cultic Calendars of the Ancient Near East* (Bethesda, 1993), p. 4.

<sup>30</sup> M. Hall, *A Study of the Sumerian Moon-God, Nanna/Suen* (Philadelphia, 1985), p. 657. This is a dissertation submitted to the University of Pennsylvania.

<sup>31</sup> M. Cohen, *op. cit.*, p. 3. It is curious to note, however, that during Rim-Sin’s time there existed a calendar which included months of up to 48 days and month cycles of up to 54 months.

behalf of Neolithic calendars, there is no credible evidence that prehistoric man paid much attention to the phases of the Moon.

The Moon's importance in ancient consciousness, so the conventional story goes, is also reflected in Sumerian religion, where the god Sin (also written Nanna) features prominently.<sup>32</sup> Yet in ancient myth and cult Sin generally occupies a subordinate role compared to other astral deities. Here Wolfram von Soden offered the following observation: "[Sin] is invoked in prayers much less frequently than the Sun-god Shamash and Ishtar, nor does he play a very important role in myth."<sup>33</sup>

In early hymns Sin was alternately described as a god of light, as a boat voyaging across the heavens, and as a bull with luminous horns. The most comprehensive survey of Sin's role in ancient Mesopotamian religion is that offered by Mark Hall.<sup>34</sup> As Hall points out, it is the crescent form that provides the common denominator behind early conceptions of the god:

"All of the textual sources from the very earliest periods on speak of Nanna/Suen as a threefold character identified at one and the same time with the moon as god of light, with the bull and calf as the protector and procreative power of the herds, and as the offspring of the sky-god An, or the air-god, Enlil. The crescent moon is the symbol both in literature and in art which unifies these three facets of the moon-god's character: it identifies the god with the moon, connects him with the bull and the calf through the frequently-attested association of the shape of the crescent moon with the shape of the bull's horns, and places him in direct relation to the sky and air. All of Nanna/Suen's epithets revolve around this basic conception of his character."<sup>35</sup>

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<sup>32</sup> E. Reiner, *Astral Magic in Babylonia* (Philadelphia, 1995), p. 8 writes as follows: "But of all the planets it was the Moon that was of the greatest importance to the Babylonians."

<sup>33</sup> W. von Soden, "Licht und Finsternis in der sumerischen und babylonisch-assyrischen Religion," *Studium Generale* 11 (1960), p. 649. [Translation by the author.]

<sup>34</sup> M. Hall, *A Study of the Sumerian Moon-God, Nanna/Suen* (Philadelphia, 1985), p. 33.

<sup>35</sup> *Ibid.*, p. 617.

Given the crescent's prominence in the cult of Sin, it is instructive to trace its role in ancient art. Crescents are attested from Early Dynastic times onwards.<sup>36</sup> Sin's crescent forms a recurring motif on numerous cylinder seals, where it may be depicted standing alone or enclosing the disc of Shamash, as in figure five (see also figures two and three).<sup>37</sup> This image is so ubiquitous on Mesopotamian cylinder seals that it is easy to overlook the fact that the celestial scenario depicted is quite impossible in the current solar system, as the solar disc can never appear to rest within the horns of the lunar crescent. This is because the lunar orb is nearer to the Earth than the Sun and only "shines" because of the reflected light of the latter. Thus it follows that the Moon could never present the form of a crescent when in inferior conjunction with the Sun (in fact, it is invisible at this time).



**Figure Five**

### **The Planet Venus**

If anomalies abound in Sumerian descriptions of the appearance and behavior of Utu and Sin, the situation is even more pronounced with respect to the planet Venus. Veneration of the planet Venus is already prominent in the earliest historical period. Excavations at

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<sup>36</sup> D. Collon, "Mond," *RA* 8 (Berlin, 1993-1997), p. 357.

<sup>37</sup> Adapted from Figure 2:8 in L. Werr, *Studies in the Chronology and Regional Style of Old Babylonian Cylinder Seals* (Malibu, 1988). See also H. Prinz, *op. cit.*, figure 12:3, 4, 9, 12-14.

the city of Uruk, the most ancient city yet excavated in Mesopotamia, have uncovered a wealth of evidence attesting to the planet's importance in Sumerian religion.<sup>38</sup>

The earliest literary texts from Mesopotamia date from the Early Old Babylonian period (ca. 2000-1800 BCE).<sup>39</sup> It is commonly believed that such texts were preserved orally for numerous generations and thus likely represent extremely early traditions about the Sumerian gods. Indeed, Szarzynska holds it probable that this sacred literature includes some very ancient ideas, perhaps reflecting "archaic Sumerian tradition."<sup>40</sup>

An early Neo-Sumerian text celebrating the planetary aspect of Inanna is the royal hymn of Iddin-Dagan, the third king of the First Dynasty of Isin (c. 1974-1954 BCE). This hymn describes the sacred marriage rite, performed by the king during the New Year's celebrations in order to insure the fertility of the land.<sup>41</sup> On this occasion the king, impersonating Dumuzi, engaged in a *hieros gamos* with the human representative of the goddess Inanna. The hymn opens by introducing the great goddess as a planetary power:

"I shall greet her who descends from above...I shall greet the great lady of heaven, Inana! I shall greet the holy torch who fills the heavens, the light, Inana, her who shines like the daylight, the great lady of heaven, Inana! I shall greet the Mistress, the most awesome lady among the Anuna gods; the respected one who fills heaven and earth with her huge brilliance...Her descending is that of a warrior."<sup>42</sup>

Here, as so often in Sumerian literature, Inanna is compared to a shining torch whose "huge" brilliance is said to "fill heaven" and shine like the daylight, images that are extremely difficult to reconcile with Venus's present modest luster.

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<sup>38</sup> K. Szarzynska, *Sumerica* (Warsaw, 1997).

<sup>39</sup> J. Hayes, *A Manual of Sumerian Grammar and Texts* (Malibu, 2000), p. 394.

<sup>40</sup> K. Szarzynska, *Sumerica* (Warsaw, 1997), p. 148.

<sup>41</sup> Daniel Reisman, "Iddin-Dagan's Sacred Marriage Hymn," *JCS* 25 (1973), p. 185.

<sup>42</sup> Lines 1-18 as quoted from "A *šir-namursaga* to Inana for Iddin-Dagan," in J. Black et al, *The Literature of Ancient Sumer* (Oxford, 2004), p. 263.

In the hymn in question the planet-goddess is more than once described as occupying the “midst” or “heart” of heaven—i.e., the very position assigned to the ancient sun-god, as we documented earlier. Yet under the current arrangement of the solar system, Venus never moves more than 47 degrees from the ecliptic, so it is quite impossible for that planet to occupy the “midst” or apex of heaven. This astronomical discrepancy has led scholars to interpret such language as figurative in nature. Witness the following disclaimer offered by Erica Reiner, a leading expert on ancient Babylonian astronomical texts: “Since astronomically such a position for Venus is excluded ‘midst’ must be taken figuratively.”<sup>43</sup>

If Reiner is right, one would hardly expect to find Inanna/Venus being described as standing in the midst of heaven in other ancient texts as well.<sup>44</sup> Yet in the late-Babylonian version of “The Exaltation of Inanna” the planet-goddess is celebrated as radiating forth in torch-like fashion from the midst of heaven: “May your torch, which spreads terror abroad, flare up in the middle of heaven.”<sup>45</sup> Early temples associated with the worship of Inanna/Ishtar preserve the same basic idea: Ishtar’s temple at Mari, for example, was known as é.šà.ba.an.na, “House of the Heart of Heaven.”<sup>46</sup>

Equally significant is the fact that Babylonian astronomical texts from a period roughly a thousand years after Iddin-Dagan link the planet Venus to the “midst” of heaven. Thus, in an omen from the Enûma Anu Enlil series the planet is described as occupying the “middle of the sky.” Confronted with this seemingly anomalous report, Reiner and Pingree dismiss it as the product of scribal error:

“In omen 15, Venus appears in a MURUB<sub>4</sub> AN-e, ‘in the middle of the sky’; this expression, since the omen affects the king of all four quarters, must be intended to refer to midheaven. Venus, of course, can never be seen so high above the horizon at night. It

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<sup>43</sup> E. Reiner, op. cit., p. 23.

<sup>44</sup> *Ibid.*, p. 23 citing STT 257 rev. 5f.

<sup>45</sup> B. Hruška, “Das spätbabylonische Lehergedicht ‘Inanna’s Erhöhung’,” *Archiv Orientalni* 37 (1969), p. 492.

<sup>46</sup> A. George, *House Most High* (Winona Lake, 1993), p. 143.

seems that the phenomenon attested in the Jupiter omens was blindly copied from there.”<sup>47</sup>

In other astronomical texts Venus is described as standing in the *ziqpu*, the latter term conventionally translated as “zenith.” Here, too, scholars have offered various interpretations in order to explain away this “impossible” station assigned Venus. Witness the following disclaimer offered by Reiner and Pingree:

“Neither should the omen ‘Venus ascends to the *ziqpu*’ be taken to mean that Venus reaches the zenith—even more an impossibility for Venus. This omen occurs in several texts from Group F...as well as in one of Group B...It must mean that Venus appears above the point along the horizon that a *ziqpu*-star rises above.”<sup>48</sup>

### **Inanna and Sin**

Sumerian texts speak of an intimate relationship pertaining between Inanna/Venus and Sin. Thus, in “A Hymn to Inana as Ninegala,” one finds the following statement: “Inana you go into the interior of heaven like your father Suen; Ninegala [i.e., Venus], you appear like moonlight in your shrine the Ibgal.”<sup>49</sup> This passage is of particular interest insofar as it suggests that Inanna and Sin both occupy the “heart” or “midst” of heaven, however the latter term is to be understood from an astronomical standpoint. Certainly that’s what a literal reading of the language would imply. Yet why should this be? In the current skies, Venus stands in no particular relation to the lunar orb. Indeed, the two bodies can only be seen together at the end of the month around the time of the Moon’s conjunction with the Sun and for a short time thereafter.<sup>50</sup> Why, then, are Inanna/Venus and Sin invoked as if they occupy the same region of the sky?

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<sup>47</sup> E. Reiner & D. Pingree, *Babylonian Planetary Omens: Part Three* (Groningen, 1998), pp. 23-24.

<sup>48</sup> *Ibid.*, p. 17.

<sup>49</sup> Lines 52-53 in “A hymn to Inana as Ninegala (Inana D),” ETCSL.

<sup>50</sup> E. Reiner and D. Pingree, *op. cit.*, p. 3.

Babylonian astronomical texts from a much later period speak of Venus standing together with the Moon. How these statements are to be understood remains unknown. Reiner and Pingree offered the following interpretation:

“In omen 110 (omen 39) is the statement that Venus stands in the position of the Moon; if our interpretation is correct, it simply means that Venus and the Moon appear, at different times of the night, above the same point on the horizon.”<sup>51</sup>

The suggestion that these omens have reference to a non-simultaneous “meeting” of Venus and Sin strains credulity, to put it mildly. Certainly such an interpretation will never explain the explicit statement from “A Hymn to Inana as Ninegala,” wherein Venus and Sin are described as “standing in the heart of the sky.”

Other omens speak of Venus “entering into” the Moon. Witness the following omen: “If Venus enters into the Moon and stops: flood will come, the sluice channels will be cut through.”<sup>52</sup> Reiner and Pingree offer a slightly different interpretation of this conjunction of planets:

“Omens 42-44 are three omens with the same protasis, ‘Venus enters into the Moon,’ except that omen 42 adds: ‘and stands,’ but different apodoses. All three omens presumably mean only that the Moon has covered Venus.”<sup>53</sup>

Here, as in their other interpretations of Venus’s description in Babylonian astronomical texts, Reiner and Pingree make the assumption that the texts do not mean what they say—rather something entirely different. This is not a sound methodology. The approach favored here strives to understand the astronomical omens in as literal fashion as possible, particularly when analogous reports are attested in more than one culture. Ancient art, moreover, suggests that something more memorable than an occasional and wholly mundane “covering” of Venus by the Moon lies behind literary descriptions of

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<sup>51</sup> *Ibid.*, p. 18.

<sup>52</sup> *Ibid.*, p. 45.

<sup>53</sup> *Ibid.*, p. 3



Inanna and Sin “standing together.” Thus, a common motif on ancient cylinder seals finds the Venus-star being set within the crescentine horns of Sin (see figure six).<sup>54</sup> Yet such a “conjunction” of Venus and the Moon is not possible given the current arrangement of the solar system.



**Figure Six**

### **Venus adorned by Sin**

A number of Sumerian hymns compare the light of Inanna/Venus to that of Sin. Witness the following passage from the Ninegal hymn, a portion of which was cited previously:

“Inana you go into the interior of heaven like your father Suen; Ninegala, you appear like moonlight in your shrine the Ibgal.”<sup>55</sup>

A similar passage is the following:

“Your divine nature shines in the pure sky like Nanna [Sin] and Utu.”<sup>56</sup>

<sup>54</sup> Adapted from Figure 1017 of P. Amiet, *La glyptique mésopotamienne archaïque* (Paris, 1961). See also seal 696 in B. Teissier, *Ancient Near Eastern Seals from the Marcopoli Collection* (Berkeley, 1984); and Figures 138 and 139 in A. Jeremias, *Handbuch der altorientalischen Geisteskultur* (Leipzig, 1913).

<sup>55</sup> Lines 52-53 in “A hymn to Inana as Ninegala (Inana D),” ETCSL.

<sup>56</sup> F. Bruschweiler, *INANNA. La deesse triomphante et vaincue dans la cosmologie sumérienne* (Leuven, 1988), p. 115, citing line 209 from “in-nin ša-gur-ra. A Hymn to the Goddess Inanna....”

Other texts describe the planet Venus as adorned with the radiance of Sin. Witness the following passage from “The Exaltation of Inanna”:

“Garment of heroes, the brilliant radiance of Suen wraps her stature, a sublime ornament, sign of a divine nature, makes her appear like the day.”<sup>57</sup>

What does it mean that the planet Venus, as Inanna, is clothed with the radiance of Sin? Once again we appear to be met with a direct statement implying an intimate relationship or conjunction between Venus and Sin. Yet what sort of celestial event could inspire the notion that Venus was attired with Sin’s “garment” or radiance?

Equally puzzling is the statement that Sin’s brilliant radiance makes Venus “appear like the day.” What possible connection could ancient skywatchers have seen between the planet Venus, Sin, and the day?

When pondering the possibility of a relationship between Venus’s epiphany and Sin, it is relevant to note that one of the most common terms used to describe Venus’s luminosity is *si*, literally “horn.”<sup>58</sup> Thus, Inanna is described as follows in one hymn:

“Even during the time that Suen and Utu are awake, may you spread your rays [*si*] in profusion.”<sup>59</sup>

Iddin-Dagan’s marriage hymn also makes mention of the planet’s horns:

“The holy one, the awesome queen of the Anunnaki, revered in heaven and earth, crowned with great horns...of her brilliant coming forth in the evening sky of her flaring in the sky—a pure torch—of her standing in the sky like the sun and the moon...”<sup>60</sup>

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<sup>57</sup> Exalt. 2: III 41-42 as quoted in F. Bruschweiler, *op. cit.*, p. 137. See also B. Hruška, “Das spätbabylonische Lehrgedicht ‘Inanna’s Erhöhung’,” *Archiv Orientalni* 37 (1969), p. 492.

<sup>58</sup> See the discussion in F. Bruschweiler, *op. cit.*, p. 161.

<sup>59</sup> Exalt. 2 III 32-36 as quoted in F. Bruschweiler, *op. cit.*, p. 112. See also B. Hruška, *op. cit.*, p. 492.

<sup>60</sup> T. Jacobsen, *The Treasures of Darkness* (New Haven, 1976), p. 139.

The references to Venus's horns are commonly understood as a metaphorical reference to light, the language supposedly being patterned after the luminous "horns" of the lunar crescent.<sup>61</sup> It is our opinion, however, that the literary references to Venus's luminous "horns" have nothing whatsoever to do with poetic metaphor. Rather, it is more likely that such references—like the cylinder seals depicting Venus set within a crescent—preserve a memory of a former age wherein Venus appeared in conjunction with a luminous crescent.

The fact that Inanna/Venus is often described as a horned bovine of some sort points in the same direction. One of Inanna's many epithets was *sún*, literally "wild cow." In "The Exaltation of Inanna," for example, the planet-goddess is invoked as follows: "Impetuous wild cow, great daughter of Suen."<sup>62</sup> Another hymn puts the following words in Inanna's mouth: "I am the bison of the kur filled with luminous rays."<sup>63</sup>

Babylonian astronomers, significantly, continued to refer to the "horns" of Venus many centuries later. Such references inspired a lively controversy in the early decades of the 20<sup>th</sup> century, some scholars viewing them as evidence that Venus's phases were known to the ancient Babylonian astronomers. Although modern astronomers discount the latter possibility—and rightfully so, in our opinion—the Babylonian references to Venus's "horns" remain unexplained. On this matter Reiner and Pingree have nothing constructive to offer by way of an explanation, stating simply: "What is meant by Venus' horns is not certain."<sup>64</sup>

### **Venus, Sin, and Utu**

The Late Babylonian version of "The Exaltation of Inanna," as previously quoted, describes Venus as shining brilliantly "even during the time that Suen and Utu are awake." This is a curious phrase, as one would not ordinarily describe our Sister planet

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<sup>61</sup> See the discussion in F. Bruschweiler, *op. cit.*, p. 139.

<sup>62</sup> Line 58 in W. Hallo & J. van Dijk, *op. cit.*, p. 23.

<sup>63</sup> F. Bruschweiler, *op. cit.*, p. 138, with reference to SBH 56 r. 12.

<sup>64</sup> E. Reiner & D. Pingree, *Babylonian Planetary Omens: Part Three* (Groningen, 1998), p. 10.

as shining at the same time as the Sun and Moon. Astronomical reality notwithstanding, it remains the case that Venus and Sin are more than once described as shining together in the immediate vicinity of the ancient sun-god. The full context of the previous passage supports this interpretation:

“Oh divine mistress, may you be the one that shines over them, that they call you ‘divine source of all life’, at their sides (that of the Sun and of the Moon), in your dominant position, may you gloriously accomplish your (celestial) crossing, even during the time that Suen and Utu are awake, may you spread your rays in profusion, may your torch with its brilliant radiance illuminate in truth as far as far as the heart of the sky, may you be admired among the gods, you who has no equal (literally has no counterweight)!”<sup>65</sup>

Here Venus is described as shining forth in heaven at the sides of Sin and Utu even while the latter two celestial bodies are visible (in Sumerian literature the sun-god is said to be “awake” during the day and “asleep” at night). Were it not for the obvious astronomical impossibilities involved, a literal reading of this passage would understand it as a patent reference to Venus standing in the same quarter of heaven together with Sin and Utu. Note further that, even were such a conjunction of the three planets possible in the current skies, it could hardly be said of Venus that it is the dominant body of the three or that it sends forth rays in profusion while the sun is visible or “awake.”

Astronomical reality notwithstanding, ancient art provides a wealth of evidence that Venus, Sin, and Utu/Shamash were thought to occupy the same region of heaven. As we have documented elsewhere,<sup>66</sup> early cylinder seals depict the Venus-star as superimposed on the “sun”-disc, both celestial bodies being set within a crescent (see figure seven).<sup>67</sup> Dominique Collon—a leading authority on Mesopotamian cylinder seals—offered the following commentary on this extraordinary state of affairs:

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<sup>65</sup> F. Bruschweiler, *op. cit.*, p. 112. See also B. Hruška, *op. cit.*, p. 492.

<sup>66</sup> E. Cochrane, *The Many Faces of Venus* (Ames, 2001), pp. 35-59.

<sup>67</sup> Adapted from W. Ward, *The Seal Cylinders of Western Asia* (Washington, 1910), figure 985.

“From Ur III times onwards, however, the crescent is also often combined with a disc inscribed with a star which is placed within it (star-disc and crescent...). This could either be explained as different phases of the moon or, more likely, is a shorthand for the principal celestial bodies, sun (and star?) and moon.”<sup>68</sup>



**Figure Seven**

At this point the open-minded researcher must consider certain fundamental questions of common sense and logic: Why would the ancients repeatedly depict the three most prominent celestial bodies in astronomically impossible positions? Was it sheer perversity alone that inspired the ancient artists to produce these particular images? The fact that similar artworks will be found around the globe suggests that we have to do here with relatively accurate depictions of the ancient sky and *not* with any artistic “metaphor” or “shorthand” peculiar to the Mesopotamian mindset. Yet the possibility that such seals might faithfully describe the order and appearance of the ancient solar system is never considered by Collon—or by any other historians of ancient Mesopotamian art, for that matter.

### **Mons Veneris**

Ancient hymns celebrating the planet Venus—as the goddess Inanna/Ishtar—describe it as residing in close proximity to the ancient sun-god. Thus, the planet-goddess is

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<sup>68</sup> D. Collon, “Mond,” *RA* 8 (Berlin, 1993-1997), p. 357.

described as follows in the hymn known as “Inanna’s Descent to the Underworld”: “I am Inanna of the place where the sun makes his rising.”<sup>69</sup>

The phrase translated as “the place where the sun makes his rising” is ki-<sup>d</sup>utu-è. Modern scholars, quite naturally, have sought to interpret such language in terms of Venus’s familiar role as a morning star.<sup>70</sup> According to this view, the phrase ki-<sup>d</sup>utu-è has reference to the eastern horizon.<sup>71</sup> Upon closer examination, however, it can be shown that this phrase has reference to a specific site in heaven—the aforementioned mountain of sunrise. Thus, Sjöberg points out that ki-<sup>d</sup>utu-è-a marks a semantic parallel to kur-<sup>d</sup>utu-è-a, “the mountain where the sun rises.”<sup>72</sup>

The particular site in question was brimming with cosmic significance, being regarded as the birthplace of the gods and sacred residence of the ancient sun-god. Recall again the passage quoted earlier: “The valiant Utu, the bull who stands secure, who proudly displays his power, the father of the great city, the place where the sun rises.”<sup>73</sup>

If Sjöberg is right about an inherent connection between “the place where the sun rises” and the mountain of sunrise, one would expect to find the Venus-goddess described as a co-inhabitant of the latter mountain. That Venus/Inanna was intimately associated with a celestial mountain is well attested. Texts from archaic Uruk invoke Inanna-kur, “Inanna of (or from) the kur,” the latter word signifying the mountain of sunrise.<sup>74</sup> The epic *Enmerkar and the Lord of Aratta* describes Inanna as the “great lady of heaven” who

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<sup>69</sup> S. Kramer, “Sumerian Literature...,” *Proc. Am. Philosophical Soc.* 85 (1942), p. 314. See also the discussion in Å. Sjöberg & E. Bergmann, *The Collection of the Sumerian Temple Hymns* (Locust Valley, 1969), p. 90, who translates the passage as follows: “I am Inanna of the place where the sun rises.” Wolfgang Heimpel, “A Catalog of Near Eastern Venus Deities,” *Syro-Mesopotamian Studies* 4:3 (1982), p. 10, would translate this passage accordingly: “I am Inanna towards the place where Utu rises.”

<sup>70</sup> W. Heimpel, “A Catalog of Near Eastern Venus Deities,” *Syro-Mesopotamian Studies* 4:3 (1982), pp. 9-10.

<sup>71</sup> W. Sladek, *Inanna’s Descent to the Netherworld* (Baltimore, 1974), p. 113, translates the line in question as follows: “I am Inanna, and (I am going) to the east.”

<sup>72</sup> Å. Sjöberg & E. Bergmann, *The Collection of the Sumerian Temple Hymns* (Locust Valley, 1969), p. 90. Franciose Bruschweiler, *op. cit.*, p. 45 made much the same point.

<sup>73</sup> Quoted from G. Leick, *A Dictionary of Ancient Near Eastern Mythology* (London, 1991), p. 161.

<sup>74</sup> K. Szarzynska, “The Sumerian Goddess Inana-Kur,” *Orientalia Varsoviensia* 1 (1987), pp. 7-8.

“dwells on the top of the mountain.”<sup>75</sup> *The Exaltation of Inanna* reports that the goddess “resides in the mountain.”<sup>76</sup> “The lament for Unug” reports that Inanna/Venus “dominates” or “fills” the kur.<sup>77</sup> Such passages suggest that the planet Venus didn’t merely have an occasional relationship to the celestial mountain—rather, it “dwelled” there.

Early hymns to the planet-goddess localize her various mythical adventures on or about this mountain, alternately described as kur or kur-šuba, “the pure shining mountain.” In the hymn *Inanna and Ebih*, the mountain is described as “the pure place of your [Inanna’s] birth.”<sup>78</sup> In *The Exaltation of Inanna*, the planet-goddess is compared to a “flood descending from its mountain [kur].”<sup>79</sup>

Venus’s intimate association with the mountain of sunrise is also reflected in ancient art. In the cylinder seal illustrated in figure eight the planet-goddess appears atop the mountain from which Shamash is about to emerge. The scene in question drew the following commentary from Amiet:

“The wings which she wears on rare occasions and the stars which sometimes top the weapons emerging from her shoulders confirm her celestial character...The image of the new goddess corresponds exactly to what is known of the Ishtar of the Semites, personification of the planet Venus.”<sup>80</sup>

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<sup>75</sup> *Ibid.*, p. 12.

<sup>76</sup> Å. Sjöberg, “in-nin ša-gur-ra. A Hymn to the Goddess Inanna...,” *Zeitschrift für Assyriologie* 65 (1976), p. 179.

<sup>77</sup> Line H:1-5, “The lament for Unug,” ETCSL. F. Bruschweiler, *INANNA. La deesse triomphante et vaincue dans la cosmologie sumerienne* (Leuven, 1988), p. 79 translates as “Queen whose grandeur dominates the kur, who bears herself like An, is decked with splendor like Enlil, who, like her father, adorns the day and the night.”

<sup>78</sup> K. Szarzynska, *op. cit.*, p. 11. Å. Sjöberg & E. Bergmann, *op. cit.*, p. 13 note that Inanna’s birth place was called kur-šuba or kur ki-sikil.

<sup>79</sup> W. Hallo & J van Dijk, *The Exaltation of Inanna* (New Haven, 1968), p. 15.

<sup>80</sup> P. Amiet, *op. cit.*, p. 46.



**Figure Eight**

The wealth of testimony linking Inanna/Venus to the kur prompts the following question: How are we to understand such traditions? Why would the planet Venus be described as residing atop the mountain of sunrise, however the latter is to be understood from an astronomical standpoint? This mystery has yet to be resolved, as Szarzynska acknowledged:

“The problem of what the kur means in the above mentioned name [Inanna-kur], remains, for the time being, unsolved. It seems that kur ‘mountain’ in connection with the goddess indicates the mythological mountain, the place of her birth and her appearance.”<sup>81</sup>

Confronted with the apparent anomaly whereby both the ancient sun-god and Venus co-habit atop a mythical mountain, conventional scholars have little recourse but to fall back upon the seemingly all-purpose explanation of the Sun and Venus appearing in the East over some ill-defined mountain range. Szarzynska’s opinion may be taken as typical in this regard:

<sup>81</sup> K. Szarzynska, “The Sumerian Goddess Inana-Kur,” *Orientalia Varsoviensia* 1 (1987), p. 11.



“This meaning of the kur is connected in all probability with the mountains in the East of the Sumer-country, upon which the sun rises and the planet Venus appears.”<sup>82</sup>

Most scholars would identify the mountains in question with the Zagros mountains.<sup>83</sup> It can be shown, however, that the kur has nothing whatsoever to do with the relatively diminutive Zagros mountain range, the latter of which, in any case, does not present a twin-peaked appearance. Nor, for that matter, does the kur have reference to any other terrestrial “mountains in the East of the Sumer-country.”

### **The Mountain of Heaven and Earth**

Another name for the mountain of sunrise in Sumerian cosmology was *hursag*, invoked in early hymns as “the mountain of heaven and earth” (*hur-sag-an-ki-bi-da*).<sup>84</sup> In various Sumerian texts the *hursag* is interchangeable with the *kur* and thus it is no surprise to find that Inanna/Venus is brought into an intimate relation with this sacred mountain as well. One text describes Inanna as seated upon the *hursag*: “(Inanna) who takes a seat on the highlands of the bright mountain, who adorns the dais of the bright mountain.”<sup>85</sup> In another hymn, Inanna is invoked as the lion (*pirig*) of the *hursag*-mountain.<sup>86</sup>

If the placement of Venus atop the mountain of the sunrise represents something of a mystery, more puzzling still are those passages that describe the planet Mars (as Nergal) as occupying the same celestial mount! Thus, a Sumerian hymn relates that Nergal was given the *hursag*-mountain as his special province.<sup>87</sup>

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<sup>82</sup> *Ibid.*, p. 13.

<sup>83</sup> D. Collon, “Moons, boats, and battle,” in I. Finkel & M. Geller eds., *Sumerian Gods and Their Representation* (Groningen, 1997), p. 13. P. Steinkeller, “Of Stars and Men,” in W. Moran & A. Gianto eds., *Biblical and Oriental Essays in Memory of William L. Moran* (Rome, 2005), p. 21 speaks of the “Hašur Mountains on the eastern edge [sic] the Persian Gulf.”

<sup>84</sup> See the discussion in E. Ebeling, “Gebirge,” *Reallexikon der Assyriologie* 3 (Berlin, 1957-1971), p. 177. Å. Sjöberg & E. Bergmann, *The Collection of the Sumerian Temple Hymns* (Locust Valley, 1969), op. cit., p. 88.

<sup>85</sup> *Enmerkar and the Lord of Aratta* 230-231 as quoted in ed. Å. Sjöberg, *The Sumerian Dictionary* (Philadelphia, 1984), p. 138.

<sup>86</sup> Å. Sjöberg & E. Bergmann, op. cit., p. 79.

<sup>87</sup> *Ibid.*, pp. 51, 88.

Nergal also features prominently in the sacred traditions surrounding the kur. Thus, an Ur III literary text describes the war-god as “filling” the kur.<sup>88</sup> An epithet of the Sumerian war-god characterizes him as en.kur.gal, “lord of the great mountain.”<sup>89</sup> Nergal is elsewhere said to “rise in the mountain where the sun rises [kur-u<sub>4</sub>-è].”<sup>90</sup>

Such traditions confirm that Nergal/Mars was intimately connected with the mountain of sunrise. Yet how are we to explain this particular feature of Sumerian cosmography from the standpoint of modern astronomy? The planet Mars does not usually rise in the East with the Sun. Indeed, the Sun and Mars are never visible together in the sky during those relatively rare occasions when Mars moves in close proximity to the Sun, the red planet only coming into view *after* the Sun has gone down. Moreover, when Mars does appear in the East, it is always faint and typically invisible, being then on the other side of the Sun and thus hundreds of millions of miles away from terrestrial viewers.<sup>91</sup>

Equally baffling from an astronomical standpoint are Sumerian epithets implying that Nergal/Mars is intimately associated with the site of the waning Sun. Witness the epithet *Lugal-ki-dù-šú-a*: “King of the site of the Sun-set.”<sup>92</sup> A closely related epithet is *Lugal-dù-šú-a*: “King who effects the Sunset.”<sup>93</sup> Here, too, we are presented with a glaring anomaly: What does the planet Mars have to do with the West—the current site of the sunset?

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<sup>88</sup> W. Horowitz, *op. cit.*, p. 281.

<sup>89</sup> *Ibid.*, p. 281. See also K. Tallqvist, *Akkadische Götterepitheta* (Helsingforsiae, 1938), p. 390. E. Ebeling, “Enkikurra,” in *Reallexikon der Assyriologie* 2 (Berlin, 1938), p. 382.

<sup>90</sup> Å. Sjöberg & E. Bergmann, *op. cit.*, p. 90. See also E. von Weiher, *Der babylonische Gott Nergal* (Berlin, 1971), p. 35.

<sup>91</sup> J. Sawyer & F. Stephenson, “Literary and Astronomical Evidence for a Total Eclipse of the Sun Observed in Ancient Ugarit on 3 May 1375 B. C.,” *BSOAS* 33 (1970), pp. 468-469 write: “When Mars is near the sun, it is faint and is never visible until about half an hour after sunset.” As these scholars note, an exception to this statement would be a total eclipse of the sun, during which Mars might appear prominent.

<sup>92</sup> K. Tallqvist, *op. cit.*, p. 390. [Author’s translation from the original German] See also the passage quoted in E. von Weiher, *op. cit.*, p. 15, where Nergal receives the epithet Lugal-u<sub>4</sub>-šú, “King of the site of the sunset.”

<sup>93</sup> K. Tallqvist, *op. cit.*, p. 390. This translation has been questioned by W. Lambert, who would interpret it as follows: “King of the netherworld who controls everything.” See the entry under Lugal-ki-dù-šú-a in *Reallexikon der Assyriologie* 7/1-2 (Berlin, 1985), p. 145.

Faced with these puzzling epithets, leading scholars have sought to question their literal meaning in order to synchronize the Sumerian testimony with astronomical reality.<sup>94</sup> Yet the Sumerian testimony involving the planet Mars, like that surrounding Venus and Utu, is unequivocal in nature and cannot be explained away simply by wishing it were otherwise.

## **The World Mountain**

In order to gain a proper understanding of Sumerian Cosmic Geography it is necessary to resolve the original nature of the mountain of sunrise associated with the ancient sun-god and Venus. At the turn of the previous century, scholars such as Jensen and Jeremias were united in the opinion that the mountain in question had reference to the concept of a World Mountain.<sup>95</sup> Samuel Kramer, Jan van Dijk, and Francoise Bruschweiler among others, have defended this position in more recent years.<sup>96</sup>

It is Mircea Eliade, perhaps, who has done the most to clarify the role of the World Mountain in ancient cosmology and religion. Eliade offered the following summary of this multivalent symbol:

“The symbolism of the World Tree is complementary to that of the Central Mountain. Sometimes the two symbols coincide; usually they complement each other. But both are merely more developed mythical formulations of the Cosmic Axis (World Pillar, etc.).”<sup>97</sup>

Although it can be shown that the beliefs surrounding the World Mountain are remarkably consistent across cultures, Sumerologists have been reluctant to take the

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<sup>94</sup> Å. Sjöberg & E. Bergmann, *op. cit.*, p. 136, wrote as follows: “<sup>d</sup>Lugal-ki-dù-šú-a and <sup>d</sup>lugal-dù-šú-a (epithets of Nergal) in St.Or. VII, p. 355; 390/91 are interpreted as ‘King of the place of Sunset’ and ‘the King who effects the Sun-set’. This interpretation is highly doubtful.”

<sup>95</sup> P. Jensen, *Die Kosmologie der Babylonier* (Berlin, 1974), pp. 201-212. See also A. Jeremias, *Handbuch der altorientalischen Geisteskultur* (Leipzig, 1913), pp. 53-57.

<sup>96</sup> S. Kramer, *Sumerian Mythology* (Philadelphia, 1944), p. 39. See also J. van Dijk, *Sumerische Götterleider* (Heidelberg, 1959), p. 17; and F. Bruschweiler, *INANNA. La deesse triomphante et vaincue dans la cosmologie sumerienne* (Leuven, 1988), pp. 84-86.

<sup>97</sup> M. Eliade, *Myths, Rites, and Symbols* (New York, 1975), p. 380.

ancient testimony at face value and would seek instead to understand the literary descriptions by reference to figurative language.<sup>98</sup> The writings of Thorkild Jacobsen have been particularly influential in this regard. Jacobsen, in keeping with his marked tendency to localize sacred symbols and mythological themes, would interpret the ḫursag as a range of mountains on the eastern border of Mesopotamia:

“As seen on the eastern horizon, its shining peaks towering from earth up into heaven, the ḫursag appears indeed to belong equally to both of these cosmic entities, and the epithet here applied to it, ‘of both heaven and earth,’ is therefore as forceful as it is apt.”<sup>99</sup>

In a recent summary of Sumerian cosmology, W. Lambert attempted to offer a compromise between the diametrically opposed positions of Jensen and Jacobsen. While admitting that the World Mountain concept can be found in Sumerian lore, he nevertheless sided with Jacobsen in understanding it as primarily figurative in nature:

“There are, it is true, some allusions to the concept of a cosmic mountain [in Sumerian Cosmology], but these occur in literary and poetic contexts and it is not possible to reconstruct a precise image from them. The most explicit ones speak of a mountain in the East from which the sun-god rises every morning, and since the phenomenon was seen on the horizon the term ‘mountain’ cannot be taken too literally.”<sup>100</sup>

Contrary to Lambert’s assertion, it *is* possible to reconstruct a fairly precise image of the mountain of sunrise from the literary allusions. For example, it is certain that the World Mountain was twin-peaked in nature exactly as depicted on the early Akkadian cylinder seals showing Shamash and the mountain of sunrise (in figure four, for example).<sup>101</sup> Thus it is that very same form characterized the World Mountain in Egyptian lore: There the


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<sup>98</sup> W. Lambert, “Kosmogonie,” *Reallexikon der Assyriologie* 6 (Berlin, 1980-1983), pp. 219-220; R. Clifford, *The Cosmic Mountain in Canaan and the Old Testament* (Cambridge, 1972).

<sup>99</sup> T. Jacobsen, “Sumerian Mythology: A Review Article,” *JNES* 5 (1946), p. 141.

<sup>100</sup> W. Lambert, “The Cosmology of Sumer and Babylon,” in C. Blacker and M. Loewe eds., *Ancient Cosmologies* (London, 1975), p. 61.

<sup>101</sup> See also the discussion in P. Schollmeyer, *Sumerisch-babylonische Hymnen und Gebete an Samas* (Paderborn, 1912), p. 5.

mountain of sunrise was known as the *akhet*, the hieroglyph for which depicts a twin-peaked mountain with an orb between its peaks: .<sup>102</sup>

In addition to the literary passages and artworks describing the World Mountain in terms that find precise parallels around the globe, it can be shown that the various cultures of Mesopotamia sought to recreate the kur in their sacred structures—an engineering strategy that might best be described “as above, so below.”<sup>103</sup> In Mesopotamia, as in cultures around the globe, temples were frequently patterned after the World Mountain, as the names é-kur and é-ḫursag attest.<sup>104</sup> Of Ningirsu’s E-ninnu temple, the Lagashite king Gudea bragged that “the house is a great mountain reaching up to the skies.”<sup>105</sup> Other early temples were named after the mountain of sunrise (ki-u<sub>4</sub>-è-a and kur-dutu-è-a).<sup>106</sup> Identical conceptions prevailed in ancient Egypt, where temples were believed to represent the *akhet*-mountain.<sup>107</sup>

The rich symbolism associated with the mountain of sunrise was also attached to ziggurats, the towering pyramid-like structures that formed a prominent component of Mesopotamian cities, including Babylon, Nippur, Ashur, and Borsippa. Henri Frankfort acknowledged that ziggurats were intended to form a terrestrial model or reproduction of the mountain associated with the ancient sun-god: “ziggurat, the massive temple tower, which stood for the ‘mountain,’ as a symbol of the earth, the Netherworld, or the place of sunrise.”<sup>108</sup>

Insofar as ziggurats were purposefully modeled upon the celestial prototype, important clues as to the visual appearance of the mountain of sunrise can be deduced from their

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<sup>102</sup> J. Assmann, “Horizont,” in *LÄ 2* (1977), col. 3. See also the entry under *aḥt* in R. Hannig, *Die Sprache der Pharonen* (Mainz, 1995), p. 13.

<sup>103</sup> G. Leick, *A Dictionary of Ancient Near Eastern Mythology* (London, 1991), p. 6 writes: “Astral observation was an intrinsic part of ancient civilizations and the notion of ‘as above so below’ forms the basis of all divination.”

<sup>104</sup> E. Ebeling, “Gebirge,” *Reallexikon der Assyriologie, Vol. 3* (Berlin, 1957-1971), p. 177.

<sup>105</sup> Line 820 in “The building of Ningirsu’s temple (Gudea cylinders A and B),” ETCSL.

<sup>106</sup> Å. Sjöberg & E. Bergmann, *op. cit.*, p. 90.

<sup>107</sup> J. Assmann, *Death and Salvation in Ancient Egypt* (Ithaca, 2005), p. 335: “Temples and pyramid complexes were often called *akhet*, with the result that this zone also had a symbolic value.”

<sup>108</sup> H. Frankfort, *Kingship and the Gods* (Chicago, 1948), p. 323.

architectural details. For example, in an apparent attempt to emulate the twin-peaks of the mountain of sunrise architects placed a set of luminous crescentine horns atop ziggurats.<sup>109</sup> Thus it is that Gudea could announce with respect to his temple-ziggurat that his builders made it “lift its horns as a bull”<sup>110</sup> and “had it wear a tiara shaped like the new moon.”<sup>111</sup>

If we are to interpret the widespread traditions of a World Mountain as originally having reference to a celestial prototype, how are we to understand it from an astronomical or physical standpoint? A decisive clue is provided by a well-known passage from “The Gilgamesh Epic.” There it is stated that the Mashu mountain presides over the “rising” and “setting” of the ancient sun-god:

“The name of the mountain is Mashu...Which every day keeps watch over the rising and setting of the sun, Whose peaks reach as high as the ‘banks of heaven’, And whose breast reaches down to the underworld.”<sup>112</sup>

Under the current arrangement of the solar system, needless to say, it is not possible for the Sun to rise *and* set over the same terrestrial mountain. As a result of the striking discordance between literary descriptions of Mt. Mashu and astronomical reality, some scholars have sought to find fault with Heidel’s literal translation of the passage in question:

“That the Mashu mountain(s) does so [keeps watch over the rising and setting of the sun] ‘every day,’ as translated by Heidel, Speiser, and others, is obviously wrong. Even if we stipulate, for the sake of peace, the idea of a terrestrial mountain, the Sun is not in the

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<sup>109</sup> D. Potts, “Notes on some horned buildings in Iran, Mesopotamia, and Arabia,” *RA* 84 (1990), pp. 33-40. There Potts admits that “even if the specific rationale behind such displays generally eludes us, it is clear that the symbolism involved is one of long standing.” See also the discussion in E. van Buren, *op. cit.*, p. 62 where it is noted of model ziggurats that “by far the larger number are zikkurrats with a crescent.”

<sup>110</sup> Line 586 in “The building of Ningirsu’s temple (Gudea, cylinders A and B),” ETCSL.

<sup>111</sup> Line 657.

<sup>112</sup> A. Heidel, *The Gilgamesh Epic and Old Testament Parallels* (Chicago, 1970), p. 65.

habit of rising on the same spot every day, and it needs no profound astronomical knowledge to become aware of this fact.”<sup>113</sup>

Were this the only such report to be found in ancient literature one could perhaps dismiss it as the product of figurative language and/or creative imagination. Yet, as we have documented elsewhere, analogous traditions can be found throughout the ancient world.<sup>114</sup> The World Mountains of Egyptian and Hindu lore—also twin-peaked—likewise presided over the “rising” and “setting” of the ancient sun-god.<sup>115</sup> Indeed, it is the very prevalence of this theme that should alert scholars to the possibility that the ancients were describing a radically different “sun” and solar system.

### **The Polar Configuration**

Difficult as it must appear at first sight, it is possible to explain the scenario described in “The Gilgamesh Epic” from an astronomical standpoint. The solution is that the ancient sun-god formerly occupied a polar station with respect to the Earth. As David Talbott first deduced in the seminal work *The Saturn Myth*, a polar “sun” would not actually move during the daily cycle associated with the Earth’s revolution about its axis; rather, it would remain motionless in the “midst of heaven” exactly as reported by the Sumerian scribes. Were there a twin-peaked mountain in the immediate vicinity of the ancient sun-god, it would naturally preside over the latter’s “rising” and “setting.”

As it turns out, cultures everywhere remember a primeval period when the sun did not move. Thus, according to the Mayan *Popol Vuh*, the primeval “sun” stood fixed in the middle of the sky:

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<sup>113</sup> G. de Santillana & H. von Dechend, *Hamlet’s Mill* (Boston, 1969), p. 293, footnote 18.

<sup>114</sup> See the discussion in E. Cochrane, *The Many Faces of Venus* (Ames, 2001), pp. 69-82.

<sup>115</sup> J. Assmann, “Horizont,” in *LÄ* 2 (1977), col. 3.

“Like a man was the sun when it first presented itself...It showed itself when it was born and remained fixed in the sky like a mirror. Certainly it was not the same sun which we see, it is said in their old tales.”<sup>116</sup>

The Australian Aborigines from Adelaide tell of a previous World Age wherein the sun remained fixed in the sky: “The sun sits (or, is permanent), but rests or sleeps at night.”<sup>117</sup> The Wiimbaio, similarly, claim that “at one time the sun never moved.”<sup>118</sup>

Similar reports are to be found in South America. Thus, the Orinoco of the Amazonian rain forest recall a Golden Age associated with a “fixed” sun named Wanadi:

“In the highest sky was Wanadi...There was no separation between Sky and Earth. Wanadi is like a sun that never sets.”<sup>119</sup>

The Modocs of the Pacific Northwest tell of a time when the ancient sun-god resided in the middle of the sky. Witness the following tradition:

“When Kumush had done all that he could for mankind he went to the place where the sun rises. He traveled on Sun’s road till he came to the middle of the sky, and there he built his house.”<sup>120</sup>

In this Modoc tradition, as in ancient Mesopotamia, “the place where the sun rises” is explicitly identified as the “middle” of the sky, in striking contradiction to astronomical reality.

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<sup>116</sup> D. Goetz & S. Morley, *The Popol Vuh* (Norman, 1972), p. 188.

<sup>117</sup> J. Wyatt, “Some accounts of the manners and superstitions of the Adelaide and Encounter Bay Tribes” in *The Native Tribes of South Australia*, ed. by J. Woods (Adelaide, 1879), p. 166.

<sup>118</sup> A. Howitt, *The Native Tribes of the South-East Australia* (New York, 1904), p. 428.

<sup>119</sup> M. de Civrieux, *Watunna: An Orinoco Creation Cycle* (San Francisco, 1980), p. 21.

<sup>120</sup> J. Curtin, *Myths of the Modocs: Indian Legends of the Northwest* (New York, 1971), p. 383.



The concept of a polar sun was particularly prominent in ancient Egypt. In the Pyramid Texts, the oldest body of religious texts in the world, the ancient sun-god is described as accompanied by the circumpolar stars and “fixed in the middle of the sky.”<sup>121</sup>

Far from being confined to ancient Egypt, the idea that the Sun once resided at the Pole is also well attested in India. Thus, E.A.S. Butterworth cautions that the ancient sun-god must be distinguished from the current Sun:

“[The primeval sun] is not the natural sun of heaven, for it neither rises nor sets, but is, as it seems, ever in the zenith above the navel of the world. There are signs of an ambiguity between the pole star and the sun.”<sup>122</sup>

In support of this conclusion, Butterworth emphasized the following passage from the “Chandogya Upanishad”:

“Henceforth, after having risen in the zenith, he (the Sun) will no more rise or set. He will stand alone in the middle.”<sup>123</sup>

In the Rig Veda, an obscure passage describes the Sun as “a gay-hued stone set in the midst of heaven.”<sup>124</sup> Ananda Coomaraswamy, a leading scholar of Hindu symbolism, emphasized the relationship between the ancient Sun and the Pole in Vedic sources. With apparent disregard for the astronomical difficulties posed by this finding, Coomaraswamy remarked: “It must not be overlooked that the polar and solar symbolisms are almost inseparably combined in the Vedic tradition.”<sup>125</sup>

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<sup>121</sup> R. Rundle Clark, *Myth and Symbol in Ancient Egypt* (London, 1959), p. 59, translates a Coffin Text as follows: “The Great God lives, fixed in the middle of the sky upon his support.” See the discussion in E. Cochrane, *The Many Faces of Venus* (Ames, 2001), pp. 167-177.

<sup>122</sup> E. Butterworth, *The Tree at the Navel of the Earth* (Berlin, 1970), p. 124.

<sup>123</sup> *Ibid.*, p. 125 with reference to III:II:1-3.

<sup>124</sup> V:47:3 as quoted in R. Griffith, *Sacred Writings: The Rig Veda* (New York, 1992), p. 262.

<sup>125</sup> “Svayamatrnn:Janua Coeli,” in R. Lipsey ed., *Coomaraswamy: Selected Papers* (Princeton, 1977), p. 484.

Talbott's theory also provides a ready answer to the mystery of the celestial referent for the mountain of sunrise. According to the reconstruction offered by Talbott, the World Mountain has reference to a spectacular apparition associated with the polar Sun—specifically, a column of luminous material extending downward from the Sun towards the Earth, as in figure nine. (This particular image, it will be noted, could easily be paralleled by artworks from around the world.)



**Figure Nine**

A key to deciphering the multifaceted symbolism associated with the mountain of sunrise is the fact that a crescent once adorned the ancient sun-god.<sup>126</sup> The countless cylinder seals that depict a sun-disc set within the horns of an upturned crescent, according to Talbott's reconstruction, accurately reflect the appearance of the polar heavens in prehistoric times.

In ancient Mesopotamia, the crescent in question was identified with the god Sin. A prominent symbol of Sin, attested already on pictographic clay tablets recovered from Uruk IV (see figure ten)<sup>127</sup>, shows a crescent set atop a pillar-like standard. This symbol is best understood as a stylized version of the mountain of sunrise. Simply put: It was Sin's crescent at the top of the polar column that formed the twin-peaks of the mountain of sunrise. Thus it is that the sun-disc is frequently set within the "horns" of such standards on early cylinder seals.

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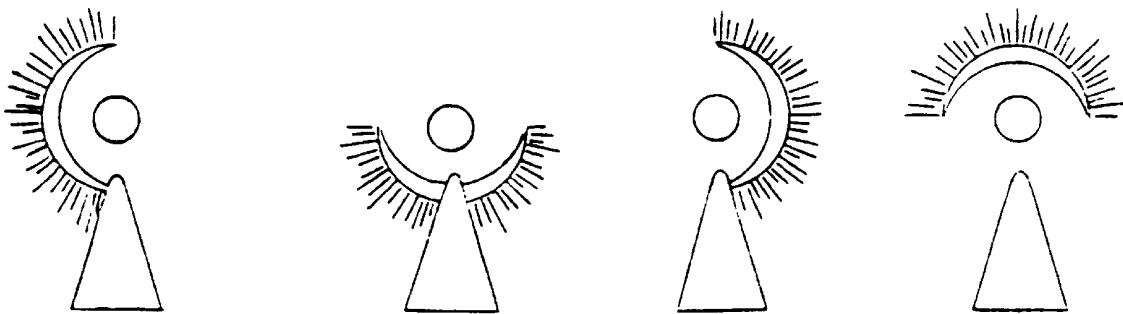
<sup>126</sup> See the discussion in D. Talbott, "From Myth to a Physical Model," *AEON* 3:3 (1993), pp. 25-26.

<sup>127</sup> E. van Buren, *op. cit.*, p. 64.



**Figure Ten**

An investigation of the crescent's unique role in the daily cycle of the ancient sun-god provides compelling support for Talbott's model. Given the polar alignment of the various planetary bodies, as the Earth rotated about its axis the crescent appeared to revolve around the sun-god. It was the revolution of Sin's crescent that provided the visual imagery for the daily cycle during this particular historical period. The most prominent phase saw the crescent grow brilliant when reaching an upturned position beneath the Sun (figure 11:2). This was the "day" of the ancient Sumerians. "Night" was signaled when the crescent reached its uppermost position, as in figure 11:4. At this time the crescent dimmed substantially together with the rest of the polar configuration, presumably because of the brilliance of the current Sun.



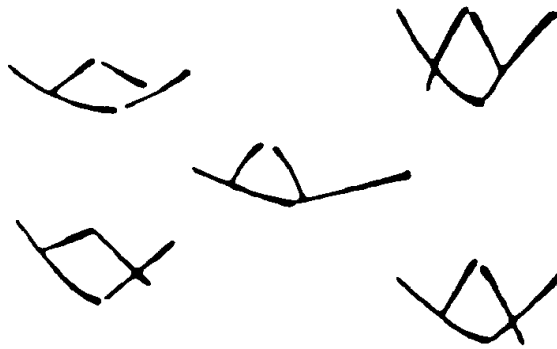
**Figure Eleven**

Talbott's reconstruction of the daily cycle associated with the ancient sun-god was developed by analyzing the earliest Egyptian imagery of the solar cycle. At this point it

is instructive to see how Talbott's model accords with the evidence from ancient Mesopotamia.

In the earliest Sumerian script the concept “day” or “sun” was determined by the pictograph depicted in figure twelve, transcribed UD. Given the fact that most early pictographs are known to have had an objective reference in the natural world, it is usually a fairly easy matter to determine the natural object depicted. Yet with regard to this particular sign scholars are divided over whether it originally had reference to the rising sun or the waxing moon! Karl Jaritz, in his compendium of Sumerian pictographs, offered the following commentary:

“The pictograph doubtless has reference to the sun rising—between hills (?)—hardly, however, the waxing crescent [as proposed by Deimel in SL II: 722] (because of the meanings), hence also the root meaning ‘sun, day, bright light, white’. The semasiological way to the storm is not recognizable.”<sup>128</sup>



**Figure Twelve**

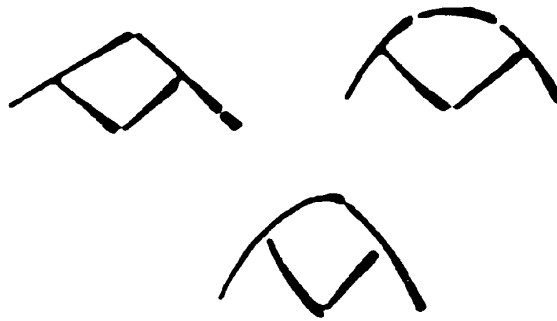
Talbott's model allows us to resolve the controversy over the original celestial referent of the UD-sign. The seemingly contradictory interpretations offered by Jaritz and Deimel can both be viewed as essentially valid. The upturned form beneath the orb does indeed

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<sup>128</sup> K. Jaritz, *Schriftarchaeologie der altmesopotamischen Kultur* (Graz, 1967), p. 116. “Das Ub. ist zweifellos die—zwischen Hügeln (?)—aufgehende Sonne, kaum (wegen der Bedeutungen) hingegen die wachsende Mondsichel [as proposed by Deimel in SL II: 722], daher auch die Gb. ‘Sonne, Tag, helle licht weiS’. Der semasiologische Weg zu Sturm ist nicht erkennbar.” Translation courtesy of Rens van der Sluijs.

represent the twin-peaked mountain of sunrise, as per Jaritz. That said, the same form also represents the waxing “Moon,” as per Deimel, for it was the crescent of Sin that formed the mountain’s two upturned peaks!

Additional support for Talbott’s model is provided by the Sumerian pictograph for “night”—transcribed sig (see figure thirteen). The pictograph in question shows an orb set within an inverted crescent, much as we would expect if the polar configuration was the original source for the image.



**Figure Thirteen**

The intimate association between the ancient sun-god and Sin’s crescent also allows us to understand the otherwise peculiar fact that the UD-sign figures prominently in the spelling of Sin’s name: UD.SAR. A leading scholar offered the following commentary on this strange state of affairs:

“Typical for the moon is its crescent form, both in iconography and in the texts. The latter can be shown by studying the various meanings of the sign combination UD.SAR, often transliterated as U<sub>4</sub>.SAR, or u<sub>4</sub>.s/akar. The meaning of these signs can be explained as ‘(day)-light’ and ‘growing’, perhaps an apt way of describing the crescent of the moon.”<sup>129</sup>

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<sup>129</sup> M. Stol, “The Moon as seen by the Babylonians,” in D.J. Meijer ed., *Natural Phenomena, Their Meaning, Depiction, and Description in the Ancient Near East* (Amsterdam, 1992), p. 245.

Leaving aside the implausible suggestion that “growing (day)-light” is an apt way of describing the lunar crescent, one must wonder why the Sumerians chose to use the same pictographic sign—UD—to designate two supposedly distinct celestial bodies, the “sun” and the “moon.” After all, one could just as easily translate Sin’s name as “growing (sun)-light” since “day” and “sun” are equally valid readings of the UD sign. The logical basis for the curious overlap in terminology, according to the theory defended here, stems from the fact that the very crescent that comprised Sin’s most fundamental attribute actually adorned the ancient sun-god, the illumination of which signaled the beginning of the Sumerian “day.”

A similar pattern is recognizable in the sacred terminology attached to Sin’s temples. How else are we to explain the temple-names u<sub>4</sub>-è-zu and u<sub>4</sub>-gim-zal-le, both translatable as “shining as the bright Daylight”?<sup>130</sup>

### **The Gates of Heaven**

If scholars have been sorely vexed in their attempt to make sense of the mountain which presided over the sunrise *and* sunset, they have fared little better when it comes to understanding the “gates” of heaven. Thus, a familiar scene on Akkadian cylinder seals depicts the sun-god as appearing between celestial gates or doors (see figure fourteen).<sup>131</sup> Insofar as there are no visible landmarks in the immediate vicinity of the current Sun that would provide an objective reference for “gates/doors,” scholars have been inclined to view the solar “gates” as imaginary in nature. Witness the following disclaimer offered by Ward: “No class of cylinders better illustrates the poetic imagination of a primitive people than those which give us the representation of the Sun-god Shamash emerging from the gates of morning and rising over the Eastern mountains.”<sup>132</sup>

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<sup>130</sup> Translation from M. Widell, “Der Mondgott Sin in der altakkadischen Periode: Einige Bemerkungen über die Erwähnungen in den Schriftlichen Quellen und die Darstellungen in der Glyptik,” *JAC* (1999), p. 127.

<sup>131</sup> Adapted from W. Ward, *The Seal Cylinders of Western Asia* (Washington, 1910), p. 89.

<sup>132</sup> *Ibid.*, p. 87.



**Figure Fourteen**

A famous passage in “The Gilgamesh Epic” places the solar gates in the immediate vicinity of the twin-peaked mountain of sunrise:

“The name of the mountain, Maš[u is its name]. When he (Gilgamesh) arri[ved] at Mt. Mašu, which daily observes the risi[ng sun and setting sun], whose tops, the firmament, r[eaches], whose foundations below reach the underworld. Scorpion-men guard its gate, whose awesomeness is magnificent, whose gaze is death. Their fearsome sheen covers the mountain-range. At sunrise and sunset they observe the Sun.”<sup>133</sup>

A. Leo Oppenheim, in his commentary on this passage, emphasized the incongruity occasioned by the gate’s association with both sunrise *and* sunset:

“The most elaborate description of the sun’s gate comes from the ninth tablet (ii 1-8) of the Gilgameš Epic. There the sun is said to enter and leave heaven every day through a mountain called Mašu that reaches up to *šupuk šame* and down to the netherworld...The use of the same gate for the rising and setting of the sun is difficult to understand, especially because the gate is said to be at the head of a long tunnel.”<sup>134</sup>

<sup>133</sup> W. Horowitz, *op. cit.*, p. 98.

<sup>134</sup> A. L. Oppenheim, “Man and Nature in Mesopotamian Civilization,” in C. Gillispie ed., *Dictionary of Scientific Biography*, Vol. 15 (New York, 1981), p. 639.

The Saturn theory provides a ready answer to this age-old mystery: The two “gates/doors” of the sun-god are simply the two peaks of the mountain of sunrise, understood here as the crescent of Sin. Thus as the ancient sun-god customarily appeared between the two peaks of the mountain of sunrise so, too, was it wont to appear between two gates. The cylinder seal depicted in figure fourteen captures this situation exactly: It shows the gates of the sun-god resting atop the two peaks of the mountain, as if the gates were merely extensions of the latter.

Indeed, it is safe to say that from whichever vantage point one approaches the symbolism attached to the solar gates the present solar system proves to be a very poor guide. Consider the following hymn in which the opening of the heavenly doors is related to the illumination of Sin: “Sin, as you become visible you open the doors of heaven.”<sup>135</sup> Now here is a passage that will never find a rational explanation in the familiar solar system. That said, the passage in question offers a perfectly coherent description of the crescent’s functional role in the polar configuration: As Sin’s crescent descended to a recumbent position beneath the ancient sun it grew brilliant, thereby signaling the opening of the doors/gates of heaven and the onset of “day.”

The fact that Sin’s crescentine “gate” is elsewhere likened to a mountain is also relevant here. Witness the following proverb: “The gate of Suen is a mountain great.”<sup>136</sup> While this proverb has no obvious logical rationale given the Moon’s current appearance or behavior, it is perfectly descriptive of the structural and functional relationship that formerly prevailed between Sin’s crescent, the twin-peaked mountain of sunrise, and the gate(s) of the ancient sun-god.

### **On Bulls and Crescents**

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<sup>135</sup> RA 12 (1915) 191:3 as quoted in W. Heimpel, “The Sun at Night and the Doors of Heaven,” *JCS* 38/2 (1986), p. 134.

<sup>136</sup> M. Hall, *op. cit.*, p. 516.



In *The Saturn Myth*, Talbott presented evidence that the spectacular apparition presented by the crescent set upon the World Pillar provided the celestial prototype for the “Bull of Heaven.”<sup>137</sup> The archaic Mesopotamian traditions offer a wealth of data from which to test this particular claim.

The placement of Sin’s crescent atop a pillar-like standard is archaic in nature, being attested already on pictographic clay tablets recovered from Uruk IV strata (see figure ten).<sup>138</sup> And Sin himself was invoked as the “bull of heaven” very early on as was documented earlier.<sup>139</sup>

Sin was not the only celestial body to be represented as a bull. The ancient sun-god was also assigned a bovine form. Recall the passage quoted earlier: “The valiant Utu, the bull who stands secure, who proudly displays his power, the father of the great city, the place where the sun rises.”<sup>140</sup> Another Sumerian text describes the sun-god as a “bright bull” in conjunction with his daily appearance from the base of heaven: “Bright bull, emerging from heaven’s base, bull, you...over the Ḫasur (trees).”<sup>141</sup> According to the reconstruction offered here, the sun-god was described as a “bright bull” precisely because it displayed luminous “horns” as it flared up each day.

The fact that the sun-god’s horns are expressly linked to the daily cycle offers additional support for the model defended here. Thus, one text makes reference to the “splendid horns like the sun coming forth from his sleeping chamber.”<sup>142</sup> Now here is a remarkable statement. The first anomaly to be noted is the obvious fact that the current sun does not typically display “horns” during its daily epiphany. The second anomaly is the explicit comparison drawn between the sun’s “horns” and the onset of “day.” Although this statement is meaningless with regard to the current Sun, it is perfectly descriptive of the daily cycle during the period dominated by the polar configuration. When Sin’s crescent

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<sup>137</sup> D. Talbott, *The Saturn Myth* (New York, 1980), pp. 265-269.

<sup>138</sup> *Ibid.*, p. 64.

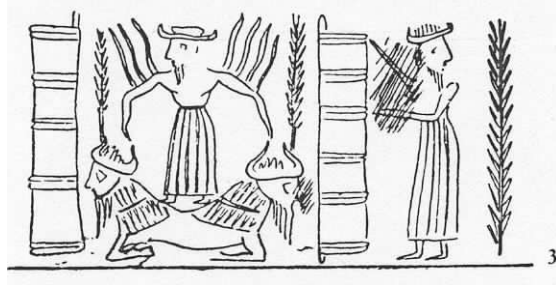
<sup>139</sup> E. van Buren, *Symbols of the Gods in Mesopotamian Art* (Rome, 1945), p. 61.

<sup>140</sup> Quoted from G. Leick, *A Dictionary of Ancient Near Eastern Mythology* (London, 1991), p. 161.

<sup>141</sup> W. Heimpel, *op. cit.*, p. 143.

<sup>142</sup> S. Kramer, *The Sacred Marriage Rite* (Bloomington, 1969), p. 41.

descended to a position below the ancient sun-god it provided the visual basis for Utu's "horns," the illumination of which signaled the onset of "day."



**Figure Fifteen**

Equally telling is the fact that the horns of a bull (or bulls) occasionally substituted for the twin-peaked mountain as the site of the sun-god's epiphany, much as would be expected given Talbott's polar model (see figure fifteen).<sup>143</sup> Of such scenes in Mesopotamian art, Van Buren writes:

"The Sun-god with rays stands as in the earlier representations, pressing down with a hand on each side, but here it is not upon mountains but on the heads of two recumbent bulls whose bodies merge into the other, for they are supposed to be lying back to back to support the rising Sun-god...Here the bulls were substituted for the mountains for they were themselves the embodiment of the mountains."<sup>144</sup>

Why on earth bulls would form the "embodiment of the mountains" is left unanswered by van Buren. Yet, while this juxtaposition of imagery is absurd in the natural world, it makes perfect sense given the visual appearance of the polar configuration, wherein the crescentine horns of the mountain of sunrise are synonymous with the luminous horns of the "Bull of Heaven." It is for this reason that the "Bull of Heaven" is intimately linked to the mountain (or place) of sunrise, as witnessed by the following hymn:

<sup>143</sup> Adapted from R. Boehmer, *Die entwicklung der Glyptik während der Akkad-Zeit* (Berlin, 1965), figure 397. See also figure 2:9 in P. Amiet, *op. cit.*, pp. 39-41.

<sup>144</sup> E. Douglas van Buren, "The Sun-God Rising," *Revue d'Assyriologie* 49 (1955), p. 13.

“The Bull of Heaven would have no food, at the horizon is its food! O maiden Inanna, it grazes where the sun rises.”<sup>145</sup>

The conceptualization of Sin’s crescent as a pair of bovine horns will explain much that is obscure about ancient symbolism. Hence we would understand why so-called “bull-men” support the sun-disc in ancient Mesopotamian art, a role elsewhere associated with Sin’s standard (see figure ten). Sin’s singular appearance within the polar configuration will also explain why crescentine horns were attached to ancient ziggurats, the latter representing terrestrial models of the World Mountain. A *balbale* to Sin captures the essence of the mythological imagery: “Shining calf...rampant wild bull, the ornament of the Ekur.”<sup>146</sup>

### On Cosmic Geography and Confusion

In order to understand the Sumerian literary references to the appearance and behavior of the most prominent celestial bodies it is necessary to have a clear understanding of the basic structure of the Sumerian cosmos. There is a wealth of evidence that the Sumerian cosmos was conceptualized as circular in nature.<sup>147</sup> Thus, the extent cosmos was commonly denoted as *kippat šamê*, “circle of heaven.”<sup>148</sup> The Akkadian term *kippat* signifies “totality, circumference of heaven/earth,” and derives from *kippatu*, “hoop.”<sup>149</sup> Piotr Steinkeller likewise emphasized the spherical nature of the Sumerian cosmos:

“Babylonian ideas about cosmic geography were by no means monolithic, being subject to change and inconsistency even during specific phases of Mesopotamian history. However, a basic understanding of how the cosmos is organized appears to have survived

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<sup>145</sup> A. George, *The Epic of Gilgamesh* (London, 1999), p. 171.

<sup>146</sup> J. Klein, “The Birth of a Crownprince in the Temple,” in J. Durand ed., *Rencontre assyriologique internationale* (Paris, 1986), p. 102.

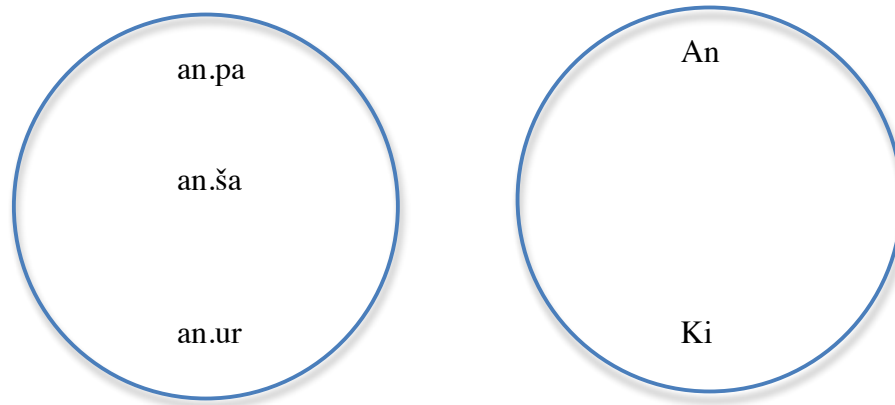
<sup>147</sup> See the discussion in A. Oppenheim, “Man and Nature in Mesopotamian Civilization,” in C. Gillispie ed., *Dictionary of Scientific Biography, Vol. 15* (New York, 1981), p. 656, note 48. W. Horowitz, *op. cit.*, p. 264 likewise concedes the point: “The visible heavens were thought to be circular in nature.”<sup>147</sup>

<sup>148</sup> W. Horowitz, *op. cit.*, p. 264.

<sup>149</sup> A. Oppenheim, *op. cit.*, p. 656.

unchanged throughout the entire span of the cuneiform civilization. Most importantly, the universe was thought to be spherical.”<sup>150</sup>

An illustration might help the reader to visualize the various components of the Sumerian cosmos. Figure 16 depicts two complementary maps of the Sumerian cosmos. The first circle represents the totality of “heaven,” known as An. The lower part of heaven was known as an.úr (Akk. *išid šamê*), while the upper part was known as an.pa (Akk. *elât šamê*). The middle or “heart” of heaven, as we have seen, was an.ša (Akk. *qereb šamê*). As Horowitz notes, the limits of the Sumerian cosmos are strictly defined by reference to this circle of An: “In many contexts, an.pa= *elât šamê* is paired with an.ur= *išid šamê*, indicating that these two parts of the sky together comprise the visible heavens.”<sup>151</sup>



**Figure Sixteen**

The second circle in figure sixteen shows the exact same cosmic area, although here the upper region is called an, “heaven” (alternately an-gal) and the lower region ki, “earth” (or ki-gal). Together, these two regions comprise the Sumerian cosmos.<sup>152</sup>

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<sup>150</sup> P. Steinkeller, “Of Stars and Men,” in W. Moran & A. Gianto eds., *Biblical and Oriental Essays in Memory of William L. Moran* (Rome, 2005), p. 18.

<sup>151</sup> W. Horowitz, *op. cit.*, p. 237.

<sup>152</sup> J. Hayes, *A Manual of Sumerian Grammar and Texts* (Malibu, 2000), p. 172 notes: “The expression an-ki is especially common in Sumerian religious texts of various kinds, and means essentially ‘the entire universe’.”

Now that we have before us a set of workable definitions—those generally agreed upon by the leading scholars in the field—it is possible to elucidate certain peculiar features of Sumerian cosmography that have hitherto proved intractable. We have already documented the fact that Sumerian descriptions of the ancient sun-god’s daily epiphany do not accord with astronomical reality insofar as they make the god come forth *and* set in the “midst” of heaven. But the fact is that virtually everything the Sumerian scribes said about the sun’s daily cycle contradicts the Sun’s current behavior. Witness the following passage from the Sumerian hymn “Inanna and Šukaletuda”:

“He raised his eyes to the lower land. He sees the high gods of the land where the sun rises. He raised his eyes to the upper land. He sees the high gods of the land where the sun sets.”<sup>153</sup>

It will be noted that this passage poses profound problems for the conventional position, for in what sense can the familiar Sun be said to “set” in the uppermost portion of heaven? The Saturn theory offers a ready solution to this problem: During the prehistoric period dominated by the polar configuration the “upper heaven” *was* the very region associated with the setting or “dimming” of the sun. Thus, as outlined earlier, the “setting” of the sun or “night” was signaled by the crescent reaching the uppermost position (an.pa) on its circumambulation around the ancient sun god (as in figure 11:4).

Properly understood, this peculiar report from “Inanna and Šukaletuda” constitutes decisive *prima facie* evidence in favor of a polar configuration as reconstructed by Talbott and myself. Should it be corroborated by testimony from some other distant culture, it has the chance to transform forever the conventional understanding of the solar system’s recent history. In fact, analogous reports will be found around the globe. Thus, among the indigenous cultures of South America one meets with the following tradition:

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<sup>153</sup> Quoted from J. Black, “The Sumerians in Their Landscape,” in T. Abusch, *Riches Hidden in Secret Places* (Winona Lake, 2002), p. 58. See also J. Black, G. Cunningham, J. Ebeling, E. Fluckiger-Hawker, E. Robson, J. Taylor, and G. Zolyomi, *The Electronic Text Corpus of Sumerian Literature* (<http://www-etcsl.orient.ox.ac.us/>) (Oxford, 1998), lines 101-102.

“The Surinamian Caribs or Kaliña conceived the sky as divided into two parts: an upper and a lower part, *undi* and *retîrî*. *Kapu* is the sky. The concept ‘east’ is rendered as *kapu undi* (lower or eastern side of the sky), ‘west’ as *kapu retîrî* (upper or western side of the sky).”<sup>154</sup>

It will be noticed that this is the very same situation presented by Sumerian cosmic geography: the phrase translated as “east” literally means “lower sky” while the phrase translated as “west” means “upper sky.” Much as the vestigial hind limbs of the whale provide compelling evidence of former structures and a long-lost world so, too, do the respective traditions of the Sumerians and Caribs testify to a “lost” solar system, one in which the ancient sun-god came to brilliance in the lower sky and faded in the uppermost portion of the sky.

### **East and West**

Sumerian hymns, as we have seen, often describe the ancient sun-god as “rising” from the an.úr or “base of heaven.” Modern scholars, in their attempt to assimilate the Sumerian language to current astronomical reality, routinely translate an.úr as “East” and an.pa as “West,” thereby distorting their original meaning and astronomical context. In this they are simply following the practice of the ancient scribes:

“The Sumerian words corresponding, respectively, to *elât* and *išid šamê* are used in certain Assyrian and Neo-Babylonian royal inscriptions to refer to East and West: ‘from sunrise [AN.ÚR] to sunset [AN.PA] wherever the sun shines.’”<sup>155</sup>

But there is a glaring contradiction here, overlooked entirely by Oppenheim and other commentators on Sumerian cosmography—namely, the fact that it is quite impossible for an.úr and an.pa to have originally signified the eastern or western horizons. Remember Oppenheim’s definitions, quoted above: the former phrase (an.úr) has reference to the

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<sup>154</sup> E. Magaña, “Tropical Tribal Astronomy: Ethnohistorical and Ethnographical Notes,” in V. Del Chamberlain et al eds., *Songs from the Sky* (College Park, 2005), p. 250.

<sup>155</sup> A. Oppenheim, *op. cit.*, p. 656.

lower portion or “base” of heaven, while the latter phrase has reference to the heaven’s uppermost portion. In the modern solar system, needless to say, the sun does not “set” or dim in the uppermost portion of heaven. So in what sense could an.pa possibly have reference to the West or place of “sunset?” Here, as elsewhere, the ancient Assyrian and Neo-Babylonian scribes were presumably struggling to assimilate the archaic Sumerian terminology relating to the sun-god’s daily cycle to their own experience, completely oblivious to the fact that the celestial landscape *and* sun had changed radically in the meantime.

## Heaven and Earth

A recurring epithet of the Sumerian sun-god describes him as “King of heaven and earth.”<sup>156</sup> Indeed, in an early temple hymn Utu is said to “fill” heaven and earth.<sup>157</sup>

Analogous conceptions are common to Akkadian astral lore as well. In addition to his role as “King of heaven and earth,” Shamash is also invoked as “Overseer of the Above and Below.”<sup>158</sup> The following hymn is typical in this regard: “Šamaš, King of Heaven and Earth, Director (*muš-te-šir*) of Above and Below.”<sup>159</sup> Here, as elsewhere, it is obvious that the two phrases serve as complementary couplets, heaven and earth being placed in apposition to above and below (*ellati* and *šaplati* respectively). But what does it mean that Shamash inhabits or rules heaven *and* earth?

The answer to this question is surprisingly simple: The ancient sun-god shone forth from the “midst” of heaven, as defined in figure sixteen. Yet the radiant splendor of the sun-god extended to the very limits of the Sumerian cosmos, including both the “heaven” above (an) and the “earth” below (ki). The following hymn describes this situation exactly:

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<sup>156</sup> A. Schollmeyer, *op. cit.*, p. 58.

<sup>157</sup> Å. Sjöberg & E. Bergmann, *The Collection of the Sumerian Temple Hymns* (Locust Valley, 1969), p. 45.

<sup>158</sup> *Ibid.*, p. 107.

<sup>159</sup> *Ibid.*, p. 98.

“Utu, great lord, wild bull...great king of heaven (above) and earth below...(who) illumine [sic] with splendor heaven and earth, Utu, beacon showing forth out of the inner land (var. in the heart of).”<sup>160</sup>

If Utu is the “King of heaven and earth,” Venus is invoked as the “great Queen of heaven and earth” (un-gal-an-ki-a).<sup>161</sup> Like the ancient sun-god, Venus is also described as illuminating heaven *and* earth. Recall again the passage from Iddin-Dagan’s marriage hymn, quoted earlier:

“I shall greet the holy torch who fills the heavens, the light, Inana, her who shines like the daylight...the respected one who fills heaven and earth with her huge brilliance.”<sup>162</sup>

Iddin-Dagan’s hymn is not describing Inanna/Venus in figurative fashion, as if the bright planet merely shines “like” the daylight. Rather, the point of reference is a spectacular apparition in the sky wherein the radiance of Venus actually filled heaven—understood here quite literally as the cosmic region spanning from heaven (an) to earth (ki).

The outstanding size of Venus is a point of emphasis throughout the Sumerian literary hymns although you would never know it from the translations offered by leading Sumerologists. As a case in point, consider the following passage from “An *adab* for Inana”:

“Grandiloquent Inana, you have no rival in heaven or on earth...Inana, lady of heaven and of the broad earth, powerful..., who radiates...,who is diffused wide over heaven and earth.”<sup>163</sup>

In this passage the adjective *maḥ*, signifying “large, great” is translated by the baroque and utterly misleading “grandiloquent.” The phrase translated as “diffused wide over

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<sup>160</sup> G. Castellino, *op. cit.*, p. 7.

<sup>161</sup> Å. Sjöberg & E. Bergmann, *op. cit.*, p. 29.

<sup>162</sup> Lines 4-8 in “A *šir*-namursaga to Ninsiana for Iddin-Dagan (Iddin-Dagan A),” ETCSL.

<sup>163</sup> Lines 12-27.



heaven and earth” is Sumerian idim-ta e<sub>3</sub>-a an uraš-a dagal bur<sub>2</sub>, wherein dagal attests to the vast extent of Venus’s radiance.<sup>164</sup> The verb bur<sub>2</sub>, meaning “to loosen, to spread out,”<sup>165</sup> underscores the fact that Venus’s “radiance” or form is outspread across heaven and earth. That said, what does it mean that Venus is “diffused wide over heaven and earth”?

A similar passage can be found in a prayer to Inanna/Venus from the Old Babylonian period. Thus, Hammurabi invokes the planet-goddess in the following terms: “nam-maḥ-zu an-ki-se<sub>3</sub> dalla e<sub>3</sub>-a, “(Inanna), your greatness shines forth to heaven and earth.”<sup>166</sup> According to Hermann Behrens, the phrase nam-maḥ has reference to the high rank of Inanna/Venus within the Babylonian pantheon: “nam-maḥ, ‘Erhabenheit’ ist der hohe Rang Inannas angesprochen.”<sup>167</sup> Yet Inanna’s high rank has little to do with such terminology. Rather, as is evident from the passage quoted from the *adab* to Inanna above, the original point of reference is Venus’s massive size and spectacularly expansive brilliance, radiating from heaven to earth; i.e., throughout the entire cosmos as commonly understood by the ancient Sumerians. In this sense the translation of J. Black et al is equally misleading: “Your greatness shines forth to heaven and earth.”<sup>168</sup>

Most telling, perhaps, is a passage from the hymn “Inanna and Ebih” that describes Venus as rivaling heaven *and* earth:

“My lady, on your acquiring the stature of heaven, maiden Inana, on your becoming as magnificent as the earth, on your coming forth like Utu the king and stretching your arms wide, on your walking in heaven and wearing fearsome terror, on your wearing daylight and brilliance on earth...”<sup>169</sup>

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<sup>164</sup> On this meaning of the term, see J. Halloran, *op. cit.*, p. 39. See also W. Horowitz, *op. cit.*, p. 264 where it is similarly translated.

<sup>165</sup> J. Halloran, *op. cit.*, p. 36.

<sup>166</sup> Line 7 in “A prayer to Inana for Hammu-rabi (Hammu-rabi F),” ETCSL. Behrens translates this passage as follows: “(Inanna) deine Erhabenheit ist hell erstrahlt in Himmel und auf Erden.”

<sup>167</sup> H. Behrens, *op. cit.*, p. 78.

<sup>168</sup> Line 7 in “A prayer to Inanna for Hammu-rabi (Hammu-rabi F),” ETCSL.

<sup>169</sup> Lines 10-14 from “Inana and Ebih,” ETCSL.

The passage translated “My lady, on your acquiring the status of heaven” is “nin-gu<sub>10</sub> an-gin<sub>7</sub> bulug<sub>3</sub>-ga<sub>2</sub>-za,” wherein bulug<sub>3</sub> is a verb signifying “to grow; to flourish; to grow big; to make grow.”<sup>170</sup> The original sense of this passage is that Inanna/Venus “grows” as big as heaven (An). This reading is confirmed by the following line, wherein Inanna/Venus is invoked in a similar fashion: “On your becoming as magnificent as the earth,” wherein maḥ, literally large, is translated as “magnificent.” Properly understood, such language has nothing to do with figures of speech, as per the translations of Black et al and the vast majority of Sumerologists. Rather, such language should be viewed as essentially realistic and concrete in nature: Venus’s massive size *was* being compared to heaven and earth itself (i.e., the circle of An as depicted in figure sixteen).

“The Exaltation of Inanna” invokes the planet-goddess as follows: “Be it known that you are as lofty as the heavens! Be it known that you are broad as the earth.”<sup>171</sup> Is this mere hyperbole, or a realistic description of a towering planet whose awe-inspiring splendor spanned the full range of the Sumerian cosmos, as depicted in figure seventeen?



**Figure Seventeen**

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<sup>170</sup> J. Halloran, *op. cit.*, p. 34.

<sup>171</sup> Lines 123-124, “The exaltation of Inana (Inana B),” ETCSL.

An old Babylonian hymn from the time of King Lipit places the following words in Inanna's mouth: "Heaven has he [Enlil] set on my head as a crown, Earth has he placed on my feet as sandals."<sup>172</sup> Such imagery makes perfect sense by reference to the cosmos depicted in figure seventeen, wherein Venus occupies the "heart" of heaven with an (heaven) overhead and ki (earth) below.

The key to understanding such language is the conjunction of planets involved in the polar configuration. In addition to shining from the same sector of the sky as the "sun"—the "midst" of heaven—Venus shared much the same "light" as Utu. As the ancient sun-god flared up during the daily cycle so, too, did Venus. Hence we would explain Venus's intimate but otherwise inexplicable association with "day" and "daylight" attested in various Sumerian hymns. Indeed, on more than one occasion Venus's light is described by the epithet U<sub>4</sub>, the very sign elsewhere transcribed as UD and signifying "sun" or "day." This is the case in "A Hymn to Inana as Ninegala," for example, wherein the expression U<sub>4</sub>-gal is translated "great light" by Jeremy Black.<sup>173</sup> Iddin-Dagan's marriage hymn employs the same epithet to describe the planet-goddess as she "fills" the sky: "In the sky at dusk the brilliant star, great brightness which fills the transparent sky."<sup>174</sup>

Properly understood, such language has nothing whatsoever to do with metaphor or poetic license. On the contrary it accurately describes the star-like Venus, a planet the likes of which has not been seen for millennia and is almost impossible to imagine nowadays. As a primary component in the polar configuration, the planet Venus played a fundamental role in the spectacular fireworks associated with the ancient "day." As the recumbent crescent adorning the disc of Utu flared up so, too, did the heaven-spanning rays of the star-planet Venus (see figure seventeen).

### **Venus and the Four Corners**

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<sup>172</sup> A. Falkenstein & W. von Soden, *Sumerische und Akkadische Hymnen und Gebete* (Zürich, 1953), p. 68. See also lines 10-11 in "A hymn to Inana (Inana F)," ETCSL.

<sup>173</sup> Line 1.

<sup>174</sup> F. Bruschweiler, *op. cit.*, p. 120.

A prominent concept in Sumerian cosmic geography was that of the four quarters of heaven. Indeed, the phrase came to denote the Sumerian cosmos itself and thus parallels the phrase an-ki.<sup>175</sup>

The planet Venus is mentioned in connection with the four corners of heaven on more than one occasion. Witness the following Sumerian hymn:

“Queen whose grandeur dominates the kur, who bears herself like An, is decked with splendor like Enlil, who, like her father, adorns the day and the night. Like Utu she leads in front with her glorious nature, who is unique because of her majesty in the four corners of the universe.”<sup>176</sup>

The phrase translated as four corners is ub-an-na. The reference is clearly to some specific region of heaven, one intimately associated with the planet Venus. Thus, in the hymn in-nin šà-gur<sub>4</sub>-ra Inanna’s torch is said to shine from the ub-an-na:

“Your divinity shines in the pure heavens like Nanna and Utu. Your torch lights up the corners of heaven, turning darkness into light...”<sup>177</sup>

The planet Venus is also associated with the “corner” of heaven in “The Duties and Powers of the Gods.” There the planet is described as follows: “to make her (Venus) burn from ‘Heaven’s Corner’ through the entire atmosphere (?)”<sup>178</sup>

How, then, are we to understand the phrase “four corners” of the universe from an astronomical standpoint? What does it mean that Inanna’s “torch” illuminates the four quarters? In the modern skies, the phrase has no obvious reference and thus it must be

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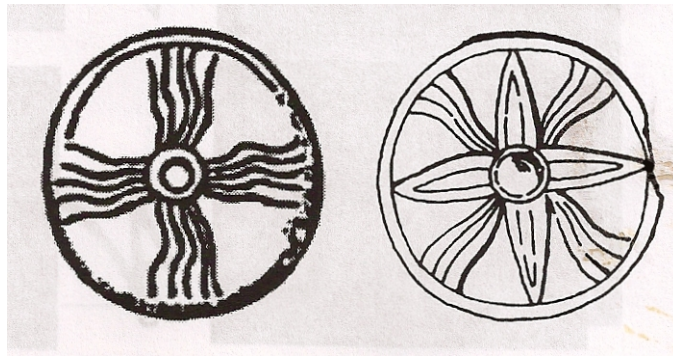
<sup>175</sup> J. Westenholz, “The King, the Emperor, and the Empire,” in S. Aro & R. Whiting eds., *The Heirs of Assyria* (Helsinki, 2000), p. 106 states: “The term ‘four quarters’ encompasses the known world.”

<sup>176</sup> F. Bruschweiler, *op. cit.*, p. 79 with reference to SKI VII 1-5.

<sup>177</sup> Lines 109-210, “A hymn to Inana (Inana C),” ETCSL. B. Meador, *Inanna: Lady of the Largest Heart* (Austin, 2000), p. 104 translates the last line as follows: “Your torch flames heaven’s four quarters spreads splendid light in the dark.”

<sup>178</sup> Quoted from W. Horowitz, *op. cit.*, p. 261. The phrase in question is an.ub.ta da.gan lil.da ba.tab.ba.

explained away as yet another example of the Mesopotamians' preference for figurative language. From the vantage point of the polar configuration, however, the phrase receives an obvious and perfectly logical explanation. Consider the image in figure eighteen: Here the disc of Utu/Shamash is seemingly divided into four sections by radiating streamers emanating from a central orb. The central orb, according to the reconstruction offered here, is to be identified with the planet Venus. It is our opinion that this cylinder seal accurately depicts a particular phase in the polar configuration's history. Terrestrial skywatchers interpreted the four radiating forms emanating from Venus as the "four corners" of heaven, four directions, or four winds, among other things. Statements to the effect that Venus's torch "flamed heaven's four quarters" thus testify to that planet's intimate association with the "midst" of heaven, for it was from there that the four streamers radiated outward, illuminating and quartering the Sumerian cosmos (to be understood literally as the region spanning from An to Ki, as depicted in figure 16).



**Figure Eighteen**

## **Conclusion**

In the present monograph, we have documented the fact that Sumerian literary descriptions of the most prominent celestial bodies often fail to accord with modern astronomical knowledge. It has also been established that leading scholars readily confess their inability to explain the astronomical imagery involved. There is a simple reason for the confusion that currently distinguishes the study of Sumerian cosmic geography: The sky was radically different in order and appearance in relatively recent

times, and therefore it follows that all attempts to interpret the ancient literary imagery by reference to the familiar celestial landscape are bound to fail.

The theory developed here offers a perfectly logical and straightforward interpretation of the Sumerian literary descriptions of Utu, Sin, and Inanna/Venus. This “literalist” position stands in dramatic contrast to that of mainstream scholarship, which must resort to “metaphor” and other literary devices in an attempt to explain Sumerian hymns. In reality, most modern “translations” of the Sumerian hymns describing the astral gods represent a strained attempt to *explain away* the unequivocal testimony of the ancient skywatchers. In their attempt to force-fit the ancient language to the familiar sky, modern scholars have made a mishmash of the Sumerian texts with the result that the true order of the solar system at the dawn of history has been distorted and thus largely obscured.

Our hypothetical reconstruction of the Sumerian cosmos has the additional advantage that it is supplemented and complemented at virtually every step by the testimony of ancient art. Thus, we have seen that literary references to Venus standing within Sin or standing together with Sin and Utu find exact parallels in scenes depicted on ancient cylinder seals—this despite the fact that Venus can never attain such positions in the current skies. This striking correspondence between Mesopotamian literature and art cannot be mere coincidence. Properly understood, the evidence of Mesopotamian literature and art testifies to a radical reordering of the solar system in relatively recent times.