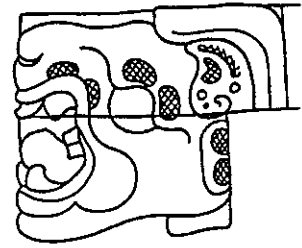


Copán Mosaics Project Copán Note* 101

September, 1991
Austin, Texas



Venus and the Monuments of Smoke-Imix-God K and others in the Great Plaza

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Smoke-Imix-God K

During summer 1991, conversations with Barbara Fash led me to investigate the role Venus played in the timing of history at Copán. The adventure began with Temple 22A and yielded far more than I or anyone else expected. Perhaps the most amazing of these Venus relationships were used by Smoke-Imix-God K in the outlying monuments that define a sacred circuit around the valley of Copán. The monuments that participate in this k'atun circuit (Fig. 1) include Stelae 2 and 3 in the acropolis area, Stelae 10, 12, 13, 19, and 23 on the periphery of the valley, and Stela 5,

which was added to the pattern fifteen years after the first monument.

The role the outlyers play in the archaeoastronomy of Copán has long been known. H. J. Spinden used the alignment of Stelae 10 and 12 to support his correlation and his assertion that Altar Q recorded an astronomical conference assembled to adjust the lunar calendar. Although this interpretation is still popular with local guides, epigraphers have long dismissed Spinden's argument partly because it depended on his correlation, and because much better interpretations have since arisen (Carlson 1977). The alignment of Stelae 10 and 12 and its association with the planting season remains valid, however, for it does not depend on

*The Copán Notes are a running series of commentaries and small reports deriving from the multidisciplinary research project designed to conserve, document, and analyze the architectural and sculpture monuments of the Classic Maya ruins of Copán. Originally undertaken by William L. Fash and known as the Copán Mosaics Project, this endeavor has since June 1988 formed part of the larger Copán Acropolis Project, funded and carried out by the Instituto Hondureño de Antropología e Historia through financing from the U.S. Agency for International Development. Funding for the Copán Mosaics Project, the Copán Hieroglyphic Stairway Project, and supplementary funding for the Copán Acropolis Project has been provided by the National Science Foundation (1986-1988), the National Geographic Society (1986-1989), the National Endowment for the Humanities (1986-1987), the Center for Field Research (EARTHWATCH; 1985-1988), the Wenner-Gren Foundation for Anthropological Research (1987; 1989), the H.J. Heinz Charitable Fund (1986), Council for International Exchange of Scholars (1987), and Northern Illinois University (1985-1989). The Copán Acropolis Project, as a dependency of the Instituto Hondureño de Antropología e Historia, is subject to the rules of that body. Regarding any re-use or subsequent distribution of these materials presented in the Copán Notes or an project publications, those rules stipulate that any publication using materials (either written or in the form of line drawings or photographs) derived from the Copán Acropolis Project must receive prior written consent from the Project Director (William Fash) and the Director of the Instituto (José María Casco). These notes are published by the Copán Acropolis Archaeological Project and the Instituto Hondureño de Antropología e Historia.

the correlation used but on the actual position of the monuments. First elucidated by Sylvanus G. Morley (1920:133, 1925), this alignment and its function has been discussed with great precision by Aveni (1977). From the position of Stela 12, the sun sets over Stela 10 on April 12 and September 1. As Morley first noted, the first date is a good approximation for the beginning of the planting season. Morley's (1920:133) consulting astronomer also noted that both dates fall half way between the equinoxes and the zenith passage of the sun at Copán. Aveni (1977, 1991) also asserted that this base line influenced the placement and orientation of Temple 22 and other buildings on the south end of the Acropolis. I think he is right, although the alignment may be far older than any of us supposed. I suspect it may have

been associated with earlier phases of the south area of the acropolis.

The dates of the outlyers and their relationship to Venus also support the idea that this Stelae 10-12 alignment was a base for the entire program of monuments (Fig. 1). The date of Stela 12 has never been properly deciphered, although Morley (1920:130-135) argued it was 9.10.15.0.0. David Stuart and Barbara Fash (personal communication, 1987) first demonstrated to me that much of its text repeats exactly on Stela 2, a monument located on the southern end of the Ballcourt. They, like Morley, noted that the initial series dates on both monuments are the same. If the surviving elements of both inscriptions are combined to give the parameters of a reading, they yield 9.10.???.0 6 Ahaw 8 Mol G9 0D, 5D or G8 and 3D. The best reconstruction using these parameters is

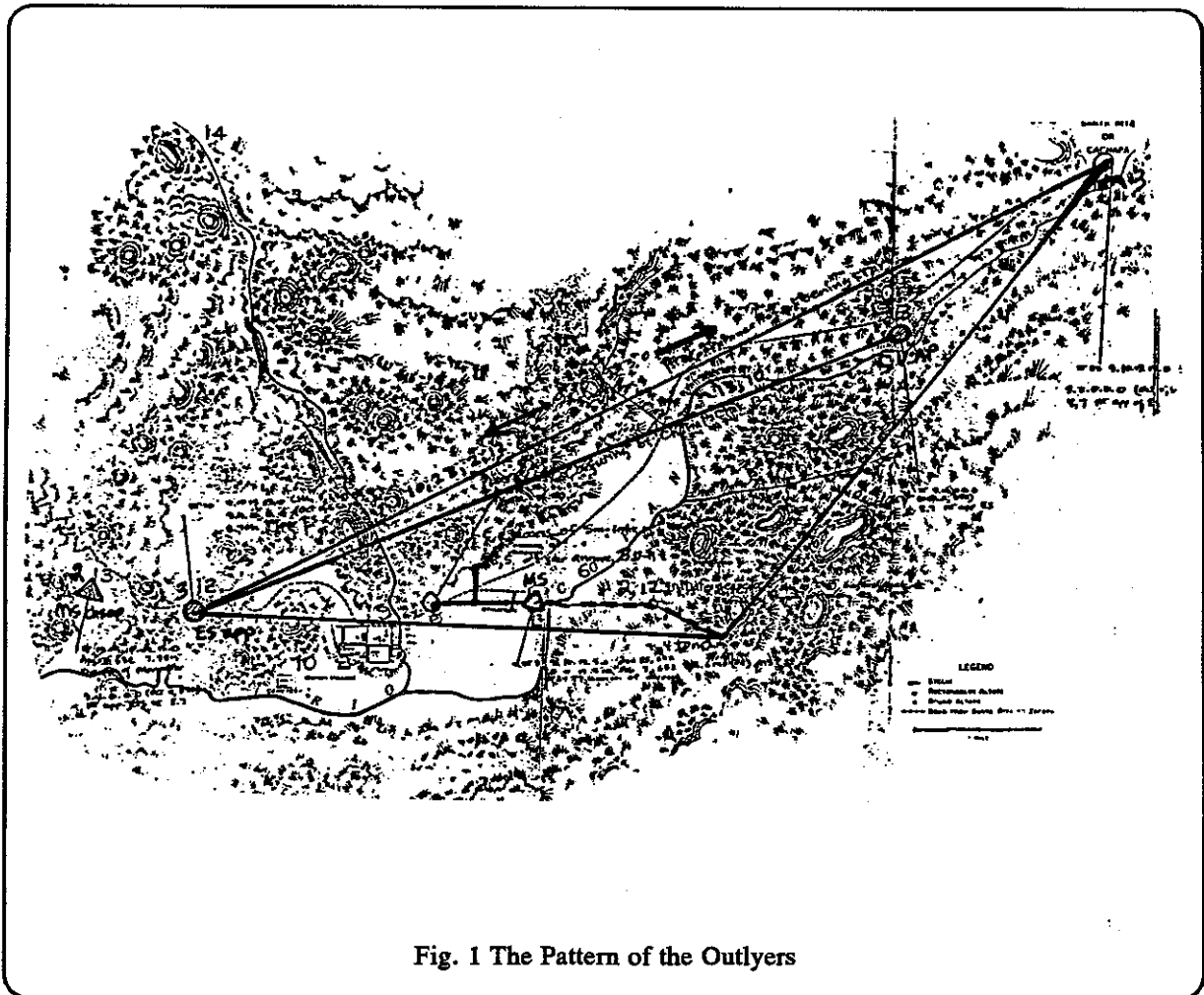


Fig. 1 The Pattern of the Outlyers

9.10.15.13.0 6 Ahaw 8 Mol G8 with a moon age of 28.33 days. This corresponds to July 24, 648 (Julian). To my knowledge, no significant astronomical phenomena occurred on that day, but I think it is safe to assume that it was the day on which one end of the base alignment was marked, although Stela 10 would not be erected until four years later.

The next part of the complex to be erected was Stela 3, which celebrates the dates 9.10.19.5.0, 9.10.19.5.10, and 9.11.0.0.0 (January 25, 652, February 7, 652, and October 14, 652, respectively). The inscriptions on both sides of Stela 3 refer to vision rites involving Smoke-Imix-God K's predecessor, Butz'-Chan, but the second of these dates is also an important Venus station. As I noted in *Copán Notes 66, 99-100*, the founding dates on Altar Q fell on the maximum altitude and maximum elongation of the Morningstar. Smoke-Imix-God K's accession on 9.9.14.17.5, or February 5, 628, happened to be only ten days before and .3419 from maximum elongation of the Morningstar. His choice of the elongation of the

Morningstar associated him directly with the most critical dates for the founding of Copán's dynasty.

The middle date on Stela 3 also fell on maximum elongation of the Morningstar (this one was an exact elongation), but just as importantly, it was exactly twenty-four haabs or three runs (plus five days) of the five-page Venus cycle recorded in the Dresden Codex later (Fig. 2). Thus, Stela 3, placed at the center of the north courts and near Stela 2, links to the accession of Smoke-Imix-God K, which by the way is recorded on the west face of Stela 2, and to the founding of the dynasty. But most of all, it marks the beginning of the Venus circuit recorded on these monuments.

The next date in the sequence occurs on Stela 10, the other end of the base line established with Stela 12, and on Stela 23 at Santa Rita. Morley (1920:149) proposed a date of 9.10.18.12.8 for the initial series of Stela 23, but I think the remnants that survive are more likely to have recorded 9.10.19.13.0 3 Ahaw 8 Yaxk'in, the same date as Stela 10. There is no Venus association that I can find for this date, but it is exactly four tuns after the Stela 12 date. The three monu-

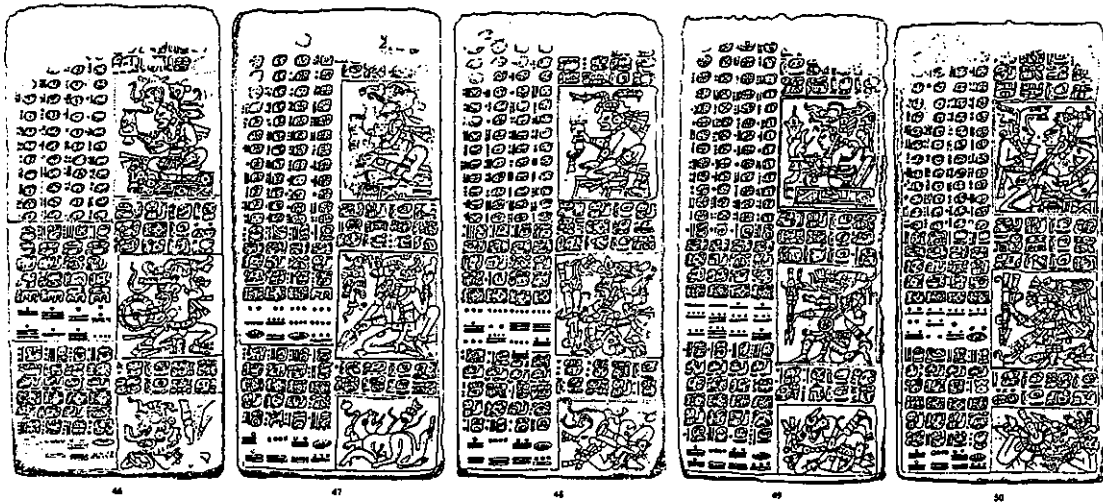


Fig. 2 The Venus pages from the Dresden Codex

ments, thus, form a huge triangle binding together the outer limits of the circuit.

The next station in the Venus circuit was recorded on Stela 19, which stands in a small valley to the west of Stela 10. It cannot be seen from the Acropolis, but it can be from Stela 10, which is visible from the Acropolis. The initial series date is 9.10.19.15.0, or August 12, 682, a day with two significances. It was first of all close to a zenith passage of the sun. Morley states the latitude of Copán as 1451' and the sun was at a declination of 1449' at noon on August 10. On August 12, Venus appeared briefly 7.7815 above the horizon. It was probably the last night the planet was visible or perhaps even its day of disappearance.

The next date recorded in the circuit was the heliacal rising of the Eveningstar, which fell coincidentally on the end of the k'atun. This coincidence was also recorded prominently in the inscriptions of Pakal at Palenque so I am sure that it was equally important and deliberate at Copán. The k'atun ending is recorded on every stela in the circuit except Stela 12, the earliest marker. The end of eleven k'atuns is recorded on Stelae 2 and 3 in the acropolis area, on Stela 10 at the west end of the base line, and on Stelae 19, 13, and 23.

Stela 13, located at the east end of the valley, recorded only the 9.11.0.0.0 k'atun ending, and most interestingly, it shares part of its text with Stela 10. Both monuments record *bah ch'am*, "he went grasping," Chanal Chak Bay Chan, a vision serpent that also appears in the inscriptions of Yaxchilan. Thus the program links Stela 2 with Stela 12 by repeating common dates and texts. It links Stela 12 to 10 by the alignment, Stela 10 to 13 by shared texts, and Stela 10 to 23 by shared dates. I wondered why the principal record of the appearance of the Eveningstar was placed at the east end of the valley, while the disappearance of the Morningstar was at the west end, until I realized that the eastern end is a better place to observe an event in the western sky and vice versa. Stela 23 associated its dates, 9.10.19.15.0 and 9.11.0.0.0,

with 4 Ahaw 8 Kumk'u and the creation of the universe.

As I was in the process of discovering the relationship between these monuments and their association with the Venus period, its elongation as Morningstar, and the heliacal rising of the Eveningstar, I wondered how they would have been used in ancient times. I had read Barbara Tedlock's (1982) description of the Momostenango ritual precinct, but it was not until August 1991 that I had an opportunity to observe the rituals of Waxaqib Batz' for myself. In the late afternoon, I visited Paklom and the "Six-Place" to see the *chuchkahaw* burning copal, candles, and other sacred substances. Then I passed the night high on a mountain at "Nine-Place." As we drove down to the center of town in the early morning darkness, we could see each of the sacred locations on distant mountains around the valley by the burning copal stoked by praying *chuchkahaw*. They were easily and clearly visible from each other, the center, the altars, and sacred places of Momostenango. In the Copán Valley, not all of the locations are visible at once, but most are visible from one of the others or from intermediate stations between, especially at night with fires burning. The alignment between Stela 10 and 12 may have allowed careful observers to pinpoint two particular days in the year, but I suspect these stelae along with the carved boulders called Sapos played important roles in a ritual circuit very much like the ones used by modern K'iche' throughout the Highland Guatemala.

The Great Plaza

18-Rabbit continued the preoccupation of Smoke-Imix-God K when he began his own monument series. The first stela he erected, Stela J, has a retrospective date, 9.0.18.0.0 1 Ahaw 3 Mol,¹ which was calculated to have been a heliacal rising of the Morningstar. This date is used as the basis of long casts into the distant past which played a significant role in setting the mythological agenda of 18-Rabbit's monuments (cf. *Copán Note 88*).

1. On 9.0.18.0.0, Venus was 10.03 from the sun after an inferior conjunction. This might be taken as a first appearance of Morningstar. Interestingly, the use of the 584 day average for Venus gives a calculation of four days after the conjunction. Since the date is retrospective, the scribes may have calculated this Venus relationship for the date. Since the calendar round is 1 Ahaw 3 Mol, and since 1 Ahaw is a pivotal date for the Venus calendar, the date may have been designed to be a Venus date.

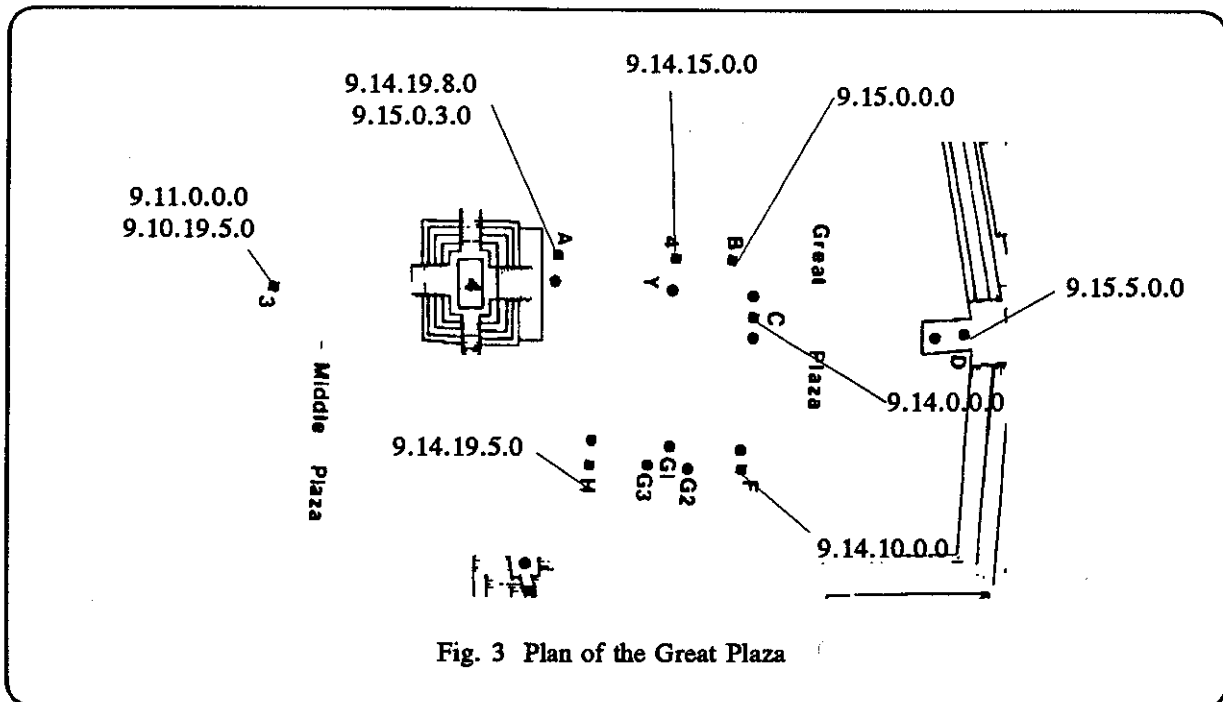


Fig. 3 Plan of the Great Plaza

Elizabeth Newsome (1991) just completed a detailed study of monumental programming in the Great Plaza. Although she dealt admirably with the iconography of these monuments and some of the Venus associations, neither she nor I knew at the time of the extraordinary role of Venus in Copán's history. We can now put her work on the imagery and ritual of the k'atun circuit in the Great Plaza into this larger context.

From Lounsbury's work on the Temple of Inscriptions at Palenque, I have long known of the occurrence of a heliacal rising of the Eveningstar on 9.11.0.0.0. Lounsbury, however, noted in his work on the k'atun-ending passages at Palenque, that any Venus phenomenon that occurs on one date will recur three k'atuns later.² The third repetition was too far off to be very accurate, but we have evidence of the application of corrections at Copán. In any case, since 9.11.0.0.0 was a heliacal rising of the Eveningstar, Lounsbury presumed 9.14.0.0.0 was also. He looked for Venus associations with this date and found them on Copán Stelae 16 and C.

Stela C, dated at 9.14.0.0.0, is not only the pivot of 18-Rabbit's new program (Fig. 3), but it is also the symmetrical repetition of Stela 3, the pivot of Smoke-Imix-God K's program. They are both double-sided with Stela 3 oriented to the north-south axis and Stela C to the east-west. Furthermore, I earlier noted the distance number that connects the 9.14.0.0.0 date to an earlier date by 11.14.5.1.0 to reach 10.19.14.17.0 6 Ahaw 18 K'ayab. This distance number is twenty-eight days longer than an even number of 584-day Venus rounds. This is close enough to be taken as a corrected calculation.

Stelae F and 4, the next additions to the program, date to 9.14.10.0.0 and 9.14.15.0.0. These dates do not have Venus associations. However, Stela F depicts 18-Rabbit in the guise of the same Venus god as on the Venus Stair in the East Court (Grube and Schele 1988). The next two monuments, Stelae H and A have dates exactly four k'atuns after the long count on the east side of Stela 3—9.10.19.5.0 and 9.14.19.5.0. Interestingly, both dates refer to rituals in which Butz'-Chan was recalled. Grube (personal communication,

2. Three k'atuns are equal to thirty-seven Venus cycles less eight days. Two dates separated by this span will be close, but the addition of a second three k'atun span is too far off. Thus, 9.11.0.0.0 and 9.14.0.0.0 are good Venus dates; but 9.17.0.0.0 is sixteen days off.

1990) has even read one of the events as *susah u bakil*, "were cut, his bones," and suggested that this was a reinterment in which bone relics were taken.

Stela C closes the k'atun program with the date 9.15.0.0.0. Because Palenque records 9.9.0.0.0 and 9.12.0.0.0 as maximum elongations of the Eveningstar (Closs 1979), I anticipated that 9.15.0.0.0 should also be near one. Interestingly, 9.9.0.0.0 proved to be the example that was farthest off. On 9.15.0.0.0 (August 28, 731), Venus was 46.2962 from the sun and only six days and .1091 before exact elongation.

18-Rabbit also used the three-k'atun repetition of this date. He recorded the 9.12.0.0.0 date on the west inscription strip of the last version of the ballcourt, which he dedicated on 9.15.6.8.13, an elongation of the Eveningstar. Yax-Pak continued the tradition. He celebrated the three-k'atun repetition of the 9.14.0.0.0 Venus event in Temple 11's inscriptions by featuring the actual heliacal rising on 9.17.0.0.16 (See *Copán Note 100* for a discussion of the association of this date to another Venus series). And finally, the 1-k'atun anniversary of his accession, recorded on Stela 8, a monument he erected in the modern village area, fell on an elongation of the Morningstar.

Summary

More than any other site I have studied, Venus played a major role in timing ritual at Copán. The lineage founding events were set to correspond to the maximum altitude and elongation of the Morningstar. Smoke-Imix-God K acceded on the elongation of the Morningstar. He composed the out-lyer program to cycle from the anniversary of that elongation (three Venus-haab cycles) through the disappearance of the Morningstar to the heliacal rising of the Eveningstar on the end of k'atun 11.

18-Rabbit based his own program on the three-k'atun repetition of the heliacal rising of the Eveningstar on 9.14.0.0.0 and continued through to a maximum elongation of the Eveningstar one k'atun later. He also attached himself to the three-k'atun repetition of this elongation on 9.12.0.0.0 by featuring that date in his ballcourt, which was dedicated on a maximum elongation of the Eveningstar. Yax-Pak tied Temple 11 into the pat-

tern by featuring the 9.17.0.0.16 repetition of the Stela C heliacal rising. Copán was quite literally timed by the movements of Venus.

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