

The Mayan Calendar Explained

by Bruce Scofield

The "Mayan Calendar" is the popular name for a complex organization of time, number, astronomy, and astrology created and employed by the Maya (and probably some of their predecessors) in ancient Mesoamerica (central and southern Mexico and northern Central America). Archaeologists and historians of Mesoamerican civilization generally refer to this calendar as the Long Count. The Long Count has three elements that are shared with the Western Christian calendar; a base date, a means of grouping large periods of time, and an astrological component.

The base date of the Christian calendar is the year that Jesus of Nazareth was supposedly born. Everything in Western history is dated relative to that point, either before (B.C.) or after (A.D.). In the Western Christian calendar, time is grouped into years, decades, centuries, and millennia. The basic idea of this calendar is to organize time in multiples of the number 10. In the Christian calendar, time is linear. There's a starting point, 0, and straight lines move forward and backward from that point. Significance occurs when a multiple of ten is crossed, like the year 2000.

The base date of the Long Count is August 11, 3114 B.C. In the Long Count time periods are grouped into multiples of the numbers 13 and 20, numbers that Westerners less familiar with. In the Long Count, time is cyclic, and there are a finite number of days that must occur after the base date before a new cycle commences.

The length of the Long Count is exactly 1,872,000 days, or 5,125.37 years. We know this to be so because we know the lengths of the fundamental units of Mayan time. For example, the katun is a Mayan time period of 7,200 days. Interestingly, this figure is very close (within 54 days) to the average synodic cycle of Jupiter and Saturn. Perhaps the katun is an attempt to represent that cycle as a mathematical ideal - similar to the way Western astrologers use 360 degrees to measure the Sun's motion during a 365.24-day year. A katun of 7,200 days was considered a major time period, a generation marker of sorts. We know that there are 260 katuns in the Long Count, which, when multiplied by the number of days in a katun, gives us 1,872,000 days again. We also know about the baktun, a period of 144,000 days, and we know that there are 13 baktuns in the Long Count.

While the Western Christian calendar is based on the year that Jesus was allegedly born, it contains a week of 7 days that are named for planets. This seven-day planetary week is actually an astrological remnant of pre-Christian culture, most probably that of the Near East. Embedded within the week are the planetary hours, divisions of the day (time itself) that are said to have an astrological quality. The hour that begins each day at dawn gives its name to that day. At various times in the history of Western astrology, the planetary hours were used in the search for propitious times, to read the destiny of a newborn, and to evaluate the nature of the new year itself. The planetary hours are a remnant of a kind of astrology that uses blocks of time as "signs." Nearly all of Western astrology since the Greeks uses blocks of space which hold symbolic meaning, i.e. signs, houses, and aspects.

The Mesoamerican astrological tradition is built on a structure of blocks of time, which function like the spatial signs of Western astrology. The Long Count's divisions into 260 katuns and 13 baktuns are amounts of time that have an astrological value, though much of the original understanding has been lost or destroyed. What we do know is that the cornerstone of Mesoamerican astrology is the 260-day astrological calendar, the tzolkin, which was used for

personality description and for choosing the best days for activities. The Long Count, with its 260 katuns, appears to be simply a large-scale, mundane version of the 260-day astrological count.

On a much vaster scale, the Long Count measures the precession of the equinoxes, a cycle of approximately 25,695 years. One fifth of the average precessional cycle is 5,139 years, very close to the 5,125-year Long Count. In Mesoamerican myth, there are five great ages, each one ending with a collapse of some sort. According to some Mesoamerican myths, we are living today in the last years of the fifth and last age, the closure of a cycle of five segments of the precession cycle. Given the simple technology available to them, the ancient Mesoamerican astrologer/astronomers did some amazing work. Not only did they estimate the length of the precession cycle, but they also anchored it with a remarkable alignment, the meeting of the winter solstice with the plane of the Milky Way, the equator-like plane that runs through the center of our galaxy.

It now appears that the Maya, or their predecessors, calculated in advance when the winter solstice point would pass through the dark band in the Milky Way, a place very important in their mythology and a place located on the plane of the galaxy. At least 2,000 years ago they calculated this date to be December 21, 2012. With this as the end date, they then strung the Long Count backwards, arriving at its starting point in 3114 B.C. The so-called "end of the Mayan calendar" is both the terminal point of the current fifth part of the precessional cycle and the terminal point of the entire 25,695-year cycle itself.