

# Ushtogai Square

<https://sacred.numbersciences.org/2023/11/25/utility-of-the-ushtogai-square-to-count-the-nodal-period/>

## Utility of the Ushtogai Square to count the Nodal Period

Using Google Earth, a large landform was found in Kazakhstan (Dmitriy Dey, 2007); a square 940 feet across with diagonals, made of evenly spaced mounds. We will demonstrate how the square could have counted the lunar nodal period of 6800 days (18.617 solar years).



## Counting the Lunar Nodal Period

One can see the side length of the square contains seventeen (17) mounds, with 16 even distances between the mounds. Were one to count each side as 17 mounds, then four times 17 gives 68 which reminds us of the 6800 days in the moon's nodal period of 18.617 years. If 17 can be multiplied by 100, then one could count the nodal period in days, and to do this one notices that the diagonals have one central space, around which each of four arms are 10 mounds long.



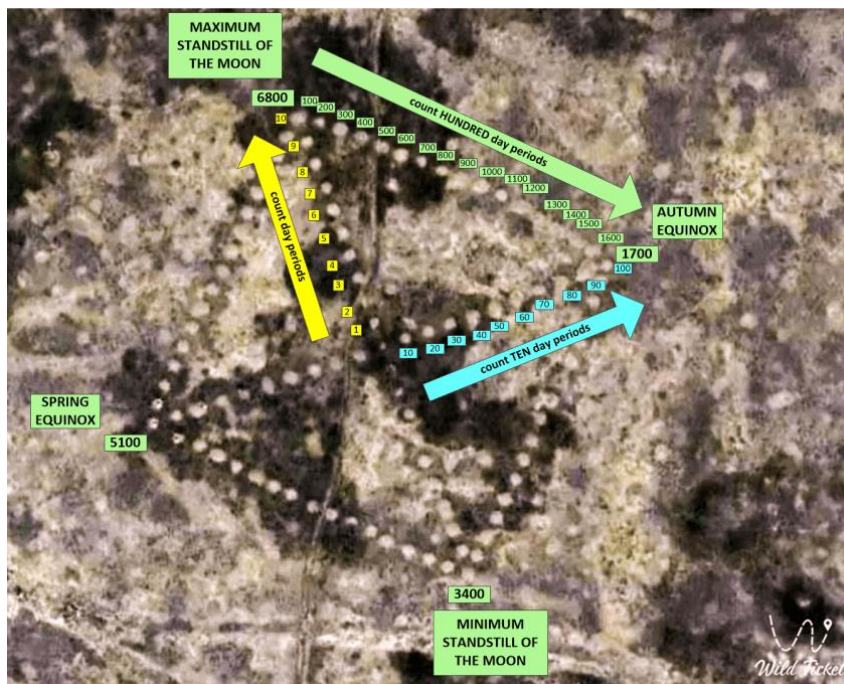
*The Ushtogai Square from above, north to the top.*

Each side length of 17 mounds forms a triangle to the central space, perhaps for central control, with two sides (left and right) of 10 mounds each. As with our own decimal counting of units and tens (as in 12) there could have been a **day marker** placed in the center. On day 1, it was moved to the first mound on the left. Every day, the left marker moves towards the left corner mound. Upon reaching the corner, two things happen.

1. The **day marker** returns to the center and,
2. A **ten-day marker** then starts its own journey to the right hand corner.

The left-hand day counting would continue on the next day, for ten more days, whereupon the same action, incrementing the ten counter, would mark another ten days in a further step between mounds, towards the right hand corner.

After 100 days, the marker of ten-day periods has reached the right hand corner and a new **hundred day marker** is deployed, to record hundreds of days per mound. Only after the first 100 days is the hundred marker placed upon the left-hand corner mound (that might have represented 100 days after the maximum standstill of the moon).



*The counting scheme for one quarter of the nodal period, repeated in each quadrant to count 6800 days*

All of the above is repeated, slowly moving the hundred-day counter from the left corner to the right, at which time the moon no longer exceeds the solar extremes of summer and winter solstice in its range of rising and setting every orbit of, on average, 27.32166 days.

### In conclusion ...

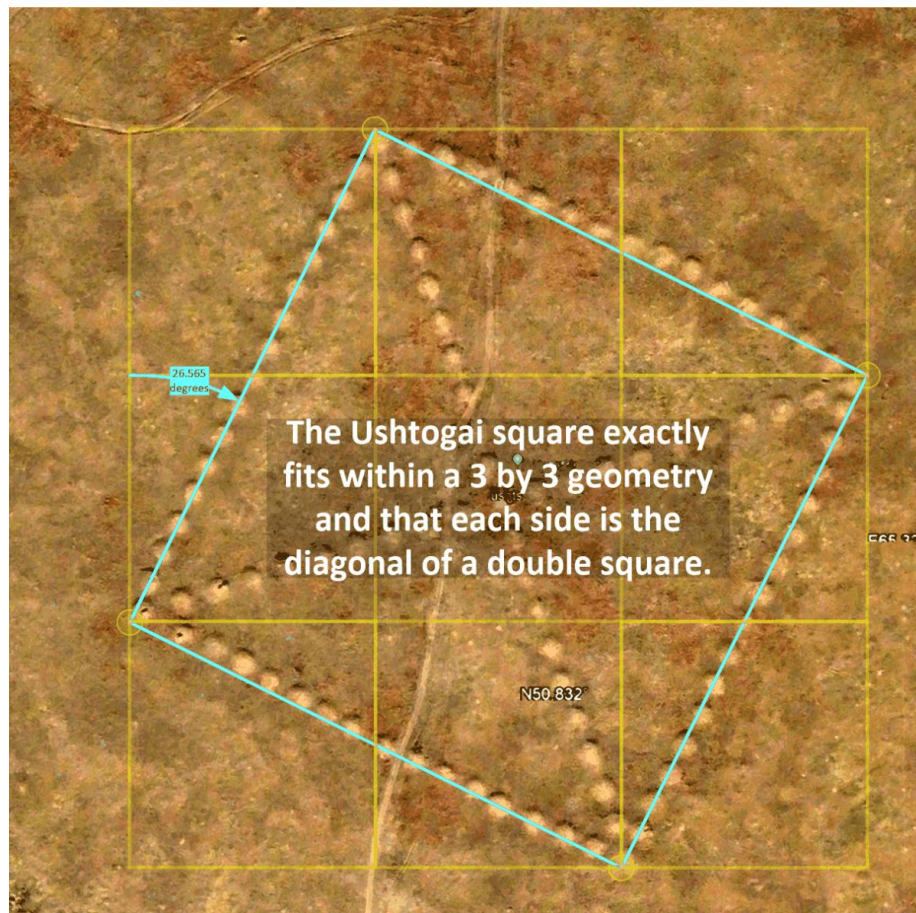
There is a very beautiful correspondence between the geometry of Ushtogai and the nodal period of the moon. But in a following article we will explore the parallel meaning of this monument as a counter of lunar months: to use the outer perimeter to study the Metonic and Saros eclipse periods.

There is a [second article on Ustogai here](#).

For more information on this sort of astronomical counting in the prehistoric period, and of the details of the major time periods of the moon and sun, these can be found in my books, [Sacred Number and the Lords of Time](#) and [Sacred Geometry: Language of the Angels](#).

## Alignment of Ushtogai Square to Vega

The Ushtogai Square is angled to fit an invisible three-by-three square aligned to the North Pole. This grid could be to help lay out the square but then why make it angled to the diagonal of the double squares within the grid?



*Figure 1. A Google Earth image of Ushtogai from above with yellow lines along its sides conforming to a 3-by-3 square aligned to north. The square sides of the monument obviously follow the angle of the double squares within the grid.*

Following on from [the first article](#), for some time I have been looking at northerly alignments within megalithic monuments as a possible siting mechanism for the circumpolar stars.

For example, the Le Menec cromlech in Brittany is a large Type 1 egg that this series of articles explores as having been a sidereal observatory, whose outputs formed The Alignments of Carnac, to the east. Modern observatories use sidereal or star clocks, and the circumpolar stars around the North Pole are such a clock. These stars directly show the rotation of the earth, from which the sidereal day can be tracked. (please use the search box for “sidereal” and “circumpolar” for a range of articles about this).

Monuments such as Göbekli Tepe, that predate the familiar megalithic periods, alignments to the star Vega are particularly interesting: around 12,500 BC, the ice age had a lull and Vega was the pole star. The northern alignment of Göbekli's enclosures B, C and D, suggest Vega was being tracked there, around 9900 BCE (years before the current era).



*Figure 2. A typical T-shaped stone of Enclosure D at Göbekli showing a “vulture” . The star Vega, in the constellation Lyra, was seen as a vulture or “falling one” and, in the mid section, one sees a vulture and a round shape that is probably that star, once Pole Star, but now departed from the celestial North Pole.*

The Ushtogai Square is thought to be at least 8000 BC and if the above alignment of 26 degrees, for a double square, were used to see Vega above the NW side of the square, then that would need to be around 9200 BCE (according to my planetarium program [CyberSky](#) version 5, see figure 3).

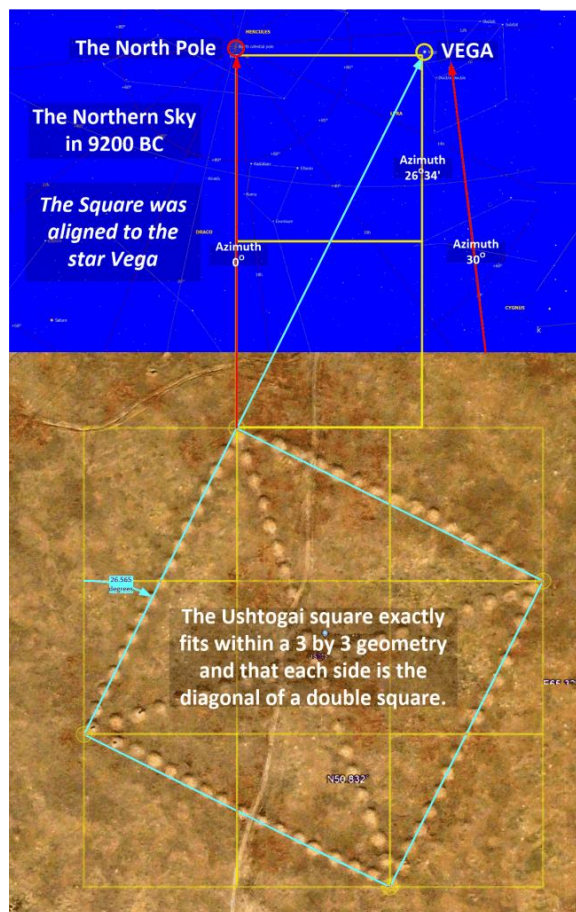


Figure 3. The upper area is the north pole and Vega on the celestial earth, looking north. Below this, the earth-coloured panel (north at the top) shows the north-west side of the Square of tumuli as an alignment to Vega in 9200 BCE.

The last ice age ended with a Maximum, but people were soon move around Eurasia: on the steppes, in Ushtogai where nomadism could flourish, and in eastern Turkey at Göbekli Tepe, at the head of the forthcoming Neolithic revolution. Such monuments display an advanced astronomical alignment and counting culture. This makes prehistory a lot more interesting, as to how and why there was such an early interest in matters cosmic.

In January, my new book will be published pushing this story forward. One in a series on such matters, it is called [Sacred Geometry in Ancient Goddess Cultures](#) because the ice age tribes were often organized around women and some “goddess” cultures seem to have been very interested in sacred geometry\*. Matrilineal tribes had a social structure able to live off the land and with a large natural workforce (an extended family who were not farmers) such groups could achieve monumental works such as the Ushtogai Square.

\*Such geometries were studied in my earlier books, [Sacred Number and the Lords of Time](#) (2014) and [Sacred Geometry: Language of the Angels](#) (2021).

### Notes

1. A previous exploration of the geometry of Ushtogai, onto which my proposed alignment to Vega can be added, is found in this pdf: [A massive neolithic geoglyph ... orientation ... to cardinal directions](#) (on academia.edu) by Howard Crowhurst.
2. To explore the Ushtogai site, and Kazakhstan in general, you might try [Wild Tickets](#).
3. Ushtogai can sometimes be written as Ushtogay when searching.