

## ASTRONOMICAL ANALYSIS FOR CHARTAQI OF NIASAR

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### ABSTRACT

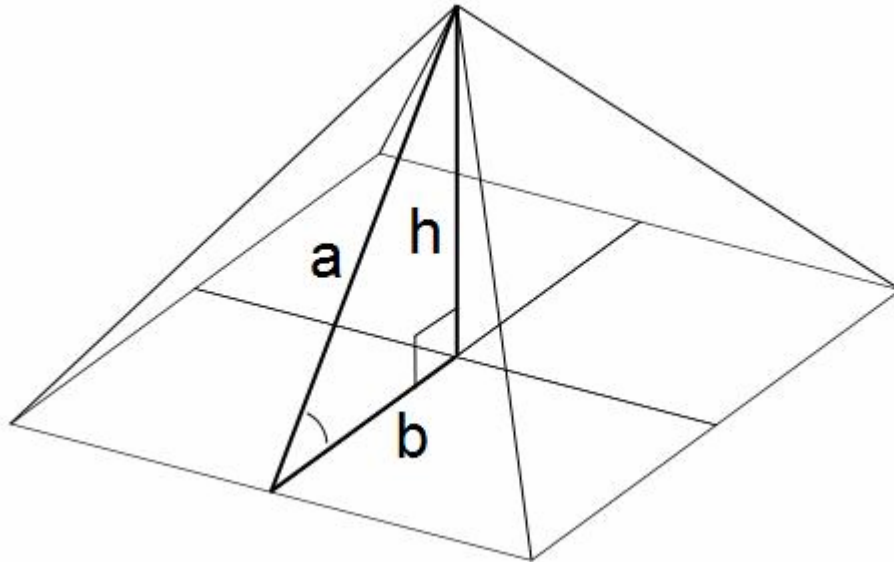
I think that Chartaqi of Niasar has same properties with the pyramids of Egypt. Because if we they we transform a chartqi to a pyramid. We will see that chartaqi is an isomorphic construction with pyramid.

### INTRODUCTION

If a pyramid has astronomical properties ,chartaqi will have same them . I think that chartaqi of niasar has golden ratio  $\varphi = 1,618$  on architectural design.

The ancient Egyptians are the first known people to use the golden ratio  $\varphi = 1,618$  in their architecture, in particular, in the design of the pyramids.  $\varphi = \frac{1+\sqrt{5}}{2}$  and  $\varphi = 1,618$  .

$h$  is the height of the pyramid,  $b$  is half the length of the base, and  $a$  is the height of a triangular face. The ancient Egyptians constructed the Great Pyramids in such a way that the ratio  $b : h : a$  is approximately equal to  $1 : \sqrt{\varphi} : \sqrt{\varphi}$  . Incidentally,  $\sqrt{\varphi}$  is surprisingly close to  $\frac{4}{\pi}$  . This means that the ratio of the perimeter to the height of the Great Pyramids is approximately equal to  $2\pi$  .



When we make an astronomical analysis of Calanderic structure of Niasar, we will see that architectural design of Chartaqi of Niasar are

Latitude:  $33^{\circ} 58.28' N (\pm 0.01')$ .

Longitude:  $51^{\circ} 08.53' E (\pm 0.01')$ .

Altitude: 1,760 meters.

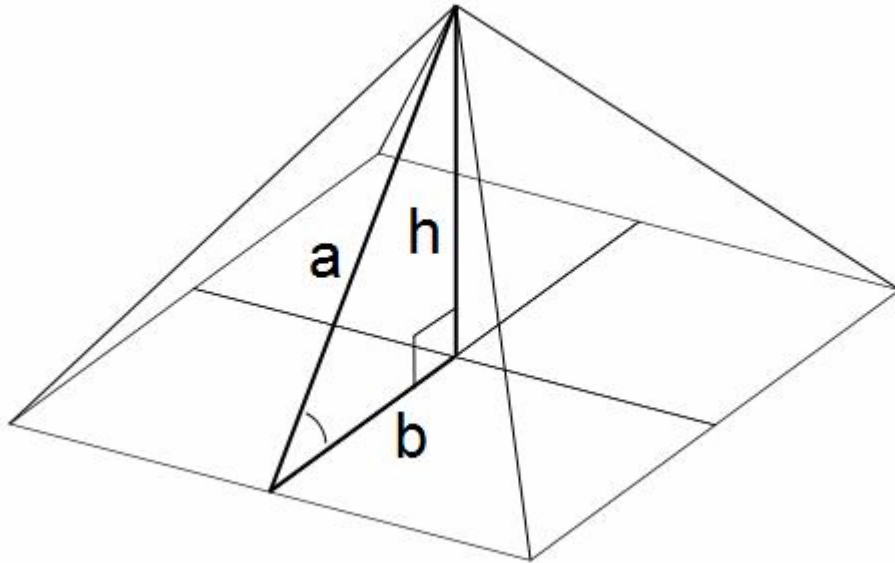
Altitude of the surrounding plain: 380 meters.

Orientation of its plan:  $11^\circ$  from true north ( $\pm 0.5^\circ$ ), eastward.

Floor area measure:  $142 \text{ m}^2$ .

Height: 10.50 m.

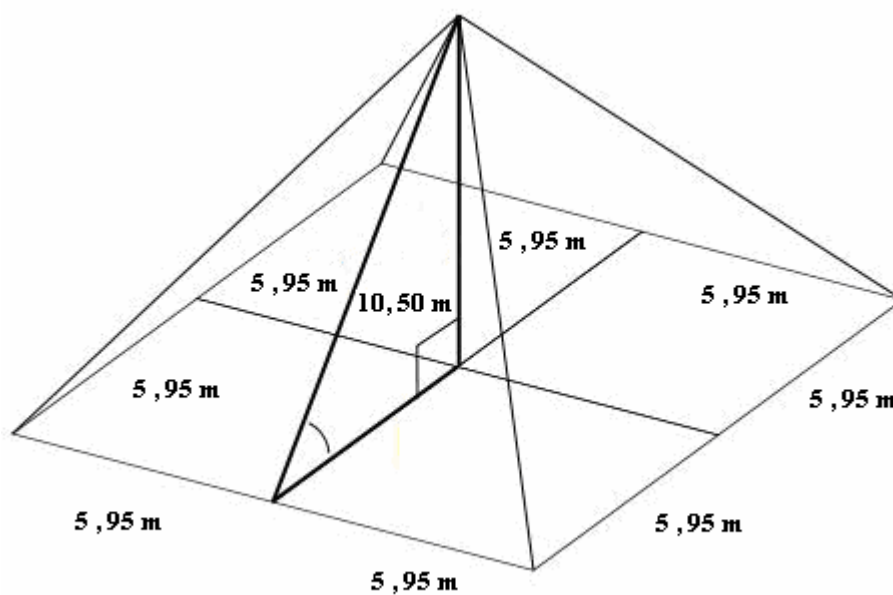
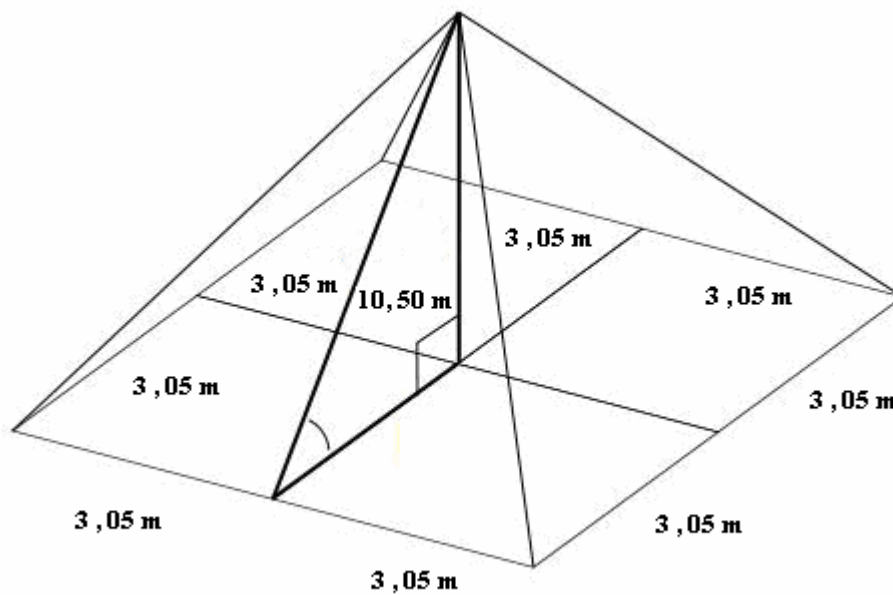
Length and Width:  $11.90 \text{ m} (\pm 2 \text{ cm})$ .



## ARCHITECTURAL DESIGN OF CHARTAQI OF NIASAR

If we analysis on chartaqi of niasar, we will see that it has golden ratio  $\varphi = 1,618$  or on architectural design.

## TRANSFORMATIONS



### LENGTHS

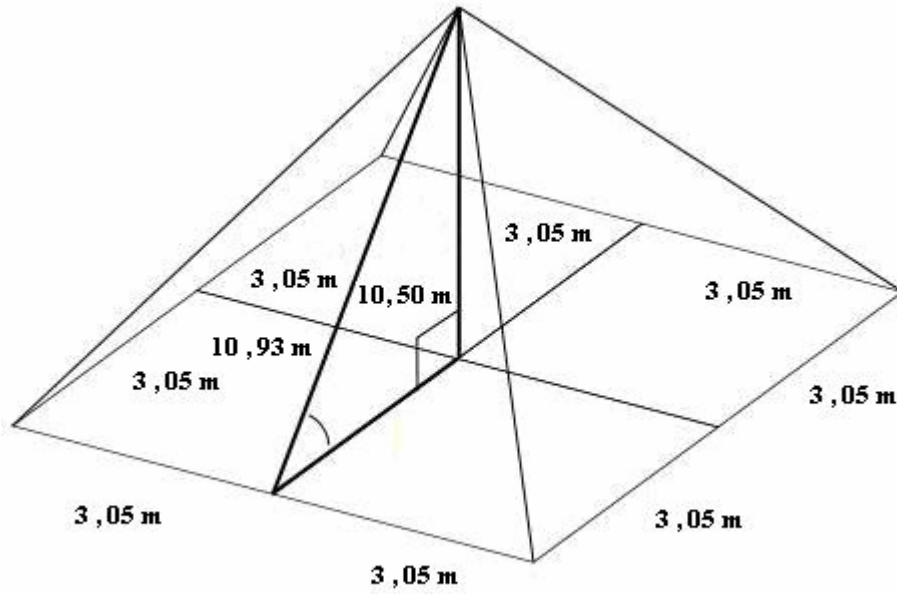
$$y_1 = 10,50m$$

$$x_1 = 3,05m$$

$$R_1 = \sqrt{x_1^2 + y_1^2}$$

$$R_1 = \sqrt{(10,50)^2 + (3,05)^2}$$

$$R_1 = 10,93m$$



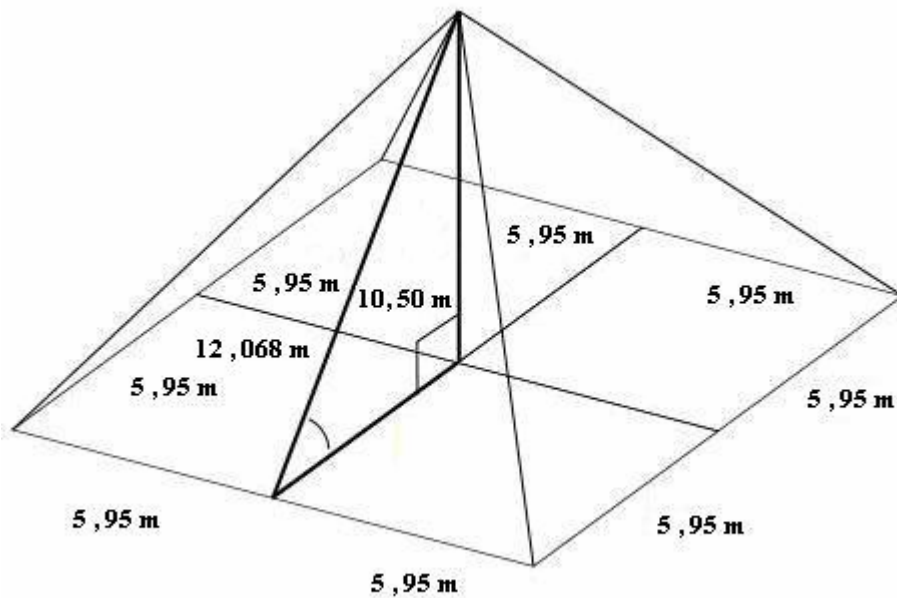
$$y_2 = 10,50m$$

$$x_2 = 5,95m$$

$$R_2 = \sqrt{x_2^2 + y_2^2}$$

$$R_2 = \sqrt{(10,50)^2 + (5,95)^2}$$

$$R_2 = 12,068m$$



**ANGELS**

$$y_1 = 10,50m$$

$$x_1 = 3,05m$$

$$R_1 = \sqrt{x_1^2 + y_1^2}$$

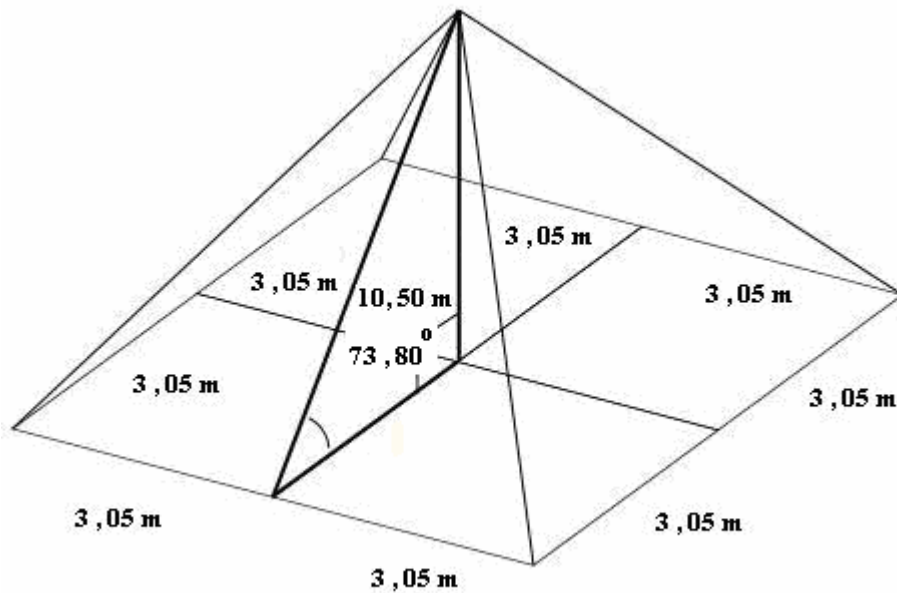
$$R_1 = \sqrt{(10,50)^2 + (3,05)^2}$$

$$R_1 = 10,93m$$

$$\sin \theta_1 = \frac{y_1}{R_1} = \frac{10,50}{10,93}$$

$$\cos \theta_1 = \frac{x_1}{R_1} = \frac{3,05}{10,93}$$

$$\theta_1 = 73,80^\circ$$



$$y_2 = 10,50m$$

$$x_2 = 5,95m$$

$$R_2 = \sqrt{x_2^2 + y_2^2}$$

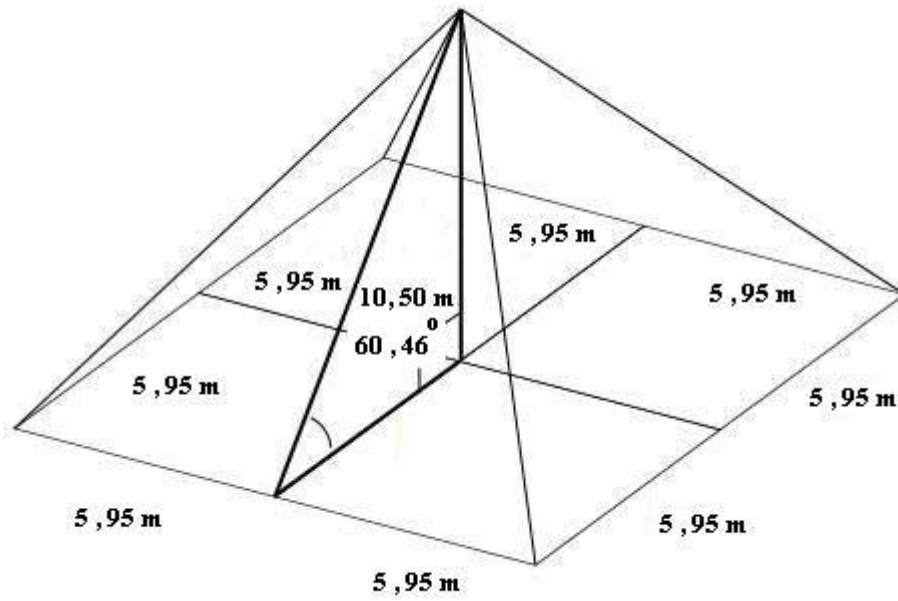
$$R_2 = \sqrt{(10,50)^2 + (5,95)^2}$$

$$R_2 = 12,068m$$

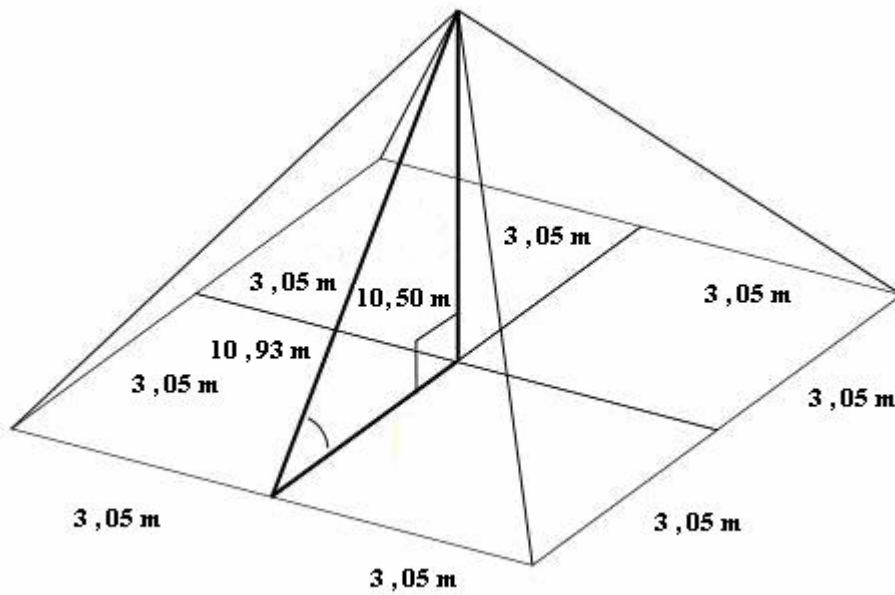
$$\sin \theta_2 = \frac{y_2}{R_2} = \frac{10,50}{12,068}$$

$$\cos \theta_2 = \frac{x_2}{R_2} = \frac{5,95}{12,068}$$

$$\theta_2 = 60,46^\circ$$



### GOLDEN RATIO



$$y_1 = 10,50m$$

$$x_1 = 3,05m$$

$$R_1 = \sqrt{x_1^2 + y_1^2}$$

$$R_1 = \sqrt{(10,50)^2 + (3,05)^2}$$

$$R_1 = 10,93m$$

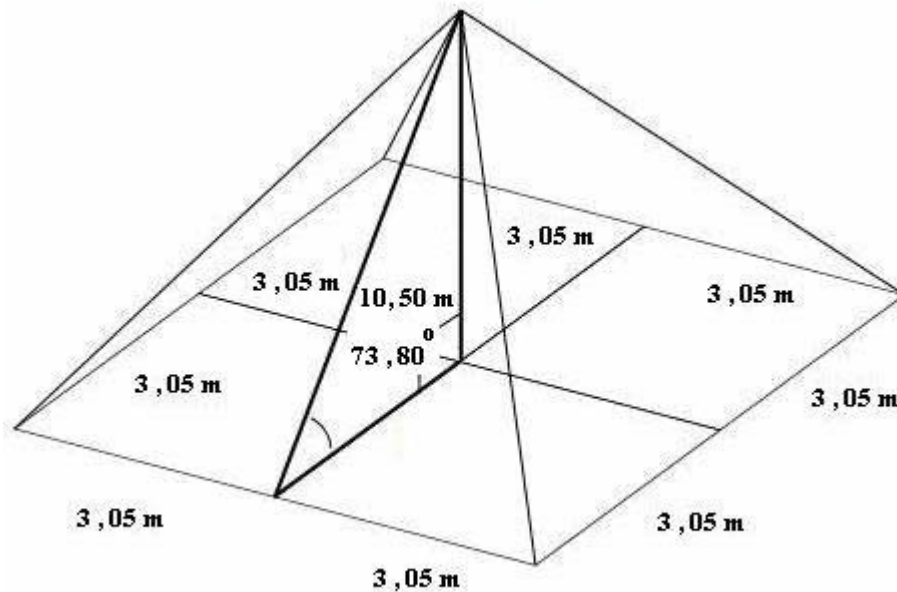
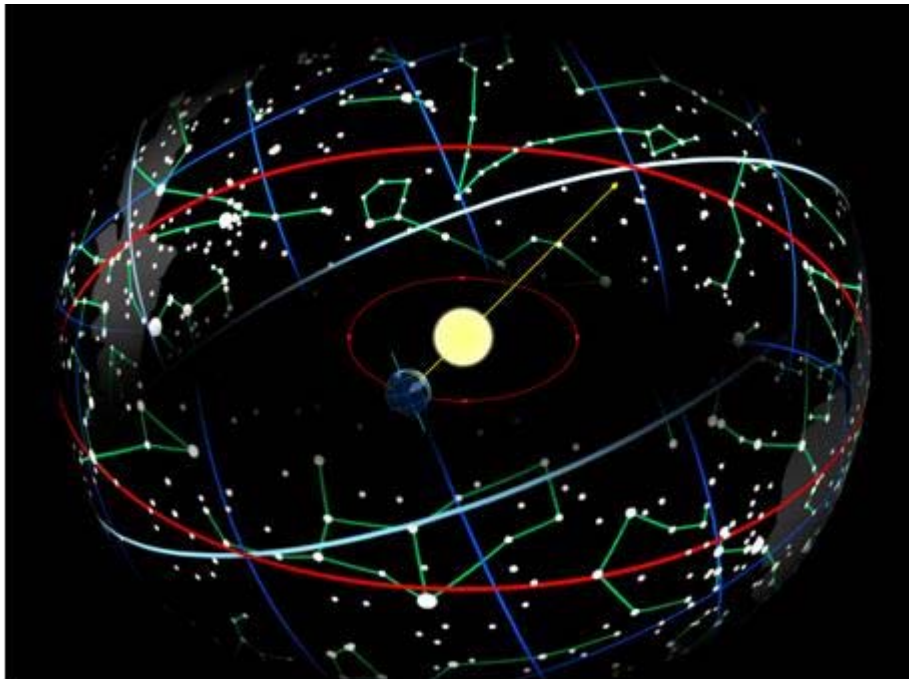


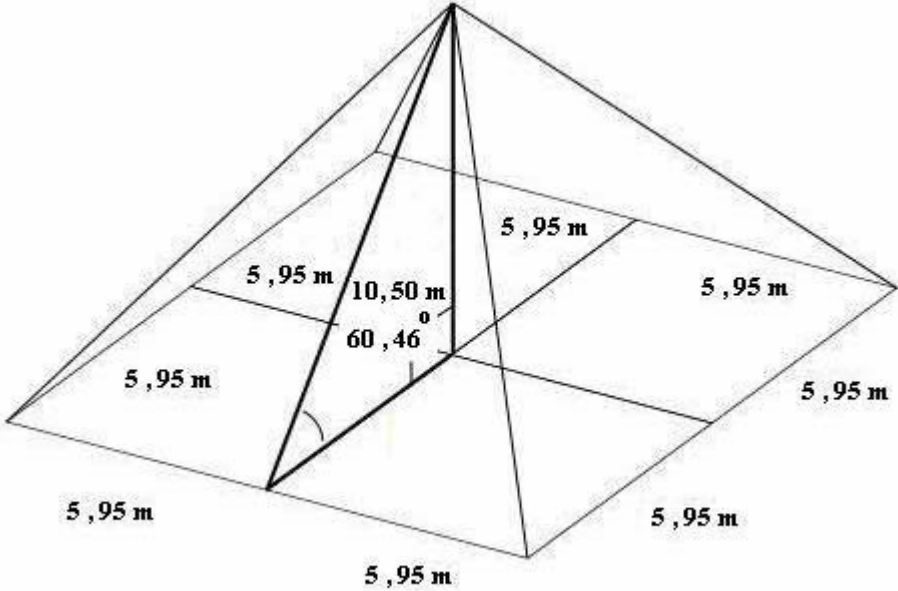
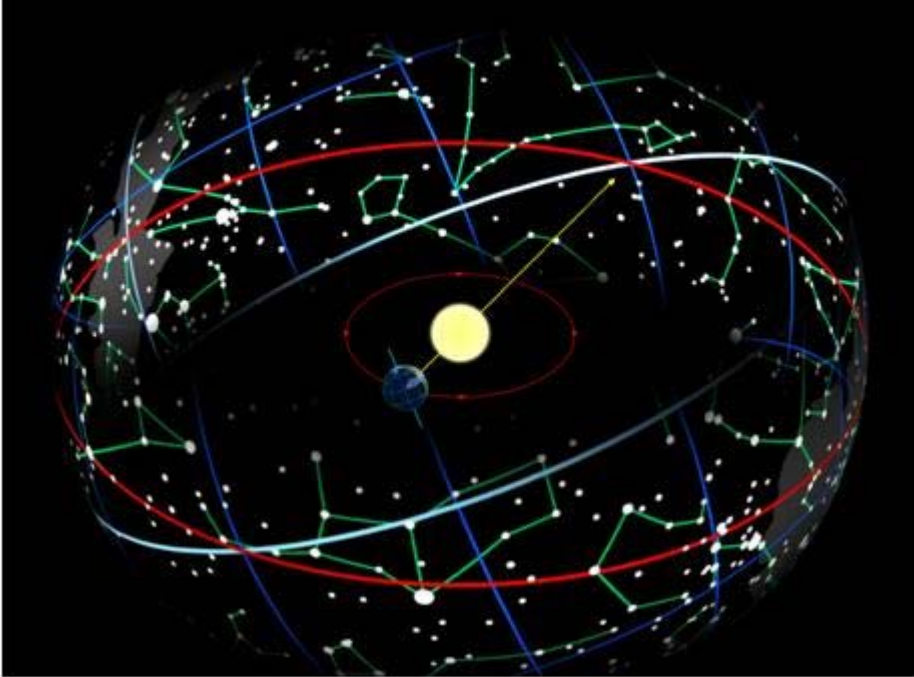
## ASTRONOMY OF CHARTAQI OF NIASAR

When we research on Chartaqi of Niasar, we will show that it will scan to zodiac. We know that in astronomy, the zodiac is the ring of constellations that lines the ecliptic, which is the apparent path of the Sun across the sky over the course of the year. The Moon and planets also lie within the ecliptic, and so are also within the constellations of the zodiac.

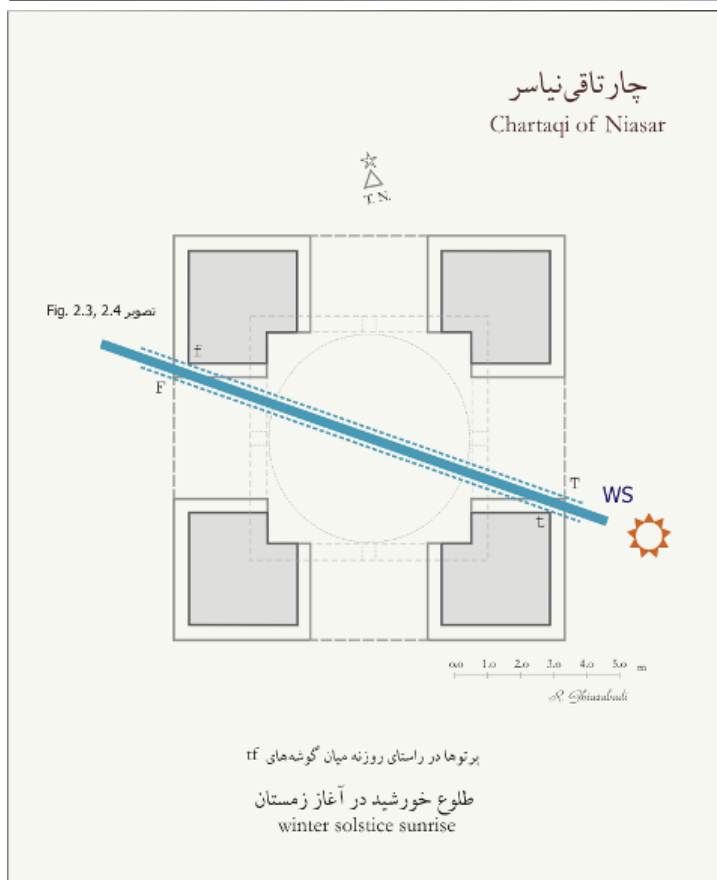
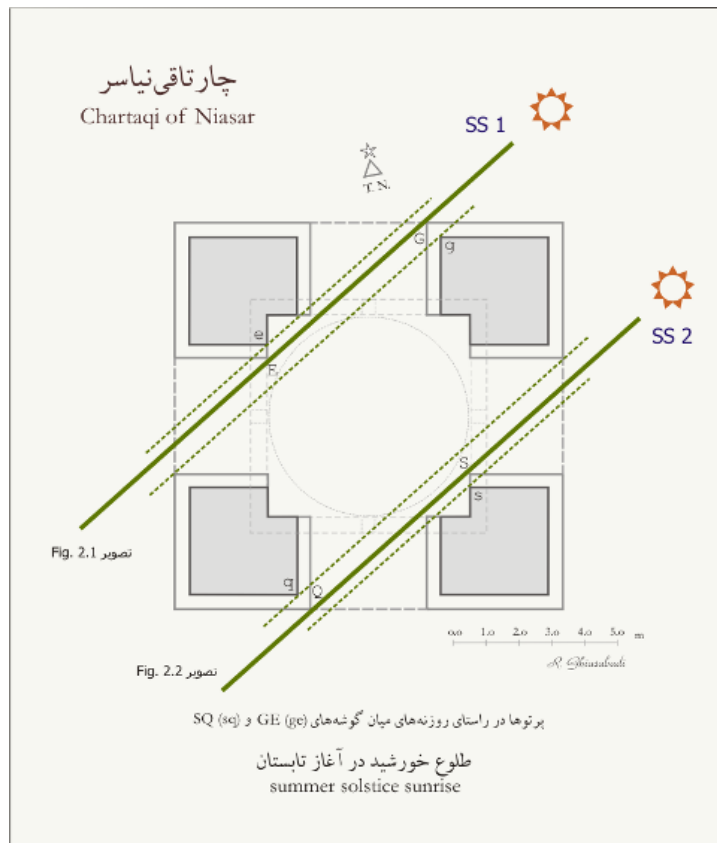
Chartaqi of Niasar will scan a area of constellation or area of the celestial sphere.

As to me Chartaqi of Niasar is a observatory. You can see zodiac and group of constellatons on Chartaqi of Niasar.

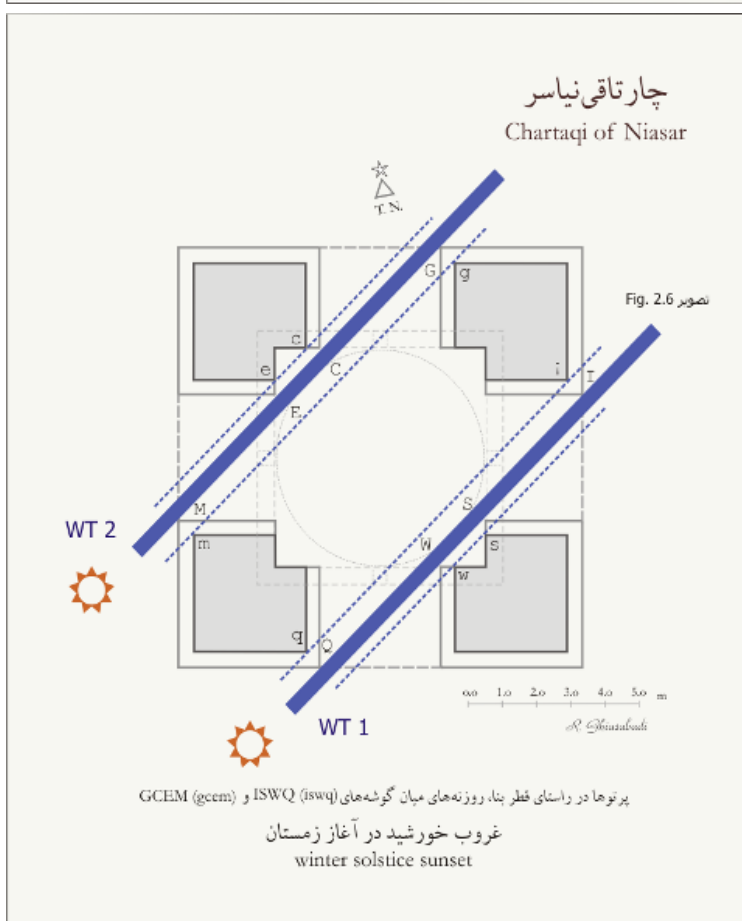
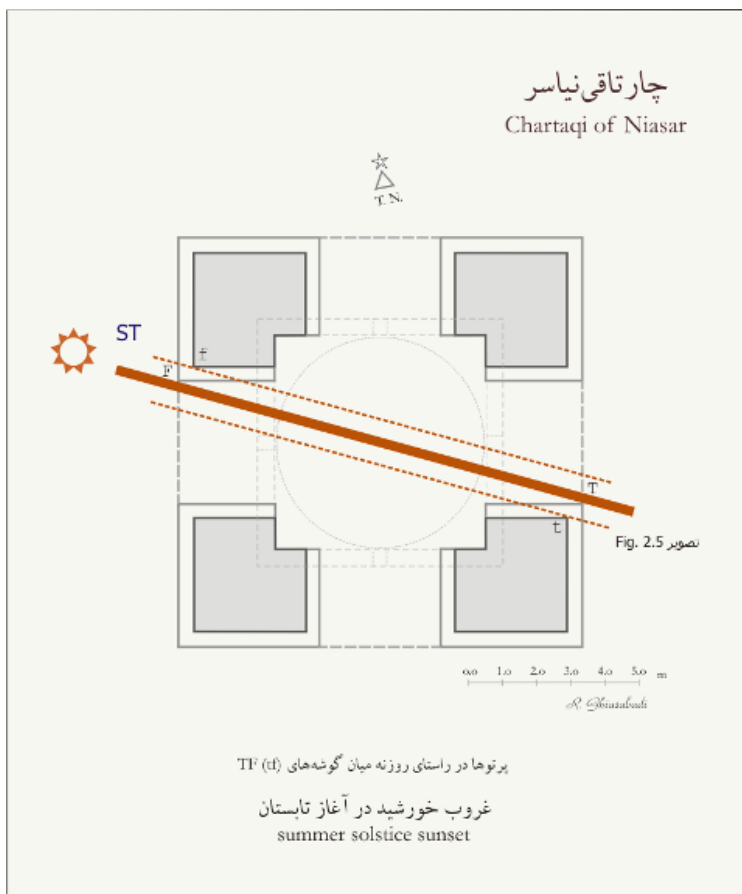




We can observe summer and winter solstice at sunrise.

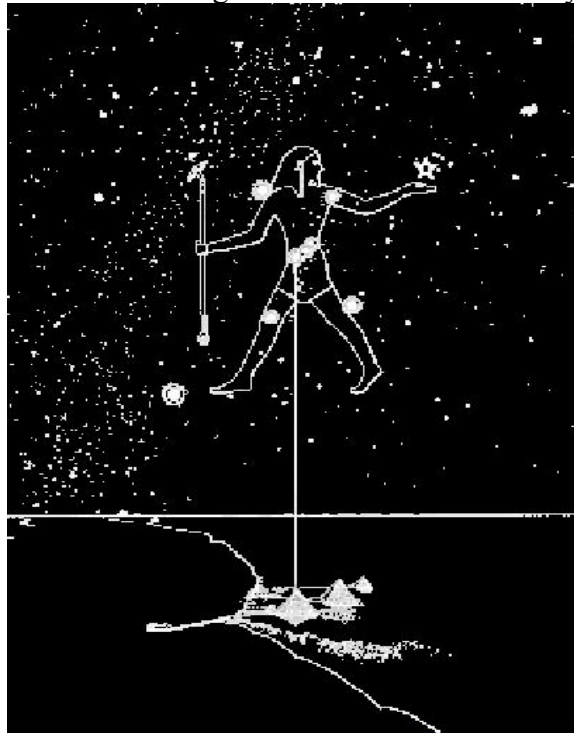


We can observe summer and winter solstice at sunset.

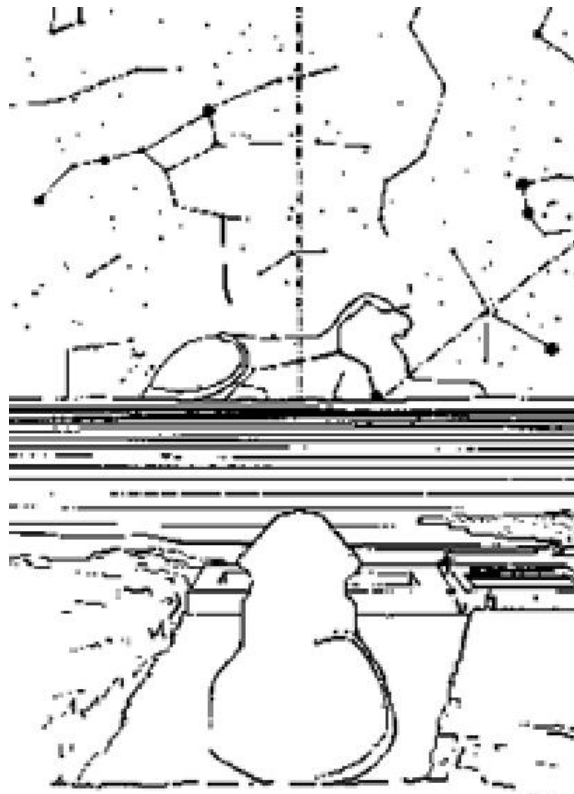


## CONCLUSION

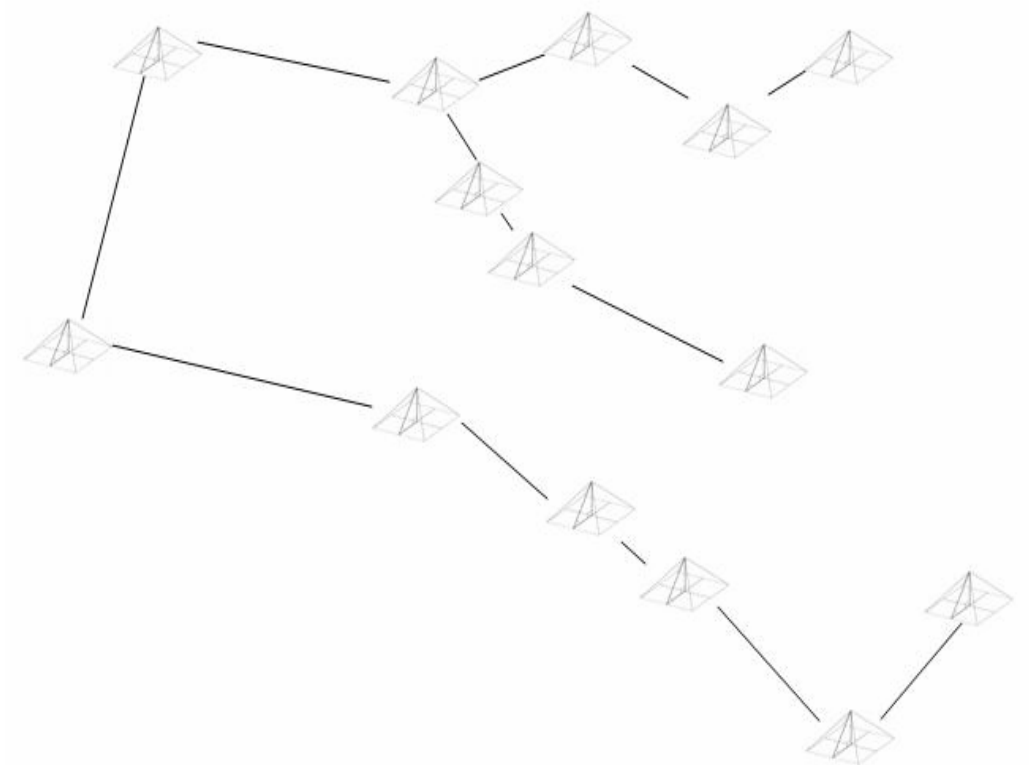
We know that the Giza Plateau in the year 10,450 BC. This is a depiction of how the Sphinx and the three Pyramids at Giza would align with Orion's Belt in the year 10,450 BC.



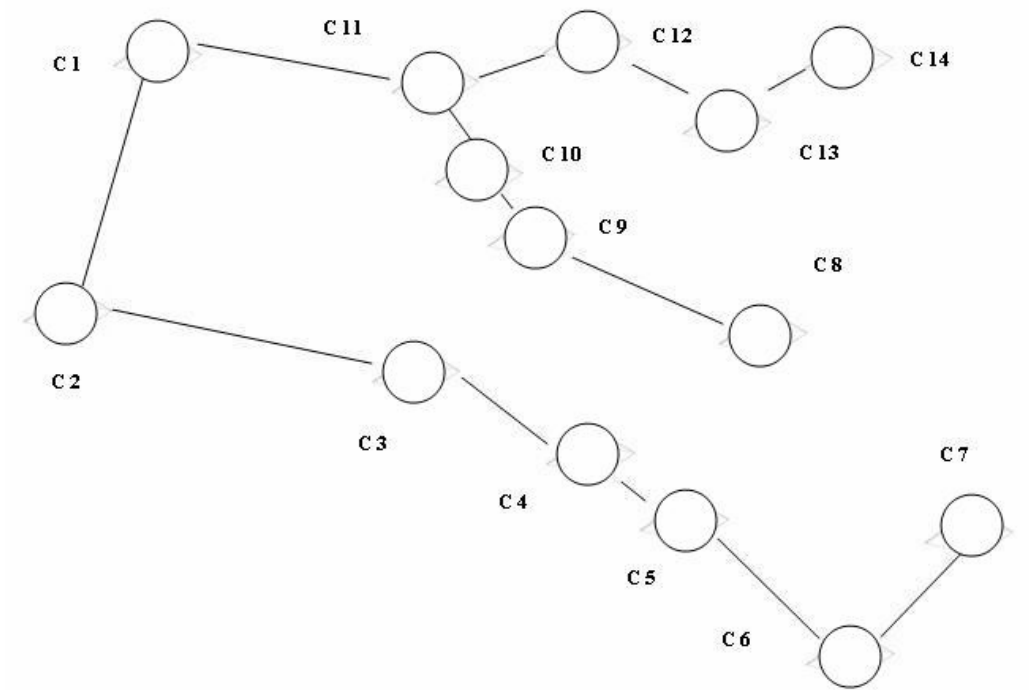
During this era, the Age of Leo, The Sphinx, which originally may have fully resembled a lion, would have been looking directly due east at it's celestial counterpart as it rose at dawn of the vernal equinox in 10,450 BC. At the same time, the Nile would have corresponded with the Milky Way.

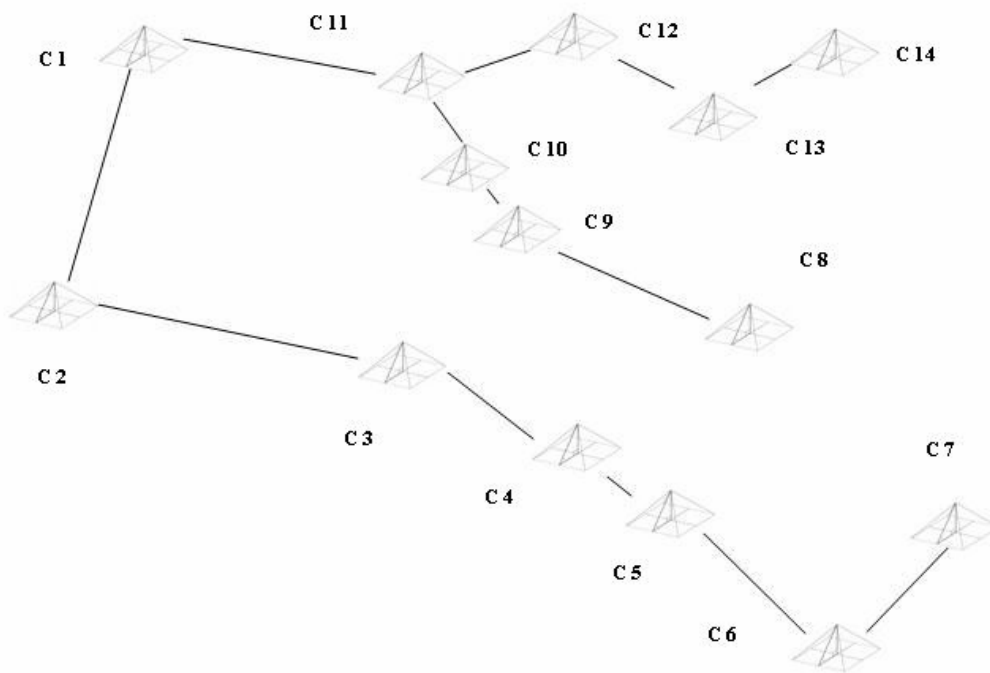


Let  $C_1, C_2, C_3, C_4, C_5, C_6, C_7, C_8, C_9, C_{10}, C_{11}, C_{12}, C_{13}, C_{14}$  are chartaques in Niasar. I think that all Chartaques of Niasar will draw the constellation of Pegasus. This condition is related with 10.000 BC .Because of Persians have constructed to these chartaques in 10.000 BC.



You can see the constellation Pegasus on a stars map.





We know that the constellation Pegasus represents the white, winged horse of Greek mythology. This beautiful figure can be seen high in the sky starting near the end of summer and continuing through autumn if you live in the Northern Hemisphere. If you are below the Equator, look for Pegasus in late winter and through spring. When looking at the image, it is difficult to see the figure as a horse. That is because the constellation is actually upside-down! Imagine it flipped over, and you can see what could be the neck and head of a horse and two legs sticking out from the famous "Square of Pegasus". This square represents the front half of the horse's body. Mythologists are still not sure what happens to the other half of the constellation. The square is very easy to find in the night sky. The neck and legs of the horse shine brightly on clear nights. The story behind Pegasus begins with the battle between Perseus and Medusa. When Perseus severed Medusa's head, drops of blood fell into the sea. They mixed with sea foam, and Pegasus was born. The white sea foam gave the horse his brilliant color. Pegasus became friends with the warrior, Bellerophon. One day, Bellerophon tried to ride Pegasus to Mount Olympus. This angered Zeus so much that he sent a gadfly to bite Pegasus. When the horse was stung, Bellerophon fell to the Earth. Pegasus made it to the home of the gods, where he still remains.