
IN TURKISTAN COLLECTION REFLECTION OF L. V. VYATKINS INFORMATION ABOUT THE OPENING OF THE MIRZO ULUGBEK OBSERVATORY

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ABSTRACT:

This article, based on the materials of the Turkistan Collection, provides information on the history of the construction of the Mirzo Ulugbek Observatory and the discovery of this observatory by V. L. Vyatkin in the early twentieth century.

KEYWORDS: Turkistan collection, Mirzo Ulugbek, observatory, Samarkand, V. L. Vyatkin, astronomy, Obi Rahmat.

INTRODUCTION:

The work of medieval Eastern astronomers, including Central Asian scientists, has a special place in the development of world astronomy. During this period, Mirzo Ulugbek left a rich legacy in the theory of motion of the sun, moon and planets, practical astronomy in determining the geographical coordinates of time and place.

The enthusiastic activity of Eastern astronomy, which lasted for almost 7 centuries, ended with the rich scientific heritage of Ulugbek and his academy. When the observatory was launched, the accuracy of its main "telescope" was only a few arc seconds, and until the seventeenth century, when optical telescopes were invented, its results served as the highest result of astronomical observations for medieval astronomers. This instrument has taken the theories of motion of the Sun, Moon, and planets to a new level, and has achieved high accuracy in measuring time, which is one of the main subjects of eclipse theory and applied astronomy.

THE MAIN PART:

In 1428, at the age of thirty-four, Mirzo Ulugbek ordered the construction of an observatory and supervised its construction. The cylindrical observatory was built in two years. More than a dozen astronomical devices and instruments were installed in it. The most important of these is a quadrant (close to an angle measuring device called a sextant) consisting of a double arc with a radius of 40.2 meters. The inner wall depicts the sky and the globe, a star map is worked out, mountains, seas, countries are marked.

When the observatory was opened, Mirzo Ulugbek used to go there in his spare time. He made scientific observations on the motion of celestial bodies with his fellow astronomers. 1018 stars were studied and the position of these stars in the universe was determined. The movements of the stars are perfectly recorded in the tables. For this, Mirzo Ulugbek spent many nights at the observatory. In the lower kitchen of the observatory, with the help of instruments and equipment aimed at the abyss, he stared at the sky and became aware of the mysteries of the sky. As a result of his many years of scientific research in the field of astronomy, his famous work "Ziji jadidi Koragoniy" was published.

It is safe to say that the observatory built by Mirzo Ulugbek was one of the greatest discoveries in the field of medieval astronomy. The observatory has not been fully preserved until now. There is a lot of information about the demolition or demolition of the observatory. According to some sources, the observatory was destroyed during the

Shaybanid dynasty. The demolished observatory has been lying in ruins for a long time.

Mirzo Ulugbek's efforts to build an observatory, finding the location of the observatory, in which the services of Vasily Lavrentevich Vyatkin are also mentioned in the "Turkistan Collection".

According to the "Turkistan Collection", a number of archaeologists and historians have conducted research to find the Ulugbek Observatory. Scientists from Russia and abroad came to study the rich history of Samarkand, world-famous architectural monuments. Among them are those who wanted to find the Mirzo Ulugbek Observatory, which is famous for its underground. But their research was in vain, and only archaeologist Vasily Lavrentevich Vyatkin was lucky. Although many scientific studies have acknowledged the discovery of the Mirzo Ulugbek Observatory in connection with the activities of V.L.Vyatkin, its details were not fully disclosed.

It was archaeologist Vasily Vyatkin who made a great effort to find the observatory. Born in Ettisuv in 1869, Vyatkin graduated from the Teachers' Seminary in Tashkent. There he worked as a teacher for a short time, came to Samarkand and continued his scientific work in this ancient city until the end of his life. V.L.Vyatkin, fluent in Arabic, Tajik and Uzbek languages, studied the history of Samarkand, its material and cultural monuments, collected ancient manuscripts. He translated many historical works into Russian. He wrote a textbook in Uzbek for Russian schools.

He spent a lot of energy and time to find the Mirzo Ulugbek Observatory. He collected the necessary information, compared it with each other and analyzed it. He also continued the research, taking into account the views of colleagues V. Stratonov, V. Nalivkin and M. Rostislavov on the location of the observatory. Then V.L.Vyatkin, came across a foundation

document of the XVII century. It described the site of the Mirzo Ulugbek Observatory, which was similar to the information in the works "Baburnoma" and "Samaria".

The archaeologist set to work without hesitation. Using funds allocated by the Russian committee, he involved young archaeologists and locals in excavations to find the location of the observatory. This work was carried out in 1908-1909. The remains of the observatory gradually began to appear. V.L.Vyatkin, was delighted when the excavations were completed and the observatory, which had been completely cleared of soil, was in full view.

After arriving in Samarkand, V.L.Vyatkin, also conducted extensive inquiries into the location of the Ulugbek Observatory. He will be talking to many people here. Refers to many books. But his initial efforts were in vain.

In addition to V.L.Vyatkin, several archaeologists were also trying to find the observatory. One of them, V. Stratonov, speaking at a meeting of the Turkestan Archaeological Amateur Circle, refuted the previous assumption that the observatory was near the Ulugbek Madrasa, based on information from the work of Mirzo Babur. He also commented on the views of his colleague V. Nalivkin.

V. Nalivkin talked to many places about the location of the observatory. According to them, "the observatory is located at the foot of the hill on the right side of the old post-Obi Rahmat canal, which leads to Tashkent, behind the Siyob canal, where the city's current locals live. It's a hill, and it's hollow, and there's traces of human excavations."

Based on the comments of V. Stratonov and V.L.Vyatkin, V. Nalivkin, archaeologists said that it is necessary to start excavations in the same place. However, the sanctity of the place mentioned by the locals was violated and no excavations were started. Indigenous people in the area have expressed opposition. Residents

of the area continued to dig bricks for their own needs, which led to the disappearance of traces of observatory ruins.

V. Vyatkin's efforts to search the observatory were stopped for several other reasons. He also had to turn to a number of organizations to resolve cases that did not concern him.

Later, with the efforts and initiative of the orientalist V. Bartold, the Russian Committee for the Study of Central and East Asia allocated 800 rubles for archeological research of the observatory.

As a result of hard excavations in Samarkand, V. Vyatkin also received a lot of information. During his two years of work, he wrote down every piece of information he could find. He looked at everything carefully, emphasizing the need to be very careful with the findings.

In 1912 he submitted a report on the findings of the excavations, which he had collected during two years of excavations. His report is also included in the Turkistan Collection.

V. Vyatkin paid attention to everything while conducting excavations. His report details how the excavations went. According to him, Mirzo Ulugbek built the observatory on a higher place near Chophonota hill. The aim was to better observe celestial bodies. Special bricks were used in the construction of the observatory. A special cement-like mixture was added between the bricks. As a result, the building was much stronger. According to V. Vyatkin, the observatory also had a special table for Mirzo Ulugbek.

According to V.L. Vyatkin, the observatory had a deep corridor at the bottom for the observation of celestial bodies. This corridor is built from north to south. The width of the observatory's long corridor was 1,092 sajen *. Baked bricks were laid on the floor of the corridor. V. Vyatkin writes that the length of

the corridor was 17 sajens. According to V. Vyatkin, the length of this corridor was from north to south.

In his report, V. Vyatkin also provided the following information about the observatory; "Initially, the observatory consisted of a three-story cylindrical building. The observatory building was 30.4 m high and 46.6 m in diameter. At the center of the observatory was a huge arc-shaped sect. The circumference of the sect was 40 m in diameter and 63 m in length. It was with the help of this sect that astronomical quantities were measured. That is why it is the main measuring instrument of the observatory. Sextant arches consist of two marble barriers. Numbers are written for each degree of the arc.

The distance between the degrees was 70cm. It is also surrounded by a brick staircase.

Today, only the entrance to the observatory and the 11-meter underground part of the sextant are preserved. It was with this sextant that Mirzo Ulugbek created his famous Astronomical Table. This table has been used for a long time in Central Asia."

CONCLUSION:

The observatory, built in Samarkand in the 15th century, was a real miracle for world science at that time. The observatory, which was destroyed by some people over the past centuries, was finally found in the early twentieth century as a result of excavations carried out by the famous archaeologist V. Vyatkin. V. Vyatkin's report on the excavations is also reflected in the "Turkistan Collection ". Every aspect of its mining is covered in the report in the collection. Therefore, it is useful to study the information about the Ulugbek Observatory in the "Turkistan collection".

REFERENCES:

- 1) "Collection of Turkestan" Volume 589.
Tashkent: 1911.
- 2) Ashraf Ahmedov. Ulugbek Muhammad
Taragay. Risola, Tashkent: 2011.48-p.
- 3) Ashraf Akhmedov. About comments Abd-
al-Ali Hussein Birdjandi to Zidju Ulugbeka.
V sb. Iz istorii nauki epoxi Ulugbeka.T.,
1979. P.69-109.