

Sultan of Astronomy - Mirzo Ulugbek

(Based on research by B. Akhmedov)

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Abstract:

This article analyzes the contribution of the Timurid ruler Mirzo Ulugbek to the development of exact and humanitarian sciences through his scientific activities, while also managing the country's political and economic life. Additionally, it examines the scientific research of academician Buriboy Ahmedov related to Mirzo Ulugbek, based on the results of Ahmedov's studies.

Keywords: Mirzo Ulugbek, Samarkand, four uluses, zij, sources, astronomy, science, scientific heritage, observatory, rule.

Introduction. Mirzo Ulugbek remains eternal in history not as a king, but for his enormous personal contribution to the development of science and culture in Maverannah, for his invaluable works, for his patronage of and guidance to representatives of science and culture.

Muhammad Taragay (Muhammad Taragay being his real name, as noted by B. Ahmedov), also known as Mirzo Ulugbek, was a great scientist of the 15th century and a prominent statesman. The son of the Timurid Shahrukh Mirza, he was born on March 22, 1394, in the city of Sultaniya (located in present-day Iran and Azerbaijan territories) during Amir Timur's five-year military campaign to Iraq and Azerbaijan[1-177].

According to historian Buriboy Ahmedov, there was a unique tradition in Amir Timur's court, whereby a newly born Timurid prince would be entrusted to the care of Timur's senior wife, Saroymulxonim. Not long after, in 1395, Shahrukh Mirzo and Saroymulxonim arrived in Samarkand with Mirzo Ulugbek.

Mirzo Ulugbek began his primary education at the age of four under his first teacher, the poet and scholar Sheikh Arif Azari[1-177]. Ulugbek accompanied his grandfather Amir Timur on military campaigns against Turkey and Syria from 1399 to 1404, as well as on expeditions against China in

1404-1405. However, following his grandfather's untimely death and the ensuing power struggle in the country, he temporarily resided in Herat with his father Shahrukh Mirza. After Khalil Sultan's capture, Ulugbek was appointed ruler of Transoxiana by the end of 1409. He continued to govern the vast empire established by Amir Timur until his tragic death on October 25, 1449.

Although Ulugbek was a statesman, he remained in history as a great scholar and patron of science and culture. During his reign, Samarkand became a major center of science and culture in the East.

Mirzo Ulugbek wrote two major works, "Zizhi Jadidi Koragoniy" ("Koragoni's New Astronomical Table") and "Tarixi arba' ulus" ("History of the Four Ulus").

In addition to exact sciences, Ulugbek, like the Timurid princes Baysunkur, Ibrahim Sultan, Mirzo Iskandar, Abubakr Mirzo, was also engaged in the sciences of Sharia and music, as historian B. Ahmedov cites in his scientific research [2-120]. Some examples of Ulugbek's poems are also given in Alisher Navoi's "Majolis un-nafais" and Abu Tohirkhoja's "Samaria". Valuable information about Ulugbek's excellent musicology is provided in the manuscript "Muhit ut-tavorikh" based on 37 sources. It is noteworthy that Ulugbek also created separate musical works such as baluj, shadiyana, otsikh, ulusi, and usuli ravon, which were performed with large and small drums.

The construction work carried out during the reign of Amir Temur continued on a large scale during the reign of Ulugbek. Ulugbek built a number of buildings (a huge madrasah, a khanaqoh, a muqatta mosque, a caravanserai, etc.) on the Registan Square in the heart of Samarkand. Ulugbek built not one, but three madrasahs in Maverannahr. One of these was built in Samarkand (1417-1420); the second in Bukhara (1417), and the third in Gijduvan (1433).

The Samarkand Observatory occupies a significant place in the science of astronomy. With the great efforts of Ulugbek Mirza, it was built in 1424-1428 on the Kohak hill on the banks of the Obirakhmat stream in the northern part of Samarkand. According to the information of Zakhiriddin Muhammad Babur, the Samarkand Observatory had three rooms. The remains of the Ulugbek Observatory were discovered in 1908 by the famous Russian scientist, orientalist, archaeologist V.L. Vyatkin. Archaeological excavations of the building were completed by V.A. Shishkin. It is confirmed that the observatory consisted of 3 floors in the shape of a cylinder more than 46 meters high. Ulugbek Observatory had a rich library, where more than 15 thousand books were stored.

Literature review. Mirzo Ulugbek's contribution to the development of science is studied by foreign scholars. In particular, Professor John Greaves (1602–1652) of Oxford University published a part of "Ziji jadidi Koragoniy" ("The constellation of the stars and the position of the great cities of the world") in 1648. Two years later, in 1650, the first part of "Ziji Ulugbek", devoted to chronology, was published in London. Fifteen years later, in 1665, another orientalist, professor at the University of Oxford (England), Thomas Hyde (1636–1703), published the text and Latin translation of "Ziji jadidi ko'ragoniy" with the necessary annotations.

Analysis and results. This publication by Thomas Hyde became the basis for all future scientific research on "Ulug'bek ziji". Professor D. Flamsteed (1646–1715) of the Greenwich Observatory (England) also touched upon "Ulug'bek ziji" and prepared it for publication, but it was not published during his lifetime. His book saw the light of day only after his death in 1725. This work of Ulugbek also aroused great interest in France. The work was published in 1839 (with the text and French translation) by the great orientalist L.A. Sediyo (1808–1876). Interest in "Ziji jadidi Koragoniy" is also great in the United States. The work was published in Washington in 1917 by E.B. Noble. It should also be noted that the above-mentioned edition of Thomas Hyde was favored by most scholars. That is why its publication was carried out twice more in the last century. However, in the countries of the East, Mirzo Ulugbek gained fame in his own time (as early as the 15th century). For example, in Hazrat Alisher Navoi's epic poem "Farhod and Shirin" these valuable lines are dedicated to him:

Sultan Ulugbek, a descendant of Temur Khan,
The world has never seen a sultan like you.
And he found a way to learn,
The sky was low in front of his eyes.
My gaze is a beautiful world,
There is another heaven within the world.

Historian B. Ahmedov wrote many scientific and popular science articles to study the scientific heritage of Mirzo Ulugbek. "Ulugbek" (1965), "Ulugbek and the political life of the Movarunnahra in the first half of the 15th century" (1965), "Historical work of Ulugbek", "Tarix-i arba' ulus" (1979), "Mirzo Ulugbek" (1989, 1994), among others. Thus, B. Ahmedov's articles in various popular science journals and periodicals mention Mirzo Ulugbek as a patron of science, Star of Enlightenment: (on the 575th anniversary of the birth of Mirzo Ulugbek), Ulugbek: (on the occasion of the 580th anniversary of his birth), A Person of Eternity: Mirzo Ulugbek's 600th Birthday, Sultan of Astronomy: March 22 - the birthday of the astronomer-scientist Mirzo Ulugbek, Ulugbek: on the occasion of the 370th anniversary of his birth, Ulugbek and his historical work "Tarih-i arba' ulus", etc. He contributed many articles. In the early years of independence, a treatise entitled "In Memory of Amir Temur and Ulugbek's Contemporaries" was published under the scientific editorship of B. Ahmedov. The scholar's book, "Ulugbek" in particular, gained wide popularity and was published twice in a very short time (1989-94). A short time later, the work was translated into Russian and published in 1994.

Research Methodology. The scientist also contributed to the work on the film adaptation of the life of Ulugbek. In collaboration with filmmakers Shukhrat Abbosov and Holmurod Ibrohimov, he worked on the creation of a two-part documentary and two-part feature film about Mirzo Ulugbek, and became a close advisor to the young filmmaker Rano Alimova in the creation of the documentary "Ulugbek" [3-78].

B. Ahmedov reports that until 1989, a number of works were carried out aimed at studying the scientific activities of Mirzo Ulugbek [3-7]. In particular, B.B. Bartold ("Ulugbek and his time" 1918), V.L. Vyatkin, V.A. Shishkin, T.N. Koriniyozov, G. Jalolov, N.I. Leonov and B. Ahmedov. The services of European and American scientists John Greaves, Thomas Hyde, E.B. Noble, L.A. Sediyo, K. Nallino, E.S. Kennedy and Mays in this regard are worthy of recognition. Also, Gleb Golubev's story "Ulugbek", Maqsud Shaikhzoda's tragedy "Mirzo Ulugbek", Odil Yakubov's novel "Ulugbek's treasure" are considered literary works written on the life of Ulugbek.

Conclusion/Recommendations. The rich scientific heritage of Mirzo Ulugbek should always be studied as a scientist who made an invaluable contribution to the development of science and civilization of all mankind.

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