

### Mirza Ulugbek is a Great Scientist and State Figure

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#### ABSTRACT

*Foreign countries know many names of scientists of the Uzbek people. Among this galaxy of scientists, one of the notable persons is Ulugbek, the most prominent scientist of the 15th century, who once founded the world's largest astronomical observatory in Samarkand, and was the head of the Eastern School of Astronomy at that time. Studying his scientific heritage and state activity is of great interest.*

The name of Mirzo Ulugbek, a great scientist and statesman, a bright representative of the Timurid dynasty, is written in golden letters on the pages of world science. His great contribution to the development of astronomy, mathematics, geometry, geography and other sciences, the accuracy of the calculations he made in the Middle Ages still amazes the people of science today.

Mirza Ulugbek (full name - Mirza Muhammad ibn Shahrukh ibn Temur Ulugbek Koragon) was born on March 22, 1394, during the military campaigns of Amir Temur in the city of Sultania in Azerbaijan. Amir Temur entrusts the education of his beloved grandson to his elder wife Saraymulkhanim, and the education provided during the following 11 years played a major role in the formation of Mirza Ulugbek as a great person.[1]

In 1409, Temurzada appointed Shahrukh's son Ulugbek as governor of Samarkand, and from 1411, Mirza Ulugbek took control of the entire Movarounnahr and turned Samarkand into a center of science.[2,4]

Mirzo Ulugbek, along with being a patron of science, is also a scholar who gave great importance to the development of enlightenment in the country. He built not one but three madrasahs in Movarounnahr. One of them is in Samarkand (1417-1420), the second is in Bukhara (1417) and the third is in Gijduvon (1433). He even wrote a plaque taken from a hadith on the entrance of the Madrasa in Bukhara saying: "Acquiring knowledge is a duty for every Muslim man and woman".[2]

According to the inscription on the facade of the Ulugbek madrasa, the construction began in 1417 and was completed in 1420. The original building was two-story, with four domes above the corner auditoriums and four towers at the corners. Ulugbek madrasa is very unique both in terms of overall architectural composition and the quality of tiling. The facade of the building represents a high level of artistic perfection: it is decorated with a wonderful combination of geometric and floral decorations, as well as calligraphic writing of wonderful works. On the facade above the arch, a stylized starry sky is depicted in the form of girih ornaments (ornaments in geometric shapes) representing the science of astronomy. Ulugbek's work played a certain progressive role in the field of science. In fact, he achieved great results in the science of astronomy and deservedly enjoyed the fame of a world scientist.[3]

Mirzo Ulugbek founded the "Ulugbek Academy" under the observatory in Samarkand, and as a result of his scientific observations conducted there, such as "Zizhi jadidi Koragonii" ("New Astronomical Table of Koragonii") and "The History of Four Nations" were published. famous works were created. Historian Davlatshah Samarkandi writes that "Ulugbek was like Euclid in geometry and Ptolemy in astronomy".

In the work "Zizhi jadidi Koragoniy" the coordinates of 1018 fixed stars are shown with surprising accuracy. According to experts, this star chart is the most accurate astronomical source created after the Greek scientists Hipparchus, who lived in the II century BC, and Ptolemy, who created it in the I-II centuries AD.[4]

His communication with the cultured people of that time, his father's rich library, which collected and acquired rare books and manuscripts from different parts of the world, played a big role in awakening the young scientist's thirst for knowledge. This library served to expand Ulugbek's intellectual outlook as he spent most of his time reading books. Undoubtedly, he was familiar with the classical works of Greek scientists - Plato, Aristotle, Ptolemy, and he knew perfectly the works of his compatriots - al-Farghani, al-Beruni, Ibn Sina, al-Khwarizmi. Personal ability, perfect memory and gradual accumulation of knowledge led to the emergence of a passion for science in Ulugbek. Later, as a result of deep study and constant hard work on himself, Ulugbek gained great knowledge. So, Ulugbek's spiritual food was mainly the cultural heritage of his ancestors - the ancient peoples of Central Asia. At that time, the development of exact sciences, the existence of outstanding works in this regard, communication of Ulugbek with famous astronomers and mathematicians mainly determined the direction of the scientist's scientific activity. At the same time, he communicated with representatives of other sciences, literature and art, representatives of calligraphy and miniatures who created wonderful types of calligraphy and new forms of unusually elegant handwriting and decorate all kinds of ancient monuments to this day. (manuscripts, wood carving, marble, metal, etc.). Talented miniaturists, who created a wonderful school of painting, worked to decorate the books. The best children of the nation worked, created, contributed to the treasure of world culture. The development of science and culture led Ulugbek to the decision to create a new higher school - at that time the Center of Eastern Scientific Thought. In 1417, the construction of the above-mentioned mosque began in Samarkand, and it was completed three years later. Ulugbek personally participated in the selection and filling of personnel from among the best scholars of the madrasa. Among the subjects taught at the Ulugbek madrasa, astronomy occupies one of the most important places. The successful scientific and educational activity of the group of astronomers led by Ulugbek led him to the idea of creating a model observatory equipped with more accurate instruments than the ones that existed before. Four years after the establishment of the above-mentioned

madrasah, this idea was brilliantly implemented after the necessary preparatory work had been carried out.[1,2]

## **CONCLUSION**

In short, Mirzo Ulugbek can rightfully be called the Sultan of Astrology. As a result of infinite respect for the scientist, statues have been erected in many cities of our country and even in foreign countries. As a tribute to his great contribution to world science, the name of Mirzo Ulugbek was also immortalized in space. For example, the German astronomer Johann Heinrich von Medler, who lived and worked in the 19th century, named the crater on the Moon he discovered after Mirzo Ulugbek.

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