



Contribution ID: 45

Type: **Plenary talk**

Public lecture: Ulugh Beg's Scientific School in Samarkand

Monday, 5 July 2021 13:30 (30 minutes)

Ulugh Beg was the grandson of Tamerlane who conquered a vast area in Transoxania and Iran around 1400. Mohammad Taraghay, best known as Ulugh Beg (lit. "Grand prince") was born in 1394 in Sultaniya (Zanjan, Iran). In 1409, he became the ruler of Samarkand where he founded a school in 1420 which is still well preserved there. Astronomy was the major subject taught in the school and Ulugh Beg gathered a group of astronomers there. He also founded an observatory in 1424 which was designed by the Iranian scholar Jamshid Kashani (al-Kashi) who upon Ulugh Beg's request, supervised the construction and operation of the observations made there. After Ulugh Beg's tragic murder arranged by his son in 1449, the observatory was destroyed and forgotten. Its remnants were rediscovered in 1908 near Samarkand. The main part of the observatory was a huge stone sextant more than 40 meters long. It measured the meridian transit of celestial bodies from which the declination of the ecliptic, the equinoxes and the geographical latitude of the locality could be determined accurately. The results of the observations were composed in a Persian treatise called *Zij Ulugh Beg*. *Zijis* a Persian word used for a collection of astronomical tables with explanations for using them in astronomical calculations. Several commentaries are written on this work and selections of it are translated into Arabic, English, French, Russian and Turkish. Ulugh Beg also devised a method for finding the sine of one degree for which he solved a cubic equation by an iterative method.

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