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History of Middle Eastern Contribution to Astronautics and Astronomy (3)

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AEROSPACE AND ASTRONOMY ADVANCES BY THE MIDDLE EAST

Abstract

Our ancestors have always looked towards the blue of the sky and the black space that went beyond the sky. Humans have been observing, studying, and recording the cosmos for thousands of years. Today, space is dominated by countries such as the U.S., China, and Russia. However, to truly understand the history of how humans looked upon the cosmos, one must go back thousands of years to the Bronze Age civilizations of the Middle Eastern regions. It was in these civilizations where great advances in astronomy were first made. The Middle East has made contributions to space in ancient times, the Middle Ages and in today's world.

We will begin with societies such as the ancient Sumerians. This civilization, as well as, many other advanced Bronze Age civilizations, made advancements in astronomy that were far ahead of their time. The Sumerians frequently associated planets, as well as, the cosmos with deities. They established the groundwork for modern mathematics such as the 360 degree circle and the 60 minute hour. Detailed and accurate diaries and records were kept in relation to the cosmos. Such records have been preserved and are on display around the world. During the Seleucid Empire, astronomers used records to predict planetary movement and phenomena. Eventually, Babylonian astronomers developed mathematical models to directly predict such events. This basic work formed the foundation for future astronomy.

During the Middle Ages, the Middle East while under Islam, compiled large sums of knowledge in massive libraries. Using knowledge of astronomy, many observatories were constructed. Star catalogs that helped to calculate the positions of the Sun, Earth, and the moon were created at such observatories. Middle Eastern astronomers during these times made detailed notes on constellations, in addition to calculating the tilt of the Earth's axis and establishing a calendar that was very close to the Gregorian calendar in accuracy. Variants of tools such as the astrolabe were also created in the Middle East during this period. The Middle East played a major role in astronomy in the Middle Ages.

While the current superpowers in space and on Earth have made significant gains in space; the Middle East is building up their own presence in space. Emirati astronauts recently made an appearance on the International Space Station. The International Astronautical Congress will be in Dubai. From the Babylonians to today, Middle eastern nations have contributed to the fields of aerospace and astronomy.