

Islamization, Ethics and Values in Science and Technology

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By

*Islamic Values and Ethics in Engineering Sciences Research Group
(IVEES-RG)*

International Islamic University Malaysia (IIUM)

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EARLY MUSLIM CONTRIBUTIONS TO ASTRONOMY

Abdi O. Shuriye
&
Nasreldeen Kabashi

ASTRONOMY: AN INTRODUCTION

This chapter tries to bring some of the input of Muslims to the early development of some scientific fields especially in Astronomy. The efforts and contributions of Al-Biruni and Al-Battani were realized by the guidance and knowledge they acquired of Al-Qur'an al-karim. Also, step by step discussion of the concept; which involves definition, properties, characteristics and challenges associated with the field; as well as the immortalization of these scientists in the field of Astronomy.

Astronomy is one of the most ancient sciences that have existed since the dawn of recorded civilization. It has been called the queen of sciences and it incorporates many disciplines such as physics, optics in particular, and mathematics, as well as celestial mechanics.

Astronomy is that branch of engineering sciences that deals with the origin, evolution, composition, distance and the motion of all bodies and scattered matter in the universe. Shaharir Mohd Zain indicated that the word *Astro* is a Greek word which brings into mind the meaning of stars – astronomy can thus be regarded as the science that investigates all matter-energy in the universe, which includes its distribution, composition, physical states, movements and evolution.¹⁴⁹

According to Sharma astronomy in the etymological level denotes the *law of the stars* - from the Greek word *αστρονομία*- is a science involving the observation and the explanation of events occurring outside earth and its atmosphere. Astronomy studies the origins, evolution, physical and chemical properties of objects that can be observed in the sky as well as the processes involving them.¹⁵⁰ Astrophysics, which discusses the physical properties and structure of all cosmic matter, is thus, a branch of this field.

In the Arabic peninsular before the advent of Islam, there was an intimate knowledge of the sun and the moon as well as the night sky whereby meteorological phenomena were associated with the changing patterns of these celestial objects throughout the year with reasons.

¹⁴⁹Shaharir Mohd Zain, *Pengenalan Tamadun Islam Dalam Sains Dan Teknologi*, (Kuala Lumpur: Dewan Bahasa dan Pustaka, 1985), 177

¹⁵⁰Arvind Sharma, *Studies in Alberuni's India*, (Wiesbaden: Otto Harrassowitz, 1983), 47