

SPACE EXPLORATION SYMPOSIUM (A3)
Mars Exploration – missions current and future (3A)

Author: Dr. Wenyi CAI

China Academy of Launch Vehicle Technology(CALT), China, caiwenyi0803@hotmail.com

THE DREAM AND THE REALITY OF HUMAN EXPLORATION OF MARS

Abstract

The nine planets in the solar system, Mars is the closest planet to the Earth. It has many similar identifiable characteristics with earth, such as polar ice caps, clouds, seasonal changes, volcanoes and canyons. Mars exploration is an important content in the history of the development of human spaceflight. Mars exploration has a great significance, not only because it will extend the living space for human, and through the study of Mars, we can understand the origin and evolution of the solar system, understand the formation history of the earth's environment, quest for the gestation and evolution of the life. The first part of this article reviews the development status and main achievements of Mars exploration of leading space countries in the worldwide. At present, the human form of Martian evolution, geological and geographic characteristics, climate characteristics and other aspects of the understanding. The second part clarifies the significance of manned landing on Mars and introduces the manned exploration plans of United States, Russia, Europe, India and China which all in the long-term goal of manned exploration of deep space. Finally, the last part focuses on the ability of deep space exploration including the Mars exploration, and the expectation of Mars exploration of China which proposes future cooperation with other countries to jointly promote the human exploration of Mars and the deep space exploration.