Paper ID: 9990
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SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

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MARS-THE NEXT FRONTIER TO SPACE EXPLORATION

Abstract

The present crisis of Global Warming around the world is propelling the scientists to look up for future human shelter on other planets of the Solar System considering the possible vanishing of human life on the Earth. Amongst all the planets of the Solar System, Mars is thought to be the planet where human life either would have existed in the past or could be established in the future. The stuff of observation, examination and dreams, Mars has always been a favorite subject for astronomers and stargazers. When Egyptians noticed Mars appearing as a small reddish disc in the sky, they quickly realized that a peculiar feature of the planet; due to its retrograde motion, Mars actually appears to go in the opposite direction of other celestial bodies as it crosses the night sky. Evidence shows that all the great cultures of antiquity were aware that Mars behaves unlike the other heavenly bodies that populate the firmament. The first maps of Mars were produced at that time. Little by little, the planet's next door was giving up its secrets. The major turn in Mars Exploration came in 1965 when US spacecraft Mariner-4 became the first spacecraft to reach Mars. It was the first spacecraft to provide close up photographs of other planet. This mission was continued by Mariner- 6, 7, 8 and Mariner- 9 in quick span of time. The US and Russia dominated the race to Mars between1960-2001. In 2003 a new era began when the first ever European mission supported by European Space Agency (ESA), Mars Express Orbiter was launched. This mission marked the beginning of European effort in Mars Exploration and the desire to reach Mars became a global effort. The United States banking on its advanced technology and scientific temperament has been dominating the race to Mars since its first mission, Mariner-3 in 1964.The successful landing of Mars Exploration Rovers, Spirit and Opportunity in 2004 transformed the era of Mars Exploration. The pictures and data sent by these rovers justified human efforts in exploring Mars and provided a sharp eye to the scientists around the world to sneak into Mars closer than ever. The conformation of frozen ice in the arctic region of planet by US mission, Phoenix proved to be a remarkable achievement in exploring Mars. Every byte of data being returned from Mars is increasing our knowledge but also multiplying the unanswered questions.