

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Water From Space: Societal, Educational and Cultural Aspects (6)

Author: Prof.Dr. Samuel Pellman  
United States

WATER MUSIC, FROM MARS

**Abstract**

Advances in technology over the centuries have been associated with corresponding changes in the technology of music-making. From the relatively crude mechanisms of the water-driven *hydraulis* of ancient Greece and Rome to the mechanical complexity of the 19th-century piano, prevailing technology has determined the range of possible musical ideas. In our own lifetimes the technology of space travel has made possible the digital technology now used to synthesize, process, and distribute musical sound. The capabilities of this technology enable us to present music that we continue to recognize by its familiar patterns of pitch and rhythm, but the technology also makes it possible for the contemporary composer to depict the unusual conditions and environments that our exploration of space has revealed to us.

On July 4, 1997, the Mars Pathfinder spacecraft landed on Ares Vallis (“Mars Valley”), an ancient floodplain on the Martian surface. This event, and the subsequent exploration of the landing site by the Sojourner rover, was the inspiration of my composition *Ares Vallis*. With the digital instruments and techniques of the studio I composed music that might evoke for the listener a Mars that once had lakes and flowing water. It might even suggest a Mars that once again can be blue someday.

In the past few years this musical composition has subsequently been mated with video imagery from a variety of sources. Some versions of the piece feature clips from classic science fiction films. Other versions incorporate imagery of the Ares Vallis region of Mars itself, as transmitted by the Pathfinder and subsequent robotic explorers orbiting overhead. This multi-media experience is offered as a celebration of the accomplishments of the teams that designed, launched, and operated these probes. It is my hope that the beauties and complexities of this and my other compositions convey a sense of what has been discovered thus far and hint at some of the further wonders that remain to be discovered.