Mars Atmosphere, Water and Weather

Weather is important to consider when thinking of setting up a colony. Weather on Earth involves the interaction of air, water, and heat energy from the sun. The weather on Mars involves the same variables.

Atmosphere

On Earth the atmosphere is composed mainly of nitrogen (78%) and oxygen (21%). Its thickness protects us from harmful solar radiation. On Mars the atmosphere is composed mainly of carbon dioxide (98%). Humans could not breathe the air on Mars. Because the force of gravity is less on Mars, the atmosphere is 100 times thinner than Earth's atmosphere. However, scientists think it can still protect humans from harmful radiation.

Water

Mars has water! NASA has sent various exploration satellites and robots to Mars. They have discovered that Mars has polar ice caps similar to Earth's. The ice is not just water however. Some of the ice is frozen carbon dioxide. During Martian summer, this dry ice sublimates, or changes directly from a solid to a gas, and the ice that remains is water. Ice water clouds also form in the Martian atmosphere. However there is no open water like Earth's ocean.

