

BRINGING LIFE TO MARS. C. P. McKay, *NASA Ames Research Center, Moffett Field, CA 94035, USA (cmckay@mail.arc.nasa.gov).*

A suitable long-term goal for human exploration of Mars is the determination of whether or not a self-sustainable biosphere could be constructed on Mars, a process called *Terraforming*. Preliminary considerations of the conditions on a habitable Mars suggest that there are two potentially habitable states: one — characterized by an atmosphere of 1-3 bars of CO₂ — would be habitable for plants and microorganisms

and another which would be habitable by humans. It may be possible to warm the planet by selective introduction of trace gases to enhance the greenhouse effect. Energy balance considerations suggest that warming Mars would take on the order of 100 years with a much longer time required to produce a breathable atmosphere.