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Abstract

Mars Advanced Studies: Next Generation Orbiters

With the discovery of potentially large amounts of water near the Martian poles in form of permafrost close to the surface, the interests of the scientific community drive the advanced studies for mars exploration. The Mars Advanced Studies Office is seeking to build an integrated plan for mars exploration into the next decade. A series of advanced studies of potential candidate missions are being investigated. The studies cover mars orbiters, Landers, rovers, drills, sample return, and robotic outposts.

The Next Generation Mars Orbiters are driven by the science community priorities. This has led to a series of concept missions to study the subsurface, the stratigraphy, the composition of the surface elements on mars, climatic changes, magnetic remnants over ancient terrain, and gravity experiments.