

Optical data in the Mars exploration program (review)

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The history of Mars exploration started from some 40 years ago with the successful Mariner 3 and 4 missions. Since then, a number of missions have been operated, however, useful data surviving still today should be those after Viking 1 and 2 missions. Lately, in the 90s, many spacecraft were launched to Mars successively in missions such as Mars Pathfinder, Mars Global Surveyor and Nozomi. A great deal of data with minute resolutions are now available and they are still increasing today. Mars Odyssey, which was launched in 2001, is also currently conducting the prime mission of science mapping. The 'context images' in Viking are frequently used to grasp the features as a whole, being compared with such minute images.

In this presentation, we review the observed optical and critical data being stacked so far. We summarize the studies of surface features on Mars relating to these data.

We next preview the future missions planned in the next few years and discuss their scientific goals as well as their specific observational targets.