



High resolution imaging of Mars with HiRISE on MRO: Crater layered deposits

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The High Resolution Imaging Science Experiment on the Mars Reconnaissance Orbiter spacecraft has the capability to image the martian surface at unprecedented resolutions, covering a 6 km wide swath at 0.3 meters per pixel [1]. Along with 3-color and stereo possibilities, this will allow quantitative investigation of martian surface features and processes on a new scale. Imaging targets may be suggested by the entire community through a web-based facility as of early spring, 2006 [2].

We present a summary of the current state of research on a topic particularly suited to advancement by HiRISE, crater interior layered deposits [3], and identify key outstanding questions that may be specifically addressed with HiRISE. Examples of what may be expected from HiRISE in the context of currently available data is meant to illustrate a new view of Mars becoming available to researchers in the months ahead. We also review the basic requirements for suggesting imaging targets so that all may take advantage of this resource. Pending successful orbit insertion in March, early HiRISE images and preliminary analysis may be presented.

[1] A. S. McEwen et al., 2003, 6th Int. Mars Conf., 3217.

[2] E. Eliason, 2003, 6th Int. Mars Conf., 3212.

[3] M. C. Malin, K. S. Edgett, 2000, Science, 290, 1927.