Cartography with HRSC on Mars Express
A Specimen for the new Series “Topographic Image Map Mars 1:200 000”

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In preparation of the High Resolution Stereo Camera (HRSC) experiment on Mars Express orbiter, the depicted specimen of the Topographic Image Map 1:200 000 series has been generated. As a member of the Mars Express science team, the Technical University of Berlin will produce large-scale topographic and geologic maps in cooperation with the German Aerospace Center (DLR), where the HRSC data will be processed.

Predominantly the decision for the map sheet Gusev was made considering the property of this crater being a proposed landing site for the Mars Exploration Rover mission (MER-A). A perspective view into the crater from south-western direction is given by the illustration on the right.

The map sheet is based on four MOC wide angle context images that provide a complete coverage of the mapped area with a resolution of about 256 pixels/degree. The image processing as well as the derivation of contour lines using a processed Digital Terrain Model from MOLA data has been executed by DLR. At TU Berlin the compilation of the map sheet has been fulfilled. Most of the contents could be generated and merged with the image data automatically through a cartographic software system, which is still in development. Within the Windows environment the software is programmed object-oriented almost entirely according to the ANSI C++ standard except the output interface that adopts the Windows EMF format. The final design of the map sheet has been accomplished using CorelDRAW.