

# **HRSCview-web: a web-based exploration system for Mars Express HRSC images**

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To increase the usability and accessibility of the now very large Mars Express HRSC colour stereo image dataset (now exceeding 2 TB map-projected) to the science community we have implemented a system for exploring the data via the web, and providing access to download the full map-projected science dataproducts.

The system may be accessed using a normal browser from a joint website of the Free University of Berlin and the German Aerospace Center (DLR). It is based on HRSCview, a standalone software tool for working with map-projected HRSC data, and which is also available for working with downloaded dataproducts. The main feature of HRSCview-web is that it permits exploration within the images by carrying out on-the-fly data-subsetting, stretching and compositing, and in the case of perspective views, projection. This means regions of interest can be explored at full resolution without needing to download full dataproduct sets. It is possible to view colour and elevation composites with nadir images (via HSV transform) and select different colour stretches or infra-red channel substitution. It offers perspective views with a choice of viewpoint and exaggeration.

Images are explored using Mars surface coordinates, making it simple to move between multiple images of the same location, and also to move from a global image-footprint map directly into the HRSC image at a position of interest. The map scale of the view can be selected; distance and elevation scale bars are provided.

Images can be accessed by orbit/image number as well as via the footprint map. In either case, a link is provided to a dataproduct page, from where the full map-projected science dataproduct set can be downloaded. In the first release it is foreseen that elevation composites will be based on the HRSC Preliminary 200m DTMs generated at the German Aerospace Center (DLR), which will not be available as downloadable dataproducts. With time, these will be supplemented or superseded by higher resolution archival DTMs which will become available for download.