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Public Outreach with Mars Express HRSC Data: 2004 – the first Year

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During the first year of operation, coinciding with the calendar year 2004, the High Resolution Stereo Camera (HRSC) and its Super-Resolution Channel (SRC) imaging experiment onboard the European Space Agency's (ESA) Mars Express mission recorded 23 Gigabyte of 8-bit compressed raw data. After processing, the amount of data increased to almost 350 Gigabyte of decompressed and radiometrically calibrated 'Level 2' (i.e., scientifically useable) image products. All HRSC data have been systematically processed by the HRSC Experiment Team in Berlin. Validated image products on 'Level 2' are finally converted from the VICAR data format used in the Experiment and Science Teams to the Planetary Data System (PDS) format.

Beginning in early 2005, every six months these HRSC 'Level 2' data are fed into ESA's Planetary Science Archive (PSA)[1][2]; every delivery contains the data taken during a time period of six months. PSA also sends all data to NASA's Planetary Data System. The disciplinary nodes and the main node of the PDS support the ESA archive team in general and the HRSC Experiment Team in particular. Concerning data structure and format, the PDS standards apply. Part of the data set is the delivery of appropriate software (xvd) to display the generally very large images, which are $\geq$ 5182 pixels wide and usually several ten- to hundreds of thousands pixels long in one band. Furthermore, the Experiment Team provides software that enables calculation of map-projected 'Level 3' images.

In addition to this scientific data set, ESA published 40 image releases in cooperation with the Principal Investigator-Group at Freie Universität Berlin and DLR until Jan-

uary 2005. Each release generally contains color and black-and-white image scenes in high resolution, three-dimensional anaglyph images and perspective views, plus the scene's regional and global context. The respective web portals at ESA, DLR and FUB have been electronically visited more than a million times [3][4][5][6].

[1] ESA's Planetary Science Archive, http://www.rssd.esa.int/psa; [2] Zender, J.J. et al. (2004), The Planetary Science Archive, Introduction and Overview, *Proceedings of Ensuring the Long Term Preservation and Adding Value to the Scientific and Technical Data*, **10**, pp. 31-38; [3] Mars Express/HRSC pages on ESA's web portal: http://www.esa.int/SPECIALS/Mars_Express; [4] Mars Express/HRSC pages on DLR's web portal: http://www.dlr.de/mars; [5] HRSC Experiment Team web pages: http://www.dlr.de/mex; [6] Mars Express/HRSC pages on FUB's web portal: http://www.geoinf.fu-berlin.de