

## THE NASA REGIONAL PLANETARY IMAGE FACILITY AT THE GERMAN AEROSPACE CENTER (DLR) IN BERLIN, GERMANY.

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**Introduction:** The DLR/NASA Regional Planetary Image Facility (RPIF) was founded in 1985 in cooperation with NASA and is located at the DLR Institute of Planetary Research in Berlin-Adlershof. This library of planetary photographs and maps keeps on file all the image data transmitted by many NASA and ESA space probes and makes them accessible to the public in Europe and mainly in Germany, Austria and Switzerland. .

**Collection:** The library holds digital image data, spectral data, along with the relevant positional data of each space probe. To back up these data there are documentations, maps, and a selection of journals and other scientific publications. All data are documented, catalogued, and available to all users whether they be the academic research community or from the general public. The data are also used internally for DLR's own research, such as the evaluation of project-related material, for the preparation of space missions, or for master and doctoral theses. The available material mainly stems from American mission but also European and Soviet/Russian ones. This database, which is almost complete with regard to the NASA and ESA missions, makes the RPIF a first-choice supplier of planetary images in Germany providing an excellent basis for research in this field. In addition to the original image material there is a large collection of maps and a extensive database of press released images as well as videos and animations. This database, available to the general public, constitute the main body of the library holdings, and is of particular interest to journalists, teachers, but also to an interested lay audience.

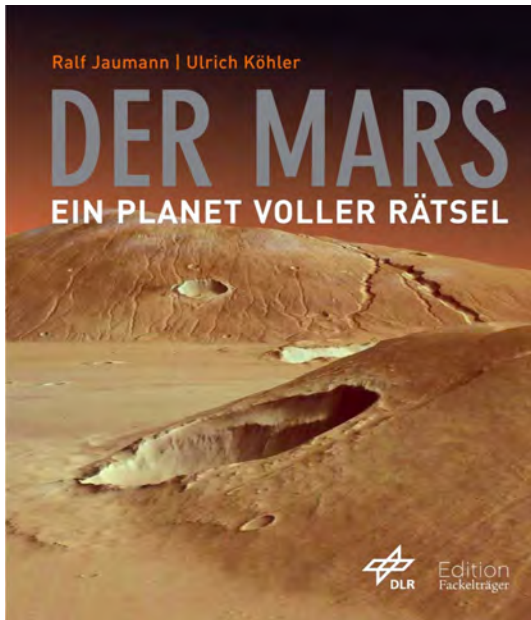
**Public relations:** To facilitate the use of the RPIF and its large collection, an open-access research area is available to all users, including the general public. Access is provided to documents from NASA, the Jet Propulsion Laboratory, and the National Space Science Data Center. Computerized catalogs permit data selection via a random keyword search function. Gathering information and researching data is free of charge. Hardcopies of images in small numbers can be delivered by the RPIF at net cost price. Besides catering for individual users, the RPIF offers lectures and tutorials to various groups of students, of as part of teacher training programs. Moreover, the RPIF presents itself at symposiums, exhibitions and trade shows.

As a RPIF Network node the DLR RPIF will continue to serve as reference center that is needed for preserving and accessing derived products from past, present, and future Solar System exploration missions with the following primary goals:

- Maintain the foundation that has been established over the past four decades in order to not lose critical, historical data products and information.. In addition a systematic effort to scan and digitize fragile materials to preserve these materials and make it accessible to computers.
- Help users to locate, access, visualize, and use planetary science data. In an effort to make this possible, RPIF personnel are being trained in the use of common planetary data sets and processing tools of different missions
- Improve the connection between the Network nodes while also leveraging the unique resources of each node. To achieve this goal, the DLR RPIF will develop and share searchable databases of their entire collections, enhanced by the development of robust metadata.
- Communicate more effectively and regularly with the planetary science community in an effort to make potential users aware of resources and services provided by the Network.

**Educational Outreach:** In collaboration with the scientists of the DLR Institute of Planetary Research the DLR RPIF develops a great variety of public education material such as posters, picture series,





Credit: Fackelträger Verlag

Games, and a brochure about our Solar System, both in German and English language. This material can be downloaded from our website

<http://dlr.de/RPIF/produkte.shtml>. The RPIF was also responsible for image compilation for several popular science books written by scientists of the institute. It supported several exhibitions, events (such as during the landing of the Rosetta lander Philae in Nov. 2014 or on the occasion of the partial solar eclipse in 2015) and teacher trainings. The RPIF works closely together with the DLR\_School\_Labs, a place, where secondary and high school pupils can get to grips with the practical side of science and engineering through interesting experiments – motivating them to take these subjects further.

**Public Highlights in 2015:** For the Twenty Century Fox movie “The Martian” scientists from the DLR Institute of Planetary Research – who are specialists in producing highly accurate topographical maps of Mars – reconstructed Watney's route using stereo image data acquired by the High Resolution Stereo Camera (HRSC) on board ESA's Mars Express spacecraft with support of the RPIF. They compiled this data into a 3D film that shows the spectacular landscape that the protagonist would see 'in the

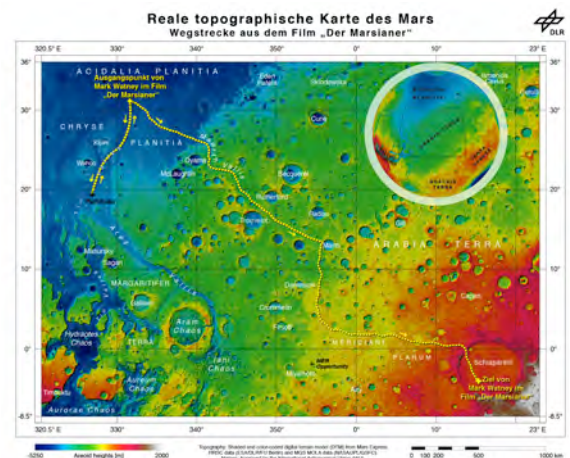


future'. This stunning film was shown in the cinemas together with the movie. Twenty Century Fox was very pleased about the map and 3D film.

[Link to Movie](#)



Credit: 2015 Twentieth Century Fox



Credit: ESA/DLR/FU Berlin – CC BY-SA 3.0 IGO

**Plans for future:** We are preparing our large database with more than 20,000 press released images from NASA and ESA missions for publication in the WWW. Consequently we have to update our complete website and combine it with our Archive of Space Missions (<http://www.dlr.de/ARM>, only in German language).

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