Doris Breuer

1) *General Information*

- Breuer, Doris, Dr. rer. nat., date of birth: 13/08/1965, female
- DLR, Institute für Planetenforschung, Rutherfordstrasse 2, D-12489 Berlin, Tel.: +49 30 67055301, e-mail: doris.breuer@dlr.de
- Current position: Head of Department 'Planetary Physics' at DLR, Germany, Associate Professor at Institute Physique du Globe de Paris, France

2) *Academic education and degrees*

- Geophysics (1984 – 1989), Westfälische Wilhelms-Universität Münster, Diploma (Prof. Dr. D. Wolf)

3) *Scientific degrees*

- Habilitation, Planetary Science, Westfälische Wilhelms-Universität Münster, 2002 (Prof. Dr. T. Spohn)
- Doctoral degree: Dr. rer. nat., Planetary Physics, Westfälische Wilhelms-Universität Münster, 1994 (Prof. Dr. T. Spohn)

4) *Professional experience*

- Since 2005, Associate Professor; Institute Physique du Globe de Paris
- Since 2004, Head of Department 'Planetary Physcis', DLR, Institut für Planetenforschung
- (1997-2004) Assistant Professor, Westfälische Wilhelms-Universität Münster
- (1995-1997) postdoctoral fellow, Department of Geology and Geophysics, University of Minnesota, USA
- (1995-1995) Visiting scholar, Institute Physique du Globe de Paris, France
- (1994-1995) postdoctoral fellow, Institut für Planetologie, Westfälische Wilhelms-Universität Münster
- (1990-1994) Ph.D fellow of German Research Foundation (DFG), Institut für Planetologie, Westfälische Wilhelms-Universität Münster

5) *Professional activities*

- Member of science team MORE (Mercury Orbiter Radio-science Experiment) (BepiColombo mission to Mercury)
- Member of the science team of HP3 (Heat Flow and Physical Properties Package), NASA InSight mission
- Member of the Organizing Committee of the Planetesimal workshop in Washington (2013)
- Organizer of the German Geodynamics workshop in Berlin (2012)
- (2008-2014) Member of ESSC (European Space Science Committee) of ESF (European Science Foundation)
- (2007-2013) PI of Topics 'Interior-Atmosphere interaction, magnetic field, and planetary evolution' in the Helmholtz Alliance 'Planetary evolution and life'
- (2007-2009) Member of the Science Definition Team of the MarsNext Mission in the ESA Aurora Program
- (2001-2003) Member of the ESA Solar System Working Group
- Topical team member of the GeoFlow experiment on the International Space Station (ISS)
- Member of editorial Board 'Solid Earth'
- Editor of Space Science Series of ISSI (Planetary magnetism) and Ency. of the Solar System (third Edition)
- Session convener at AGU, EGU and EPSC
- Reviewer for several ISI journals and of science proposals submitted to NWO, NREC, NASA, and ETH.

6) *Publications*

Published or accepted peer-reviewed publications, book chapters, etc.

Tosi, N., Plesa, A. and Breuer D. (2013): Overturn and evolution of a crystallized magma ocean: a numerical parameter study for Mars. Journal of Geophysical Research Planets, 118, 7, 1512–1528, doi:10.1002/jgre.20109.

Neumann, W., Breuer D. and Spohn T. (2012): Differentiation and core formation in accreting

planetesimals. Astronomy and Astrophysics, Planets and planetary systems, 543, A141, 21p, doi: 10.1051/0004-6361/201219157.
Grott, M., Breuer D. and Laneuville M. (2011): Thermo-chemical Evolution and Global Contraction of Mercury. EPSL, 307(1-2), 135-146, 2011, doi:10.1016/j.epsl.2011.04.040.
Morschhauser, A., Grott M. and Breuer D. (2011): Crustal recycling, mantle dehydration, and the thermal evolution of Mars. Icarus, Volume 212(2):541-558, doi:10.1016/j.icarus.2010.12.028.
Stamenkovic V., Breuer D. and Spohn T. (2011): Thermal and transport properties of mantle rock at high pressure: Applications to Super-Earths. Icarus, 216(2):572-596.
Breuer, D., Labrosse S. and Spohn T. 2010: "Thermal Evolution and Magnetic Field Generation in Terrestrial Planets and Satellites". Space Science Reviews, 152, 1, 2010, 449-500.
Breuer, D., Hauck S.A., Buske M., Pauer M. and Spohn T. (2007): Interior Evolution of Mercury, Space Science Reviews 132 (2-4), 229-260, doi:10.1007/s11214-007-9228-9
Schumacher, S. and Breuer D. (2007): An alternative mechanism for recent volcanism on Mars, GRL 34, L14202, doi:10.1029/2007GL030083.
Breuer, D. and Spohn T. (2006): Viscosity of the Martian mantle and its initial temperature: Constraints from crust formation history and the evolution of the magnetic field Planetary and Space Science, 54, 153-169.
Breuer, D. and Spohn, T. (2003) Early plate tectonics versus single-plate tectonics on Mars: Evidence from magnetic field history and crust evolution, JGR – Planets, 108, E7, 5072.