

Peer Reviewed Publications

Poulet, F., **Gross, C.**, Horgan, B., Loizeau, D., Bishop, J. L., Carter, J., Orgel, C. (2019). Mawrth Vallis, Mars: a fascinating place for future in situ exploration - *Astrobiology* –Volume 20, Issue 2.

Bishop, J. L., Fairén, A. G., Michalski, J. R., Gago-Duport, L., Baker, L. L., Velbel, M. A., **Gross, C.**, and Rampe, E. B. (2018) Surface clay formation during short-term warmer and wetter conditions on a largely cold ancient Mars. *Nature Astronomy*, v. 2, p. 206-213

Al-Samir, M., Nabhan, S., Fritz, J., Winkler, A., Bishop, J. L., **Gross, C.**, Jaumann, R. (2017). The paleolacustrine evolution of Juventae Chasma and Maja Valles and its implications for the formation of interior layered deposits on Mars. *Icarus*, Available online 27 December 2016, ISSN 0019-1035, <https://doi.org/10.1016/j.icarus.2016.12.023>

Michael, G.G., Walter, S.H.G., Kneissl, T., Zuschneid, W., **Gross, C.**, McGuire, P.C., Dumke, A., Schreiner, B., van Gasselt, S., Gwinner, K., Jaumann, R. (2016). Systematic processing of Mars Express HRSC panchromatic and colour image mosaics: Image equalisation using an external brightness reference. *Planetary and Space Science* 121; 18-26

Noel, A., Bishop, J.L., Al-Samir, M., **Gross, C.**, J. Flahaut, McGuire, P.C., Seelos, F., Weitz, C., Murchie, S. (2015). "Mineralogy, Morphology and Stratigraphy of the Light-Toned Interior Layered Deposits at Juventae Chasma". *Icarus*, doi:10.1016/j.icarus.2014.09.033

Cull, S., McGuire, P., **Gross, C.**, Meyers, J., Shmorhun, N. (2014). A new type of jarosite deposit on Mars: Evidence for past glaciation in Valles Marineris? *Geology*, Volume 42, no. 11, Pages 1-4

McGuire, P.C., Bonnici, A., Bruner, K.R., **Gross, C.**, Ormö, J., Smosna, R.A., Walter, S. and Wendt, L. (2014). The Cyborg Astrobiologist: Matching of Prior Textures by Image Compression for Geological Mapping and Novelty Detection. *International Journal of Astrobiology* 13 (3): 191–202 (2014), doi:10.1017/S147355041300037

Dohm, J. M., Miyamoto, H., Ori, G. G., Fairén, A. G., Davila, A. F., Komatsu, G., Mahaney, W. C., Williams, J.-P., Joye, S. B., Di Achille, G., Oehler, D. Z., Marzo, G. A., Schulze Makuch, D., Acocella, V., Glamoclija, M., Pondrelli, M., Boston, P., Hart, K. M., Anderson, R. C., Baker, V. R., Fink, W., Kelleher, B. P., Furfaro, R., **Gross, C.**, Hare, T. M., Frazer, A. R., Ip, F., Allen, C. C. R., Kim, K. J., Maruyama, S., McGuire, P. C., Netoff, D., Parnell, J., Wendt, L., Wheelock, S. J., Steele, A., Hancock, R. G. V., Havics, R. A., Costa, P., and Krinsley, D. (2011). An inventory of potentially habitable environments on Mars: Geological and biological perspectives. *Analogs for Planetary Exploration: Geological Society of America Special Paper* 483, Pages 317–347, doi:10.1130/2011.2483 (21)

Kneissl, T., van Gasselt, S., Wendt, L., **Gross, C.** and Neukum, G. (2011). Layering and degradation of the Rupes Tenuis unit, Mars – a structural analysis south of Chasma Boreale. *Geological Society, London, Special Publications* 2011, v. 356, p. 257-279

Roush, T.L., Marzo, G.A., Fonti, S., Orofino, V., Blanco, A., **Gross, C.**, Wendt, L. (2011). Assessing Spectral Evidence of Aqueous Activity in Two Putative Martian Paleolakes. *Icarus*, Volume 214, Pages 240-245

Wendt, L., **Gross, C.**, Kneissl, T., Sowe, M., Combe, J.-P., LeDeit, L., McGuire, P.C., Neukum, G. (2011). Sulfates and iron oxides in Ophir Chasma, Mars, based on OMEGA and CRISM observations. *Icarus*, Volume 213, Pages 86-103

Davila, A., **Gross, C.**, Marzo, G.A., Fairén, A.G., Kneissl, T., McKay, C.P., Dohm, J.M. (2011). A large sedimentary basin in the Terra Sirenum region of the southern highlands of Mars. *Icarus*, Volume 212, Pages 579-589

Foing, B.H., Stoker, C., Zavaleta, J., Ehrenfreund, P., Thiel, C., Sarrazin, P., Blake, D., Page, J., Pletser, V., Hendrikse, J., Direito, S., Kotler, M., Martins, Z., Orzechowska, G., **Gross, C.**, Wendt, L., Clarke, J., Borst, A.M., Peters, S.T.M., Wilhelm, M.-B., Davies, G.R. and ILEWG EuroGeoMars 2009 Team. (2011). Field astrobiology research in Moon–Mars analogue environment: instruments and methods. *International Journal of Astrobiology*, Cambridge University Press, doi: 10.1017/S1473550411000036

Marzo, G.A., Davila, A.F., Tornabene, L.L., Dohm, J.M., Fairén, A.G., **Gross, C.**, Kneissl, T., Bishop, J.L., Roush, T.L. and McKay, C.P. (2010). Evidence for Hesperian impact-induced Hydrothermalism on Mars. *Icarus*, Volume 208, Pages 667-683

McGuire, P.C., **Gross, C.**, Wendt, L., Bonnici, A., Souza-Egipsy, V., Ormö, J., Díaz-Martínez, E., Foing, B.H., Bose, R., Walter, S., Oesker, M., Ontrup, J., Haschke, R. and Ritter, H. (2010). The Cyborg Astrobiologist: testing a novelty detection algorithm on two mobile exploration systems at Rivas Vaciamadrid in Spain and at the Mars Desert Research Station in Utah. *International Journal of Astrobiology*, 9: 11-27 Cambridge University Press doi:10.1017/S1473550409990358

Fairén, A. G., Chevrier, V., Abramov, O., Marzo, G. A., Gavin, P., Davila, A. F., Tornabene, L. L., Bishop, J. L., Roush, T. L., **Gross, C.**, Kneissl, T., Uceda, E., Dohm, J. M., Schulze-Makuch, D., Rodriguez, A., Amils, R., McKay, C. P. (2010). Phyllosilicates in Impact Craters on Mars: Pre- and Post-Impact Genesis. *PNAS – Proceedings of the National Academy of Sciences of the United States of America*, Issue 2010-07-06

Manuscripts under review:

Gross, C., Bishop, J. L., Carter, J., Tornabene, L. L., Sowe, M. (2019). A Putative Shelf-Like Environment on Mars Revealed by Impact Excavation - *submitted to ICARUS*.

Bishop, J. L., **Gross C.**, Danielsen, J., Parente, M., Murchie, S. L., Horgan, B., Wray, J. J., Viviano, C., Ehlmann, B. L., Seelos, F. P. (2019). Multiple Mineral Horizons in Layered Outcrops at Mawrth Vallis, Mars, Signify Changing Geochemical Environments on Early Mars – *submitted to ICARUS*.

Conference Abstracts

Weitz, C. M., Bishop, J. L., Flahaut, J., **Gross, C.**, Saranathan, A. M., Itoh, Y., and Parente, M. (2019). Evidence for Hesperian Acidic Alteration in Ius Chasma. *Ninth International Conference on Mars, LPI Contribution # 2089, id.6240*

Bishop, J. L., Weitz, C. M., Flahaut, J., **Gross, C.**, Saranathan, A. M., Danielsen, J. M., Usabal, G. S., Miura, J. K., Itoh, Y., and Parente, M. (2019). Salty Residues on Mars Mark Changing Geochemical Environments. *Ninth International Conference on Mars, LPI Contribution # 2089, id.6148*

Gross, C., Bishop, J. L., Carter, J., Horgan, B., Loizeau, D., Orgel, C., and Poulet, F. (2019). Investigating Fractured Phyllosilicate-Rich Deposits at Mawrth-Vallis, Mars. *50th Lunar and Planetary Science Conference, Abstract # 1517*

- Musiol, S., Balthasar, H., Dumke, A., **Gross, C.**, Michael, G., Neu, D., Schreiner, B., and Jaumann, R. (2019). 15 Years High Resolution Stereo Camera Observations with ESA's Mars Express Mission. *50th Lunar and Planetary Science Conference, Abstract # 1537*
- Schreiner, B. P., Neu, D., Musiol, S., Balthasar, H., Dumke, A., **Gross, C.**, and Michael, G. G. (2019). HRSC on Mars Express - Image Mosaicking for Public Outreach: Korolev Crater. *50th Lunar and Planetary Science Conference, Abstract # 2735*
- Michael, G. G., Walter, S. H., Zuschneid, W., **Gross, C.**, Schreiner, B., and Gwinner, K. (2019). Brightness Equalization for Mars Images as Applied to HRSC Image Mosaics. *4th Planetary Data Workshop - Flagstaff, Arizona. LPI Contribution # 2151, id.7058*
- Bishop, J. L., Wray, J. J., Sessa, A. M., Danielson, J. M., Ehlmann, B. L., Murchie, S. L., Horgan, B., **Gross, C.**, Parente, M., and Seelos, F. P. (2018). Evidence of Salty Residues in Layered Outcrops at Mawrth Vallis and Implications for Evaporative Environments on Early Mars. *49th Lunar and Planetary Science Conference, Abstract # 1117*
- Gross, C.**, Orgel, C., Poulet, F., Carter, J., Horgan, B., and Bishop, J. L. (2018). ExoMars 2020 — High Priority Science Targets Within the Mawrth Vallis Candidate Landing Site. *49th Lunar and Planetary Science Conference, Abstract # 1405*
- Hiesinger, H., Bernhardt, H., Reiss, D., Tirsch, D., Jaumann, R., Hauber, E., Head, J. W., Michael, G., Williams, D. A., Bishop, J. L., Poulet, F., Muller, J.-P., **Gross, C.**, Gwinner, K., Adeli, S., and Fanara, L. (2018). Absolute Model Ages and Stratigraphy of Neukum Crater Geologic Units, *49th Lunar and Planetary Science Conference, Abstract # 2001*
- Musiol, S., Balthasar, H., Dumke, A., **Gross, C.**, Neu, D., Schreiner, B., and Jaumann, R. (2018). 15 years of fascinating Mars press images and movies from the High Resolution Stereo Camera on Mars Express, prepared at Freie Universität Berlin. *European Planetary Science Congress, EPSC2018-329*
- Hiesinger, H., Bernhardt, H., Reiss, D., Tirsch, D., Jaumann, R., Hauber, E., Head, J. W., Michael, G., Williams, D. A., Bishop, J. L., Poulet, F., Muller, J. P., **Gross, C.**, Gwinner, K., Adeli, S., and Fanara, L., Neukum Crater in Noachis Terra, Mars (2018). Absolute Model Ages and Stratigraphy. *Proceedings EGU General Assembly Conference, Volume 20, p.13328*
- Tirsch, D., Jaumann, R., Adeli, S., Bernhardt, H., Bishop, J. L., Fanara, L., **Gross, C.**, Gwinner, K., Hauber, E., Head, J. W., Hiesinger, H., Michael, G., Muller, J.-P., Poulet, F., Reiss, D., Williams, D. A., Pinet, P., Foing, B., and McCord, T. (2018). The Complex Geomorphology of Neukum Crater on Mars. *Proceedings EGU General Assembly Conference, Volume 20, p. 1959*
- Bishop, J. L., Fairén, A. G., Michalski, J. R., Gago-Duport, L., Baker, L. L., Velbel, M. A., **Gross, C.**, and Rampe, E. B. (2017). Diverse Early Aqueous Environments and Climate on Mars Revealed by the Phyllosilicate Record. *Proceedings Fourth International Conference on Early Mars: Geologic, Hydrologic, and Climatic Evolution and the Implications for Life, Volume 2014, Abstract # 3030*
- Bishop, J. L., Baker, L., Fairén, A. G., Michalski, J. R., Gago-Duport, L., Velbel, M. A., Gross, C., and Rampe, E. B. (2017). Implications of Martian Phyllosilicate Formation Conditions to the Early Climate on Mars. *AGU Fall Meeting Abstracts, Abstract # P31F-04.*
- Gross, C.**, Carter, J., Poulet, F., Loizeau, D., Bishop, J.L., Horgan, B., Michalski, J. (2017). Mawrth Vallis – An auspicious destination for the ESA and NASA 2020 landers. *48th Lunar and Planetary Science Conference, Abstract # 2194*

Bishop, J.L., Baker, L.L., Fairen, A.G., **Gross, C.**, Velbel, M.A., Rampe, E.B., Michalski, J.R. (2017). Unraveling the diversity of early aqueous environments and climate on Mars through the phyllosilicate record. *48th Lunar and Planetary Science Conference, Abstract # 1804*

Bishop, J.L., **Gross, C.**, Tirsch, D., Tornabene, L.L., Carter, J., Erkeling, G. (2016). Impacts on Mars: Excavation and/or Hydrothermal Alteration. *79th Annual Meeting of the Meteoritical Society, Abstract # 6462*

Gross, C., Poulet, F., Michalski, J., Horgan, B., Bishop, J.L. (2016). Mawrth Vallis – Proposed Landing Site for EXOMARS 2018/2020. *47th Lunar and Planetary Science Conference, Abstract # 1421*

Weitz, C.M., Bishop, J.L., Tornabene, L.L., Mest, S.C., Grant, J.A., **Gross, C.**, Rodriguez, J.A.P. (2016). Disrupted Hydrated Deposits in Southeastern Noctis Labyrinthus: Possible Displaced Subsurface Materials From Oudemans Crater? *47th Lunar and Planetary Science Conference, Abstract # 1610*

McGuire, P.C., Audouard, J., Dunker, **Gross, C.**, Kneissl, T., Michael, G., Ody, A., Poulet, F., Schreiner, B., van Gasselt, S., Walter, S.H.G., Wendt, L., Zuschneid, W. (2016). True- and False-Color HRSC+OMEGA Image Mosaics of Mars. *47th Lunar and Planetary Science Conference, Abstract # 1031*

Bishop, J.L., **Gross, C.**, Rampe, E.B., Wray, J.J., Parente, M., Horgan, B., Loizeau, D., Viviano-Beck, C.E., Clark, R.N., Seelos, F.P., Ehlmann, B.L., Murchie, S.L. (2016). Mineralogy of Layered Outcrops at Mawrth Vallis and Implications for Early Aqueous Geochemistry on Mars. *47th Lunar and Planetary Science Conference, Abstract # 1332*

Gross, C., Bishop, J. L., Maturilli, A., D'Amore, M., Helbert, J. (2015). A Hydrothermally Altered, Mn-incrusted Sediment as an Analogue for Martian Deposits? *AGU Fall Meeting, San Francisco, Calif., Abstract P31A-2039*

Horgan, B., Loizeau, D., Poulet, F., Bishop, J., Noe Dobrea, E. Z., Farrand, W., Michalski, J., **Gross, C.**, Kleinhenz, J., Linne, D. (2015). Habitable Noachian Environments and Abundant Resources in the Mawrth Vallis Exploration Zone. *First Landing Site/Exploration Zone Workshop for Human Missions to the Surface of Mars, 27-30 October 2015, Houston, Texas. LPI Contribution No. 1879, p.1009*

Bishop, J. L., **Gross, C.**, Parente, M., Wray, J., Horgan, B., Viviano-Beck, C., Seelos, F. (2015). The transition from neutral to acidic alteration at Mawrth Vallis as observed from the mineralogical record. *2015 GSA Annual Meeting, Baltimore, Maryland, 1-4 November, Abstract # 260648*

Bishop, J. L., **Gross, C.** (2015). Bentonite composition and stratigraphy at Mawrth Vallis, Mars. *Euroclay and The Clay Minerals Society 52nd Annual Meeting, Edinburgh, Scotland, 5-7 July, Abstract # 314*

Michael, G., Walter, S., McGuire, P., Kneissl, T., van Gasselt, S., **Gross, C.**, Schreiner, B., Zuschneid, W. (2015). Systematic Processing of Mars Express HRSC Image Mosaic Quadrangles. *European Geosciences Union General Assembly, Vienna; Geophysical Research Abstracts, Vol. 17, EGU2015-6956*

Gross, C., Carter, J., Tornabene, L. L., Sowe, M., Bishop, J. L. (2015). Stratified Phyllosilicate-bearing Deposits within Impact Craters in the Northern Plains of Mars. *46th Lunar and Planetary Science Conference, Abstract # 1817*

Bishop, J. L., **Gross, C.**, Wray, J. J., Horgan, B., Viviano-Beck, C. E., Seelos, F. P. (2015). Acid Alteration at Mawrth Vallis between the older Fe/Mg-rich Clays and the younger Al/Si-rich Clays.

46th Lunar and Planetary Science Conference, Abstract # 1455

Michael, G., Walter, S., McGuire, P., Kneissl, T., van Gasselt, S., **Gross, C.**, Schreiner, B., Zuschneid, W. (2015). Systematic Processing of Mars Express HRSC Image Mosaic Quadrangles. 46th Lunar and Planetary Science Conference, Abstract # 2387

McGuire, P.C., Walter, S.H.G., van Gasselt, S., Dumke, A., Dunker, T., **Gross, C.**, Wendt, L., Audouard, J., Ody A., Poulet, F. (2015). Color HRSC+OMEGA Image Mosaics of Mars. 46th Lunar and Planetary Science Conference, Abstract # 1404

Gross, C., Carter, J., Tornabene, L. L., Sowe, M., Bishop, J. L. (2014). Excavation of Stratified Phyllosilicate-Bearing Rocks in the Northern Plains of Mars. *AGU Fall Meeting, San Francisco, Calif.*, Abstract P41A-3884

Bishop, J. L., Flahaut, J., Weitz, C. M., **Gross, C.**, Parente, Horgan, B. H. N. (2014). Acidic Alteration Environments on Mars and Implications for Habitability. *AGU Fall Meeting, San Francisco, Calif.*, Abstract P41A-3885

Bishop, J. L., Horgan, B., Wray, J. J., Loizeau, D., **Gross, C.**, McGuire, P. C., Parente, M., Seelos, F., Viviano-Beck, C. and Murchie, S. L. (2014). Composition and Stratigraphy of Acidic Components at Mawrth Vallis, Mars. *European Planetary Science Congress (EPSC), Cascais, Portugal, 7-12 September*, Abstract # 694

McGuire, P. C., Walter, S. H. G., van Gasselt, S., Dumke, A., Dunker, T., **Gross, C.**, Michael, G., Wendt, L., Audouard, J., Ody, A. and Poulet, F. (2014). Global Hybrid HRSC+OMEGA Image Mosaics of Mars. *European Planetary Science Congress (EPSC), Cascais, Portugal, 7-12 September*, Abstract # 414

Gross, C., Carter, J., Sowe, M., Bishop, J. L. (2014). Excavation of Altered Sediments in the Northern Plains of Mars. *European Planetary Science Congress (EPSC), Cascais, Portugal, 7-12 September*, Abstract # 365

Gross, C., Carter, J., Sowe, M., Bishop, J. L. (2014). Uplifted Sediments in the Northern Plains of Mars? *Eighth International Conference on Mars, July 14-18 2014, Pasadena, California*. Abstract # 1116

McGuire, P. C., Walter, S. H. G., van Gasselt, S., Dumke, A., Dunker, T., **Gross, C.**, Michael, G., Wendt, L., Audouard, J., Ody, A. and Poulet, F. (2014). Global HRSC Image Mosaics of Mars: Dodging for High-Pass Filtering, Combined with Low-Pass-Filtered OMEGA Mosaics. *Eighth International Conference on Mars, July 14-18 2014, Pasadena, California*. Abstract # 1118

Gross, C., Noel, A., Bishop, J.L., Al-Samir, M., J. Flahaut, McGuire, P.C., Seelos, F., Weitz, C., Murchie, S. (2014). Investigating the Mineralogy, Morphology and Stratigraphy of Mound B in Juventae Chasma, Mars using Multiple Datasets. 45th Lunar and Planetary Science Conference, Abstract # 1918

McGuire, P.C., Walter, S.H.G., van Gasselt, S., Dumke, A., **Gross, C.**, Michael, G., Wendt, L. (2014). Towards automated/global color mosaicking of MEx/HRSC images of Mars. 45th Lunar and Planetary Science Conference, Abstract # 1899

Cull, S., McGuire, P.C., **Gross, C.**, Dumke, A. (2013). Stratigraphic mapping of hydrated phases in Western Ius Chasma, Mars. *AGU Fall Meeting, San Francisco, Calif.*, Abstract P23F-1844

Gross, C., Sowe, M. (2013). Soffen Crater in the Terra Cimmeria Region of Mars. 44th Lunar and Planetary Science Conference, Abstract # 2470

- Gross, C.**, Airo, A., Al-Samir, M., Sowe, M., Nabhan, S., Bishop, J. L., van Gasselt, S. (2013). Martian Crater-Lake Environments and their Potential Range of Biological Deposits. *44th Lunar and Planetary Science Conference, Abstract # 2452*
- McGuire, P. C., Arvidson, R. E., Bishop, J. L., Brown, A. J., Cull, S., Green, R. O., **Gross, C.**, Hash, C. D., Hauber, E., Humm, D. C., Jaumann, R., LeDeit, L., Malaret, E. R., Martin, T. Z., Marzo, G. A., Morgan, M. F., Murchie, S. L., Mustard, J. F., Neukum, G., Parente, M., Platz, T., Roush, T. L., Seelos, F. P., Seelos, K. D., Smith, M. D., Sowe, M., Tirsch, D., Walter, S., Wendt, L., Wiseman, S. M., Wolff, M. J. (2013). Mapping Minerals on Mars with CRISM: Atmospheric and Photometric Correction for MRDR Map Tiles, Version 2, and Comparison to OMEGA. *44th Lunar and Planetary Science Conference, Abstract # 1581*
- Al-Samir, M., Bishop, J. L., Flahaut, J., Kneissl, T., van Gasselt, S., **Gross, C.**, Jaumann, R. (2012). Formation and evolution of ILDs in Juventae Chasma and implications from fractures at mound B. *AGU Fall Meeting, San Francisco, Calif., Abstract # P11E-1864*
- Sowe, M., **Gross, C.**, Walter, S., Bishop, J. L., Ramsey, M., Al-Samir, M. (2012). The Peruvian Pisco Formation as analogy for layered sulphate deposits on Mars. *3rd Conference on Terrestrial Mars Analogues, 25-27 October 2012, Marrakech, Morocco*
- Gross, C.**, Sowe, M., Wendt, L., Bishop, J. L., Fairén, A. G. (2012). Phyllosilicates in Bamberg Crater, Mars. *43rd Lunar and Planetary Science Conference, Abstract # 2356*
- Gross, C.**, Wendt, L., Combe, J.-Ph., Jodlowski, P., Marzo, G. A., Roush, T. L., McCord, T., Halbach, P., Neukum, G. (2012). Investigating the Phyllosilicate Bearing Micoud Crater in the Northern Plains of Mars. *43rd Lunar and Planetary Science Conference, Abstract # 1795*
- Al-Samir, M., van Berk, W., Kneissl, T., van Gasselt, S., **Gross, C.**, Wendt, L., Jaumann, R. (2012). A Model Scenario for Kieserite-Dominated Evaporites in Juventae Chasma, Mars. *43rd Lunar and Planetary Science Conference, Abstract # 2453*
- Wendt, L., **C. Gross**, T. Kneissl, M. Sowe, J.-Ph. Combe, L. Le Deit, P. C. McGuire and G. Neukum (2011). Sulfates and Iron Oxides in Ophir Chasma, Mars, *GRSG and OGEO workshop at ESA/ESRIN, Frascati, Italy, from the 7th to the 9th of December 2011*
- Gross, C.**, Wendt, L., Combe, J.-Ph., Jodlowski, P., Marzo, G.A., Roush, T.L., McCord, T., Halbach, P., Neukum, G. (2011). Investigation on a Pyllosilicate-Bearing Crater in the Northern Plains of Mars. *42nd Lunar and Planetary Science Conference, Abstract #1875*
- Jodlowski, P., **Gross, C.**, Wendt, L., Halbach, P., Neukum, G. (2011). Geologic/Geomorphologic Mapping of a Complex Impact Crater in the Northern Plains of Mars. *42nd Lunar and Planetary Science Conference, Abstract #1899*
- Wendt, L., **Gross, C.**, Kneissl, T., Sowe, M., Combe, J.-P., LeDeit, L., McGuire, P.C., Neukum, G. (2011). Sulfates and iron oxides in Ophir Chasma, Mars, based on OMEGA and CRISM observations. *European Geosciences Union General Assembly, Vienna; Geophysical Research Abstracts, Vol. 13, EGU2011-7364*
- Wendt, L., **Gross, C.**, Kneissl, T., Sowe, M., Combe, J.-P., LeDeit, L., McGuire, P.C., Neukum, G. (2011). Mineralogy and Stratigraphy of Sulfates and Ferric Oxides in Ophir Chasma, Mars. *42nd Lunar and Planetary Science Conference, Abstract # 1775*

Roush, T.L., Marzo, G.A., Fonti, S., Orofino, V., Blanco, A., **Gross, C.**, Wendt, L. (2011). Assessing Spectral Evidence of Aqueous Activity in Two Putative Martian Paleolakes. *42nd Lunar and Planetary Science Conference, Abstract # 1181*

Bonnici, A., **Gross, C.**, McGuire, P.C., Ormö, J., Walter, S., Wendt, L. (2010). The Cyborg Astrobiologist: Compressing Images for the Matching of Prior Textures and for the Detection of Novel Textures. *European Planetary Science Congress 2010 Vol. 5, EPSC2010-162*

Boche-Sauvan, L., Foing, B. H., Stoker, C., Ehrenfreund, P., Wendt, L., **Gross, C.**, Thiel, C., Peters, S., Borst, A., Zavaleta, J., Sarrazin, P., Blake, D., Page, J., Pletser, V., Monaghan, E., Mahapatra, P., Noroozi, A., Giannopoulos, P., Calzada, A., Walker, R., Zegers, T., Exogeolab, ILEWG Exohab Team, Eurogeomars Team (2010). ILEWG ExoHab & EuroGeo-Mars Campaigns: Habitability & Human Operations. *41st Lunar and Planetary Science Conference, Abstract # 1759*

Borst, A., Peters, S., Foing, B. H., Stoker, C., Wendt, L., **Gross, C.**, Zavaleta, J., Sarrazin, P., Blake, D., Ehrenfreund, P., Boche-Sauvan, L., Page, J., McKay, C., Batenburg, P., Drijkoningen, G., Slob, E., Poulakis, P., Visentin, G., Noroozi, A., Gill, E., Guglielmi, M., Freire, M., Walker, R., Sabbatini, M., Pletser, V., Monaghan, E., Ernst, R., Oosthoek, J., Mahapatra, P., Wills, D., Thiel, C., Lebreton, J. P., Zegers, T., Chicarro, A., Koschny, D., Vago, J., Svedhem, H., Davies, G., Westenberg, A., Edwards, J., Exogeolab Team, Eurogeomars Team (2010). Geochemical Results from EuroGeoMars MDRS Utah 2009 Campaign. *41st Lunar and Planetary Science Conference, Abstract # 2744*

Ehrenfreund, P., Foing, B. H., Stoker, C., Zavaleta, J., Quinn, R., Blake, D., Martins, Z., Sephton, M., Becker, L., Orzechowska, G., van Sluis, C., Boche-Sauvan, L., **Gross, C.**, Thiel, C., Wendt, L., Sarrazin, P., Mahapatra, P., Direito, S., Roling, W., Eurogeo-mars MDRS Team (2010). EuroGeoMars Field Campaign: Sample Analysis of Organic Matter and Minerals. *41st Lunar and Planetary Science Conference, Abstract # 1723*

Hendrikse, J., Foing, B. H., Monaghan, E., Stoker, C., Zavaleta, J., Selch, F., Ehrenfreund, P., Wendt, L., **Gross, C.**, Thiel, C., Peters, S., Borst, A., Sarrazin, P., Blake, D., Boche-Sauvan, L., Page, J., Pletser, V., Mahapatra, P., Wills, D., McKay, C., Davies, G., van Westrenen, W., Batenburg, P., Drijkoningen, G., Slob, E., Poulakis, P., Visentin, G., Noroozi, A., Gill, E., Guglielmi, M., Freire, M., Walker, R., Exogeolab Team, Eurogeomars Team (2010). Highlights from Remote Controlled Rover for EuroGeoMars MDRS Campaign. *41st Lunar and Planetary Science Conference, Abstract # 2435*

Fairen, A. G., Chevrier, V., Abramov, O., Marzo, G. A., Gavin, P., Davila, A. F., **Gross, C.**, Kneissl, T., Roush, T. L., Bishop, J. L., Tornabene, L. L., Dohm, J. M., Rodriguez, J. A. P., Schulze-Makuch, D., McKay, C. P. (2010). Toro Crater: First Evidence for Hesperian Phyllosilicates on Mars. *41st Lunar and Planetary Science Conference, Abstract # 2683*

Wendt, L.; **Gross, C.**; Kneissl, T.; Sowe, M.; Combe, J.-P.; Le Deit, L.; McGuire, P. C.; Neukum, G. (2010). Sulfates and Iron Oxides in Ophir Chasma, Mars. *41st Lunar and Planetary Science Conference, Abstract # 1699*

McGuire, P.C., Arvidson, R.E., Bishop, J.L., Brown, A.J., Cull, S., Green, R.O., **Gross, C.**, Hash, C.D., Hauber, E., Humm, D.C., Jaumann, R., Le Deit, L., Malaret, E.R., Martin, T.Z., Marzo, G.A., Morgan, M.F., Murchie, S.L., Mustard, J.F., Neukum, G., Parente, M., Platz, T., Roush, T.L., Seelos, F.P., Seelos, K.D., Smith, M.D., SOWE, M., Tirsch, D., Walter, S. Wendt, L., Wiseman, S.M., Wolff, M.J. (2010). Mapping Minerals on Mars with CRISM: Atmospheric, Thermal, and Photometric Correction for MRDR Map Tiles and Comparison to OMEGA. *EPSC 5, Rome, Italy, September 20-25, 2010, Abstract #163*

Fairén, A. G., Marzo, G. A., Chevrier, V., Gavin, P., Davila, A. F., **Gross, C.**, Kneissl, T., Roush, T. L., Bishop, J. L., Dohm, J. M., Tornabene, L. L., McKay, C. P. (2010). Toro Crater: The Case for Hesperian Phyllosilicates on Mars. *Astrobiology Science Conference 2010: Evolution and Life: Surviving Catastrophes and Extremes on Earth and Beyond*, LPI Contribution No. 1538, p.5588

Foing, B. H., Stoker, C., Zhavaleta, J., Ehrenfreund, P., Quinn, R., Blake, D., Martins, Z., Sephton, M., Becker, L., Orzechowska, G., van Sluis, C., Boche-Sauban, L., **Gross, C.**, Thiel, C., Wendt, L., Sarrazin, P., Mahapatra, P., Direito, S., Roling, W., EuroGeoMars MDRS Team (2010). Eurogeomars Field Campaign: Sample Analysis of Organic Matter and Minerals. *Astrobiology Science Conference 2010: Evolution and Life: Surviving Catastrophes and Extremes on Earth and Beyond*, LPI Contribution No. 1538, p.5656

Foing, B. H.; Boche-Sauvan, L.; Stoker, C.; Ehrenfreund, P.; Wendt, L.; **Gross, C.**; Thiel, C.; Peters, S.; Borst, A.; Zhavaleta, J.; Sarrazin, P.; Blake, D.; Page, J.; Pletser, V.; Monaghan, E.; Mahapatra, P.; Wills, D.; Noroozi, A.; Walker, R.; Zegers, T.; Exogeolab; Exohab Team; Eurogeomars Team (2010). ExoHab and EuroGeoMars Campaigns: Human Exploration and Astrobiology. *Astrobiology Science Conference 2010: Evolution and Life: Surviving Catastrophes and Extremes on Earth and Beyond*, LPI Contribution No. 1538, p.5625

Foing, B. H.; Mahapatra, P.; Boche-Sauvan, L.; Som, S.; Page, J.; Stoker, C.; Zhavaleta, J.; Sarrazin, P.; Blake, D.; Poulakis, P.; Visentin, G.; Noroozi, A.; Ehrenfreund, P.; Barton, A.; Lebreton, J. P.; Zegers, T.; Koschny, D.; Peters, S.; Borst, A.; Monaghan, E.; Wills, D.; Thiel, C.; Wendt, L.; **Gross, C.**; Nijman, F.; Pletser, V.; McKay, C.; Davies, G.; van Westrenen, W.; Batenburg, P.; Drijkoningen, G.; Slob, E.; Gill, E.; Guglielmi, M.; Freire, M.; Walker, R.; Exogeolab Team (2010). ExoGeoLab Test Bench for Landers, Rovers and Astrobiology Instruments. *Astrobiology Science Conference 2010: Evolution and Life: Surviving Catastrophes and Extremes on Earth and Beyond*. LPI Contribution No. 1538, p.5477

Ehrenfreund, Pascale, Foing, B. H., Stoker, C., Zhavaleta, J., Orzechowska, G., Kotler, M., Martins, Z., Sephton, M., Becker, L., Quinn, R., van Sluis, C., Boche-Sauvan, L., **Gross, C.**, Thiel, C., Wendt, L., Sarrazin, P., Mahapatra, P., Direito, S., Roling, W. (2010). EuroGeoMars Field Campaign: habitability studies in preparation for future Mars missions. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany. Symposium F, session 34, paper number F34-0013-10, 2010cosp...38.3299E

Gross, C., Wendt, L., McGuire P.C. (2009). The Cyborg Astrobiologist: Teaching Computers to Find Uncommon or Novel Areas of Geological Scenery in Real-time. Test and Results from Crew 77,MDRS 2009. European Space Agency - *ExoGeoLab-ExoHab-Eurogeomars Workshop ESTEC, Noordwijk, The Netherlands, 2-3 April 2009*

Wendt, L., **Gross, C.** (2009) Raman Studies at the Mars Desert Research Station. European Space Agency - *ExoGeoLab-ExoHab-Eurogeomars Workshop ESTEC, Noordwijk, The Netherlands, 2-3 April 2009*

Borst, A., Peters, S., **Gross, C.**, Wendt, L., Sarrazin, P. (2009). InXitu Terra XRD/XRF Campaign Results. European Space Agency - *ExoGeoLab-ExoHab-Eurogeomars Workshop ESTEC, Noordwijk, The Netherlands, 2-3 April 2009*

Wendt, L., **Gross, C.**, McGuire, P.C., Bonnici, A., Foing, B.H., Souza-Egipsy, Bose, R., Walter, S., V., Ormö, J., Díaz-Martínez, E., Oesker, M., Ontrup, J., Haschke, R. and Ritter, H. (2009). The Cyborg Astrobiologist: Teaching Computers to Find Uncommon or Novel Areas of Geological Scenery in Real-time. *European Space Agency – 43rd ESLAB Symposium – International Conference on Comparative Planetology: Venus – Earth – Mars, ESTEC, Noordwijk, The Netherlands, 11-15 May 2009*

Kneissl, T., **Gross, C.** (2009). GIS-Anwendungen für planetare Oberflächen am Beispiel Mars. 15. *Deutschsprachige ESRI Anwenderkonferenz, Bregenz.*

Gross, C., Wendt, L., Dumke, A. and Neukum, G. (2009). Episodic Floodings at Maja Valles and Juventae Chasma. *European Planetary Science Congress, Vol. 4, EPSC2009-555*

Gross, C., Wendt, L., Dumke, A. and Neukum, G. (2009). Further Evidence for Multiple Flooding Events at Juventae Chasma and Maja Valles, Mars. *40th Lunar and Planetary Science Conference , Abstract # 1890*

Wendt, L., **Gross, C.**, McGuire P.C., Combe, J.-P., Neukum G. (2009). Analysis of Juventae Chasma Sulfate mound B using the Multiple-Endmember Linear Spectral Unmixing Model (MELSUM) on CRISM Data. *40th Lunar and Planetary Science Conference, Abstract # 1531*

Gross, C., Wendt, L., Dumke, A. and Neukum, G. (2009). Juventae Chasma and Maja Valles, Mars: Further Evidence for Multiple Flooding Events. *European Geosciences Union General Assembly, Vienna; Geophysical Research Abstracts, Vol. 11, EGU2009-8854*

Wendt, L., **Gross, C.**, McGuire P.C., Combe, J.-P., Neukum G. (2009). Analyzing CRISM Data from mound B in Juventae Chasma, Mars, with the Multiple-Endmember Linear Spectral Unmixing Model MELSUM. *European Geosciences Union General Assembly, Vienna; Geophysical Research Abstracts, Vol. 11, EGU2009-9211*