

PUBLICATIONS (PEER-REVIEWED JOURNAL)

1. Quantin-Nataf, C., Lozac'h, L., Thollot, P., Loizeau, D., Fernando, J., Bultel, B., Allemand, P., Dubuffet, F., Poulet, F., Ody, A., **Clenet, H.**, Leyrat, C. and Harrisson, S., MarsSI: Martian surface data processing Information System, *Planetary and Space Science* 150, 157-170, 2018
2. Marinoni, A. and **Clenet, H.**, Higher order nonlinear hyperspectral unmixing for mineralogical analysis over extraterrestrial bodies, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, in press, 10.1109/JSTARS.2017.2699083, 2017
3. Nakhostin, S., **Clenet, H.**, Corpetti, T., and Courty, N., Joint anomaly detection and spectral unmixing for planetary hyperspectral images, *IEEE Transactions on Geoscience and Remote Sensing* 54, 6879-6894, 2016
4. Bultel, B., Quantin, C., Andreani, M., **Clenet, H.** and Lozac'h, L., Deep alteration between Hellas and Isidis Basins, *Icarus* 260, 141-160, 2015
5. **Clenet, H.**, Jutzi, M. Barrat, J.-A., Asphaug, E., Benz, W. and Gillet, Ph., A deep crust-mantle boundary in the asteroid 4 Vesta, *Nature* 511, 303-306, 10.1038/nature13499, 2014
6. **Clenet, H.**, Pinet, P., Ceuleneer, G., Daydou, Y. Heuripeau, F., Rosemberg, C., Bibring, J.-P., Bellucci, G., Altieri, F., Gondet, B., and the OMEGA team, A systematic mapping procedure based on Modified Gaussian Model to characterize magmatic units from olivine/pyroxenes mixtures: application to Syrtis Major volcanic shield on Mars, *JGR* 118, 1632-1655, 2013
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9. Flahaut, J., J. F. Mustard, C. Quantin, **H. Clenet**, P. Allemand and P. Thomas, Evidence for compositional dikes intruding preserved Noachian crust in Valles Marineris, Mars, *Geophysical Research Letter*, 38, L15202, 2011
10. **Clenet, H.**, P. Pinet, Y. Daydou, F. Heuripeau, C. Rosemberg, D. Baratoux and S. Chevrel, A new systematic approach using the Modified Gaussian Model: Insight for the characterization of chemical composition of olivines, pyroxenes and olivine-pyroxene mixtures, *Icarus*, 213, 404-422, 2011
11. Williams, D. A., R. Greeley, L. Manfredi, R. Fergason, J.-P. Combe, F. Poulet, P. Pinet, C. Rosemberg, **H. Clenet**, T.B. McCord, J. Raitala, G. Neukum, Surface-compositional properties of the Malea Planum region of the Circum-Hellas Volcanic Province, Mars, *Earth Planet. Sci. Lett.*, 294, 451-465, 2010
12. **H. Clénet**, G. Ceuleneer, P. Pinet, B. Abily, Y. Daydou, E. Harris and C. Dantas, Thick sections of layered ultramafic cumulates in the Oman ophiolite revealed by an airborne hyper-spectral survey: petrogenesis and relationship to mantle diapirism, *Lithos*, Vol. 114, Issues 3-4, 265-281, 2010
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CONFERENCES (ORAL PRESENTATION)

1. **Marinoni, A.* and Clenet, H.**, Identification of mafic minerals on Mars by nonlinear hyperspectral unmixing, 8th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing, Los Angeles, 2016
2. **Clenet, H.***, Jutzi, M., Barrat, J.-A. and Gillet, Ph., Adapted Modified Gaussian Model: no detection of olivine in regions predicted to be mantle-rich from models of planet-scale collisions, 45th Lunar and Planetary Science Conference, Abstract #1349, 2014
3. **Bultel, B.***, Quantin, C., Andreani, M. and **Clenet, H.**, Deep alteration between Hellas and Isidis Basins: characterization of carbonates and phyllosilicates using near 2.3-2.5 μm combinations of absorptions in CRISM data, 45th Lunar and Planetary Science Conference, Abstract #1710, 2014
4. **Clenet, H.***, Jutzi, M., Barrat, J.-A. and Gillet, Ph., Adapted Modified Gaussian Model: no detection of olivine in regions predicted to be mantle-rich from models of planet-scale collisions, Vesta in the Light of Dawn: First Exploration of a Protoplanet in the Asteroid Belt, Houston, Abstract #2013, 2014
5. **Clenet, H.***, Quantin, C., Andreani, M., Ceamanos, X., Allemand, P. and Pinet, P. C., Primitive environment on Early Mars: relation between phyllosilicates detection and Noachian crust composition in the vicinity of Valles Marineris, Serpentine Days Workshop, Porquerolles Island, France, 2012
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7. **Clenet, H.***, Quantin, C., Ceamanos, X., Flahaut, J., Allemand, P., Pinet, P. C. and Daydou, Y., Heterogeneity of the crustal composition in the vicinity of Valles Marineris, Planetary volcanism workshop, Toulouse, France, 2012
8. C. Quantin*, J. Flahaut, **H. Clenet**, P. Allemand and P. Thomas, Crustal contact between Tharsis edge and the primitive Martian crust, Planetary volcanism workshop, Toulouse, France, 2012
9. **H. Clenet***, C. Quantin, X. Ceamanos, J. Flahaut, P. Allemand, P. C. Pinet and Y. Daydou, Crustal composition in the vicinity of Valles Marineris, Mars, as seen from the central peaks of impact craters, 43rd Lunar and Planetary Science Conference, Abstract #1486, 2012
10. **H. Clenet**, C. Quantin* and P. Allemand, Carbonate-bearing crustal exposure in an impact crater associated with an outflow channel context, First Landing Site Workshop, Washington, 2012
11. Quantin, C.*, Flahaut, J., **Clenet, H.** and Allemand, P., The first Gy of Martian history exposed in Coprates Chasma, Valles Marineris, First Landing Site Workshop, Washington, 2012
12. H. Clenet*, C. Quantin, J. Flahaut, X. Ceamanos, P. Pinet, Y. Daydou and P. Allemand, Compositional diversity of mafic rocks in the vicinity of Valles Marineris, Mars, using Modified Gaussian Model, EPSC-DPS Joint Meeting, Nantes, France, 2011
13. Flahaut J.*, **H. Clenet**, J. F. Mustard, C. Quantin and P. Allemand, Phyllosilicates and low calcium pyroxene-rich Noachian crust exposures in the walls of Valles Marineris, Mars, 41st Lunar and Planetary Science Conference, 2010
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15. **Clenet H.***, Heuripeau F., Pinet P., Daydou Y., Ceuleneer G., Rosemberg C., Baratoux D., Chevrel S., MGM deconvolution of hyperspectral data applied to the study of mafic minerals units in Oman's ophiolite (Earth) and Syrtis Major volcano (Mars), 2^o International Workshop Exploring Mars and its Earth Analogues, Trento, Italy, 2007
16. **H. Clénet***, P. Pinet, G. Ceuleneer, F. Heuripeau, Y. Daydou, C. Rosemberg, D. Baratoux, S. Chevrel, P. Launeau, Déconvolution MGM (Modèle Gaussien Modifié) de données hyperspectrales dans le cas de la détection des minéraux mafiques : Application à l'ophiolite d'Oman, Atelier PNTS Hyperspectrale, Nantes, 2007
17. P. Pinet*, **H. Clenet**, S. Chevrel, D. Baratoux, Y. Daydou, F. Heuripeau, C. Rosemberg, F. Poulet, S. LeMouélic, J. Mustard, J.-P. Bibring, G. Bellucci & the OMEGA team, Mineralogy variations across Syrtis Major and surroundings as inferred from visible-near-infrared spectroscopy by OMEGA/Mars Express, EGU, Vienne, 2007.
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1. Albetis, J., Jacquin, A., Nor-Guttler, F., **Clenet, H.**, Goulard, M., Poilve, H., Rousseau, J., Barbier, M., and Duthoit, S., UAV multispectral images for precision viticulture: potentialities to detect Flavescence dorée and Grapevine Trunk Diseases, 20th GiESCO International Meeting, Mendoza, Argentine, 2017
2. **Clenet, H.**, Akhtman, Y., Constantin, D., Rehak, M., Le Dantec, N., Bajjouk, T., Petit, T. and Delacourt, C., UAV based multispectral imaging over a lagoon with corals in Reunion Island, 9th EARSeL SIG Imaging Spectroscopy workshop, 2015
3. **Clenet, H.**, Jutzi, M., Barrat, J.-A., Asphaug, E., Benz, W. and Gillet, Ph., A deep Moho in “small planet” Vesta and implication regarding the chondritic nature of protoplanets, AGU Fall Meeting, San Fransisco, 2014
4. **Clenet, H.**, Pinet, P., Quantin, C. and Gillet, Ph., The adapted Modified Gaussian Model: a tool to characterize the composition of magmatic rocks on terrestrial “planets”, 6th whispers conference, 2014
5. Rozel, A., **Clenet, H.**, Douté, S. and Quantin, C., Mineralogical characterization using neural networks: composition of mafic minerals in Martian meteorites from their spectra., 6th whispers conference, 2014
6. Bultel, B., Quantin, C., Andreani, M. and **Clenet, H.**, Data reduction of CRISM data to highlight alteration minerals, 6th whispers conference, 2014
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9. Bultel, B., Quantin, C., Andreani, M. and **Clenet, H.**, A new CRISM data analysis tool for the detection of miscellaneous alteration phases, European Planetary Science Congress, London, 2013
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17. J. Flahaut, C. Quantin, J. F. Mustard, **H. Clénet**, P. Allemand and P. Thomas, Evidence for preserved dikes intruding the Noachian crust and major geologic transitions in the walls of Valles Marineris, Mars, EPSC-DPS Joint Meeting, Nantes, Abstract #527, 2011
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