

Elena Martellato

Publications

Peer-Reviewed Journal Papers:

1. Ferrari, S., M. Massironi, S. Marchi, P.K. Byrne, C. Klimczak, **E. Martellato**, G. Cremonese: *Age relationships of the Rembrandt basin and Enterprise Rupes*, Mercury. Geol. Soc. London Sp. Pub. 401, in: Platz, Massironi, Byrne, Hiesinger (eds) “Volcanism and Tectonism Across the Inner Solar System”
DOI: [10.1144/SP401.20](https://doi.org/10.1144/SP401.20)
2. **Martellato, E.**, B.H. Foing, J. Benkhoff: *Numerical modelling of impact crater formation associated with isolated lunar skylight candidates on lava tubes*, Planet. Space Sci. 86, 33–44, 2013
DOI: [10.1016/j.pss.2013.06.010](https://doi.org/10.1016/j.pss.2013.06.010)
3. Cremonese, G., **E. Martellato**, F. Marzari, E. Kuhrt, F. Scholten, F. Preusker, K. Wünnemann, P. Borin, M. Massironi, E. Simioni, W. Ip, and The OSIRIS team: *Hydrocode simulations of the largest crater on asteroid Lutetia*, Planet. Space Sci. 66, 147–154, 2012
DOI: [10.1016/j.pss.2012.01.001](https://doi.org/10.1016/j.pss.2012.01.001)
4. Thomas, N., C. Barbieri, H.U. Keller, P. Lamy, H. Rickman, R. Rodrigo, H. Sierks, K.P. Wenzel, G. Cremonese, L. Jorda, M. Küppers, S. Marchi, F. Marzari, M. Massironi, F. Preusker, F. Scholten, K. Stephan, M.A. Barucci, S. Besse, M.R. El-Maarry, S. Fornasier, O. Groussin, S.F. Hviid, D. Koschny, E. Kührt, **E. Martellato**, R. Moissl, C. Snodgrass, C. Tubiana, J.-B. Vincent: *The geomorphology of (21) Lutetia: Results from the OSIRIS imaging system onboard ESA’s Rosetta spacecraft*, Planet. Space Sci. 66, 96–124, 2012
DOI: [10.1016/j.pss.2011.10.003](https://doi.org/10.1016/j.pss.2011.10.003)
5. Cremonese, G., P. Borin, **E. Martellato**, F. Marzari, M. Bruno: *New Calibration of the Micrometeoroid Flux on Earth*, Astrophys. J. Lett. 749, L40, 2012
DOI: [10.1088/2041-8205/749/2/L40](https://doi.org/10.1088/2041-8205/749/2/L40)
6. Marchi, S., M. Massironi, G. Cremonese, **E. Martellato**, L. Giacomini, L.M. Prockter: *The effects of the target material properties and layering on the crater chronology: The case of Raditladi and Rachmaninoff basins on Mercury*, Planet. Space Sci. 59, 1968–1980, 2011
DOI: [10.1016/j.pss.2011.06.007](https://doi.org/10.1016/j.pss.2011.06.007)
7. Monegato, G., M. Massironi, **E. Martellato**, G. Teza: *Omeonga — A possible large impact structure on the Eastern Kasai Province (D.R. Congo)?*, Meteoritics Planet. Sci. 46, 1804–1813, 2011
DOI: [10.1111/j.1945-5100.2011.01296.x](https://doi.org/10.1111/j.1945-5100.2011.01296.x)
8. Massironi, M., L. Giacomini, S. Ferrari, **E. Martellato**, G. Cremonese, S. Marchi, A. Coradini: *Benefits of the Proposed Magia Mission for Lunar Geology*, Earth Moon Planets 107, 267–297, 2010
DOI: [10.1007/s11038-011-9378-3](https://doi.org/10.1007/s11038-011-9378-3)
9. Massironi, M., G. Cremonese, S. Marchi, **E. Martellato**, S. Mottola, R.J. Wagner: *Correction to “Mercury’s geochronology revised by applying Model Production Function to Mariner 10 data: Geological implications”*, Geophys. Res. Lett. 37, L19203, 2010
DOI: [10.1029/2010GL045068](https://doi.org/10.1029/2010GL045068)
10. Flamini, E., F. Capaccioni, L. Colangeli, G. Cremonese, A. Doressoundiram, J.L. Josset, Y. Langevin, S. Debei, M.T. Capria, M.C. De Sanctis, L. Marinangeli, M. Massironi, E. Mazzotta Epifani, G. Naletto, P. Palumbo, P. Eng, J.F. Roig, A. Caporali, V. Da Deppo, S. Erard, C. Federico, O. Forni, M. Sgavetti, G. Filacchione, L. Giacomini, G. Marra, **E. Martellato**, M. Zusi, M. Cosi, C. Bettanini, L. Calamai, M. Zaccariotto, L. Tommasi, M. Dami, J. Fikai Veltroni, F. Poulet, Y. Hello, and the SIMBIOSYS Team: *SIMBIO–SYS: The spectrometer and imagers integrated observatory system for the BepiColombo planetary orbiter*, Planet. Space Sci. 58, 125–143, 2010
DOI: [10.1016/j.pss.2009.06.017](https://doi.org/10.1016/j.pss.2009.06.017)
11. Massironi, M., G. Cremonese, S. Marchi, **E. Martellato**, S. Mottola, R.J. Wagner: *Mercury’s geochronology revised by applying Model Production Function to Mariner 10 data: Geological implications*, Geophys. Res. Lett. 36, L21204, 2009
DOI: [10.1029/2009GL040353](https://doi.org/10.1029/2009GL040353)
12. Marchi, S., S. Mottola, G. Cremonese, M. Massironi, **E. Martellato**: *A New Chronology for the Moon and Mercury*, Astron. J. 137, 4936–4948, 2009
DOI: [10.1088/0004-6256/137/6/4936](https://doi.org/10.1088/0004-6256/137/6/4936)

13. Giacomini, L., M. Massironi, **E. Martellato**, G. Pasquarè, A. Frigeri, G. Cremonese: *Inflated flows on Daedalia Planum (Mars)? Clues from a comparative analysis with the Payen volcanic complex (Argentina)*, *Planet. Space Sci.* **57**, 556–570, 2009
DOI: [10.1016/j.pss.2008.12.001](https://doi.org/10.1016/j.pss.2008.12.001)

Theses:

1. **E. Martellato**. *The Importance of Being a Crater: A tool in Planetary Surface Analysis and Datation*, Ph.D. thesis, Centro Interdipartimentale di Studi e Attività Spaziali "G. Colombo", Univ. of Padova, Padova, Italy (2011) 236 pp. (<http://paduaresearch.cab.unipd.it/3826/>)
2. **E. Martellato**. *Analysis of impact craters on the Lunar and Hermean surfaces* (in Italian), Laurea thesis, Dipartimento di Fisica "G. Galilei", Univ. of Padova, Padova, Italy (2006) 214 pp.

Other Professional Publications:

1. **Martellato, E.**, V. Da Deppo: *Calibration of the Integrating Sphere for the radiometric calibration of STC*, Tech. Rep. BC-SIM-OAPD-TN-013_STC_IntegratingSphere, 2014
2. **Martellato, E.**, G. Cremonese: *Stellar fields database for the in-flight calibration of STC*, Tech. Rep. BC-SIM-OAPD-TN-010_STC_StarsDatabase, 2008
3. Coradini, A., C. Barbieri, G. Bellucci, E. Carolo, S. Casotto, G. Cerinola, P. Cerroni, L. Colangeli, G. Cremonese, G. De Angelis, M.C. De Sanctis, M. Di Martino, C. Federico, F. Ferri, G. Filacchione, L. Giacomini, L. Giacomini, C. Grava, V. Iafolla, L. Marinangeli, **E. Martellato**, M. Massironi, V. Mennella, A. Migliorini, G. Minelli, G. Naletto, S. Nazzareni, P. Paolicchi, C. Pauselli, G. Strazzulla: *The Moon: an unavoidable step in the exploration of the Solar System*. ASI Int. Rep., 2007

International Conference and Workshop Proceedings:

1. Da Deppo, V., **E. Martellato**, E. Simioni, D. Borrelli, M. Dami, G. Aroldi, G. Naletto, I. Fikai Veltroni, G. Cremonese: *Preliminary results of the optical calibration for the stereo camera STC onboard the bepicolombo mission*, ICSO 2014, 2014
2. Da Deppo, V., **E. Martellato**, G. Rossi, G. Naletto, V. Della Corte, F. Capaccioni, G. Filacchione, M. Zusi, P. Palumbo, G. Aroldi, M. Baroni, D. Borrelli, L. Tommasi, M. Dami, I. Fikai Veltroni, E. Flamini, G. Cremonese: *Characterization of the integrating sphere for the on-ground calibration of the SIMBIOSYS instrument for the BepiColombo ESA mission*, in Proc. SPIE **9143**, 914344, 2014
3. Cremonese, G., V. Da Deppo, G. Naletto, **E. Martellato**, S. Debei, C. Barbieri, C. Bettanini, M.T. Capria, M. Massironi, M. Zaccariotto: *Observing Mercury: from Galileo to the stereo camera on the BepiColombo mission*, in Proc. IAU Symposium **269**, 213–218, 2010
4. **Martellato, E.**, G. Cremonese, F. Marzari, M. Massironi, M.T. Capria: *Analysis of the impact craters on the Mercury's surface*, in Mem. S.A.It. Suppl. **11**, 124–129, 2007

International Conference and Workshop Abstracts

1. Cremonese, G., A. Lucchetti, **E. Martellato**, N. Oklay, J.B. Vincent, H. Sierks, the OSIRIS team: *Simulation of impact feature on comet 67P/churyumov-Gerasimenko, as imaged by OSIRIS/Rosetta*, AGU Fall Meeting 2013, 15–19/12/2014, San Francisco, CA, USA, #P41C–3944
2. **Martellato, E.**, G. Cremonese, A. Lucchetti, M. Massironi, F. Marzari, A.M. Bramson, S. Byrne, S. Mattson: *Ground ice on Mars: numerical modelling of a terraced crater in Arcadia Planitia*, 46th DPS 2014, 9–14/11/2014, Tucson, AZ, USA, #2069585
3. Lucchetti, A., R. Pozzobon, G. Cremonese, M. Massironi, A.P. Rossi, L. Marinangeli, **E. Martellato**: *Filled Craters in Arabia Terra: Numerical Modelling Results from Firsoff Crater*, 45th LPSC 2014, 17–21/03/2014, The Woodlands, TX, USA, #1405
4. Pozzobon, R., F. Mazzarini, A.P. Rossi, A. Lucchetti, M. Pondrelli, L. Marinangeli, **E. Martellato**, G. Cremonese, M. Massironi: *Genesis and fluid source in Arabia crater mounds: mapping, fractal analysis, and impact simulations*, AGU Fall Meeting 2013, 9–13/12/2013, San Francisco, CA, USA, #P23F–1842
5. **Martellato, E.**, M.S. Robinson, G. Cremonese, A. Lucchetti, *Numerical modelling of Linné crater*, 8th EPSC 2013, 8–3/09/2013, London, UK, #649
6. **Martellato, E.**, J. Benkhoff, F. Preusker, G. Cremonese, B. Foing, M. Massironi, J. Oberst: *Numerical modeling of Raditladi and Rachmaninoff basins*, 44th LPSC 2013, 18–22/03/2013, The Woodlands, TX, USA, #1405

7. **Martellato, E.**, J. Benkhoff, G. Cremonese, B.H. Foing, M. Massironi, J. Oberst, F. Preusker, *Raditladi and Rachmaninoff: Numerical Modelling*, 7th EPSC 2012, 23–28/09/2012, Madrid, Spain, #637
8. **Martellato, E.**, J. Benkhoff, G. Cremonese, B.H. Foing, M. Massironi, J. Oberst, F. Preusker, *Raditladi and Rachmaninoff: Comparative Studies*, 7th EPSC 2012, 23–28/09/2012, Madrid, Spain, #635
9. **Martellato, E.**, B.H. Foing, J. Benkhoff: *Analysis of Lava Tubes and Skylights in the Lunar Exploration Context*, 7th EPSC 2012, 23–28/09/2012, Madrid, Spain, #632
10. **Martellato, E.**, J. Benkhoff, L. Colangeli, B.H. Foing, S. Marchi: *Numerical modeling of the Caloris basin*, Workshop on the Early Solar System Impact Bombardment II, 1–3/02/2012, Houston, TX, USA, #1649
11. Giacomini, L., S. Marchi, M. Massironi, **E. Martellato**: *Crater-size frequency distribution as a tool to investigate the uppercrust layering*, 6th EPSC–DPS 2011, 3–7/10/2011, Nantes, France, #855
12. **Martellato, E.**, G. Cremonese, L. Giacomini, M. Massironi, S. Marchi, J. Oberst, F. Preusker, L. Prockter: *Raditladi: numerical modeling of a Hermean peak-ring basin*, 6th EPSC–DPS 2011, 3–7/10/2011, Nantes, France, #833
13. Cremonese, G., **E. Martellato**, F. Marzari, E. Kürt, F. Scholten, F. Preusker, K. Wünnemann, P. Borin, M. Massironi, E. Simioni, W. Ip: *Hydrocode simulations of few Lutetia craters*, 6th EPSC–DPS 2011, 3–7/10/2011, Nantes, France, #705
14. Borin, P., G. Cremonese, F. Marzari, **E. Martellato**, M. Bruno: *New calibration of the micrometeoroid flux on the Earth*, 6th EPSC–DPS 2011, 3–7/10/2011, Nantes, France, #455
15. Ferrari, S., M. Massironi, L. Giacomini, **E. Martellato**, G. Cremonese, D.A. Rothery, L.M. Prockter, S. Marchi: *Geo-structural mapping and age determinations of Rembrandt Basin region*, 5th EPSC 2010, 19–25/09/2010, Rome, Italy, #712
16. **Martellato, E.**, G. Monegato, M. Massironi, G. Cremonese: *Hydrocode Simulations of OMEONGA crater formation*, 5th EPSC 2010, 19–25/09/2010, Rome, Italy, #558
17. Ferrari, S., M. Massironi, **E. Martellato**, L. Giacomini, G. Cremonese, D.A. Rothery, L.M. Prockter: *Geo-structural mapping and age determinations of Rembrandt basin*, 38th COSPAR Scientific Assembly 2010, 18–24/07/2010, Bremen, Germany, #B07-0033-10
18. Massironi, M., G. Cremonese, S. Marchi, **E. Martellato**, L. Giacomini, S. Ferrari: *A review of Model Production Function age determinations on the Mercury surface*, 38th COSPAR Scientific Assembly 2010, 18–24/07/2010, Bremen, Germany, #B07-0011-10
19. Cremonese, G., M.T. Capria, V. Da Deppo, G. Forlani, O. Forni, Y. Langevin, M. Massironi, G. Naletto, E. Simioni, S. Debei, E. Flamini, M. Sgavetti, L. Giacomini, **E. Martellato**: *Expected performance of the stereocamera on board the BepiColombo mission*, 38th COSPAR Scientific Assembly 2010, 18–24/07/2010, Bremen, Germany, #B07-0005-10
20. **Martellato, E.**, G. Cremonese, M. Massironi, G. Monegato: *Omeonga (Wembo-Nyama): iSALE Hydrocode Simulations*, Nördlingen 2010: The Ries Crater, the Moon, and the Future of Human Space Exploration, 25–27/06/2010, Nördlingen, Germany, #1559
21. **Martellato, E.**, S. Ferrari, L. Giacomini, G. Cremonese, S. Marchi, M. Massironi, D.A. Rothery: *A Glance at Model Production Flux Ages on Mercury Surface*, EGU General Assembly 2010, 2–7/05/2010, Wien, Austria, #5296
22. **Martellato, E.**, M. Massironi, G. Cremonese, S. Marchi, S. Ferrari, L.M. Prockter: *Age Determination of Raditladi and Rembrandt Basins and Related Geological Units*, 41st LPSC 2010, 1–5/03/2010, The Woodlands, TX, USA, #2148
23. Monegato, G., M. Massironi, **E. Martellato**: *The Ring Structure of Wembo-Nyama (Eastern Kasai, R.D. Congo): A Possible Impact Crater in Central Africa*, 41st LPSC 2010, 1–5/03/2010, The Woodlands, TX, USA, #1601
24. Cremonese, G., V. Da Deppo, G. Naletto, **E. Martellato**, S. Debei, C. Barbieri: *Observing Mercury: from Galileo to the StereoCamera on the BepiColombo Mission*, Galileo's Medicean Moons, 7–9/01/2010, Padova, Italy
25. Cremonese, G., Y. Langevin, L.M. Lara, G. Neukum, M.T. Capria, S. Debei, J.M. Castro, P. Eng, S. van Gasselt, A. Adriani, A.T. Basilevsky, T. Behnke, C. Bettanini, F. Capaccioni, L. Colangeli, V. Da Deppo, M.C. De Sanctis, T. Denk, O. Fabel, G. Filacchione, G. Galuba, K. Gwinner, O. Hartmann, J. Haruyama, H. Hiesinger, H. Hoffmann, R. Jaumann, **E. Martellato**, F. Marzari, M. Massironi, H. Michaelis, G. Naletto, J. Oberst, P. Palumbo, M. Pertile, N. Schmedemann, N. Schneider, F. Tosi, M. Zaccariotto: *Wide angle and stereo cameras for JGO*, 4th EPSC 2009, 13–18/09/2009, Potsdam, Germany

26. Giacomini, L., M. Massironi, G. Pasquarè, **E. Martellato**, C. Carli, L. Pompilio, G. Cremonese: *Spectral and morphological analysis of Daedalia Planum lava field*, AGU Fall Meeting 2008, 15–19/12/2008, San Francisco, CA, USA, #P43A-1385
27. Marchi, S., C. Barbieri, S. Casotto, G. Cremonese, V. Da Deppo, F. Ferri, M. Lazzarin, S. Magrin, **E. Martellato**, F. Marzari, S. Mottola, E. Simioni and the OSIRIS Team: *Analysis of Steins Cratering History using the OSIRIS/ROSETTA Images*, 40th DPS 2008, 10–15/10/2008, Ithaca, NY, USA, #40,28.32
28. Marchi, S., S. Mottola, G. Cremonese, M. Massironi, **E. Martellato**: *A new chronology for the Moon and Mercury*, 40th DPS 2008, 10–15/10/2008, Ithaca, NY, USA, #40,9.04
29. Marchi, S., S. Mottola, G. Cremonese, **E. Martellato**: *A new model for age determination of lunar regions*, 10th ACM 2008, 13–18/07/2008, Baltimore, MD, USA, #1405
30. **Martellato, E.**, G. Cremonese, S. Marchi, M. Massironi, P. Borin, L. Giacomini, S. Mottola: *Cratering Analysis and Age Determination of the Mercury's Surface*, 37th COSPAR Scientific Assembly 2008, 13–19/07/2008, Montréal, Canada, #B07-0046-08
31. Cremonese, G., and **STC/SIMBIOSYS Team**: *The Stereo Camera on the ESA mission BepiColombo; a novel approach*, 37th COSPAR Scientific Assembly 2008, 13–19/07/2008, Montréal, Canada, # B07-0010-08
32. Giacomini, L., M. Massironi, G. Pasquarè, C. Carli, **E. Martellato**, A. Frigeri, G. Cremonese, A. Bistacchi, C. Federico: *Comparative analysis between Payen and Daedalia Planum lava fields*, 37th COSPAR Scientific Assembly 2008, 13–19/07/2008, Montréal, Canada, #B02-0023-08
33. Giacomini, L., G. Cremonese, M. Massironi, E. Carolo, **E. Martellato**: *Analysis of two lunar regions by relative age determination and geological interpretation*, 2nd EPSC 2007, 19–24/08/ 2007, Potsdam, Germany, #382
34. Cremonese, G., **E. Martellato**, F. Marzari, M. Massironi, M.T. Capria: *Analysis of impact craters of Mercury*, 1st EPSC 2006, 18–22/09/2006, Berlin, Germany, #206