

Anni Määttänen

Liste des Publications/Publication list

18.11.2022

Publications

Chapitres d'ouvrages / Book chapters

5. **Anni Määttänen** & Montmessin, F. (2021, April 26). Clouds in the martian atmosphere. In *Oxford Research Encyclopedia of Planetary Science*. Oxford University Press. doi: <https://doi.org/10.1093/acrefore/9780190647926.013.114>
4. J. M. C. Plane, G. J. Flynn, **Anni Määttänen**, J. E. Moores, A. R. Poppe, J. DiCarrillo-Sanchez and C. Listowski (2018): Impacts of Cosmic Dust on Planetary Atmospheres and Surfaces. Chapter in: "Cosmic Dust from the Lab to the Stars", published in *Space Science Reviews*, accepted for publication. See item 31 in the list of articles below.
3. F. Montmessin, **Anni Määttänen**: Temperature, Clouds and Aerosols in the Terrestrial Bodies of the Solar System. (2017) Editors: Dr. Hans J. Deeg, Dr. Juan Antonio Belmonte, *Handbook of Exoplanets*, Springer, ISBN: 978-3-319-30648-3 (Print) 978-3-319-30648-3 (Online).
2. P. Read **et al.** (2017): The Martian Planetary Boundary Layer (chapter). In: Robert M. Haberle, R. Todd Clancy, François Forget, Michael D. Smith, Richard W. Zurek (Eds), *The Atmosphere and Climate of Mars*, Cambridge University Press, ISBN: 978-1-1070-1618-7.
1. **Anni Määttänen**, K. Pérot, F. Montmessin, A. Hauchecorne (2013): Mesospheric clouds on Mars and on the Earth. Chapter 16 in: S. Mackwell, A. A. Simon-Miller, M. Bullock, and J. Harder (Eds), *Comparative Climatology of the Terrestrial Planets*, University of Arizona Press. ISBN: 978-0-8165-3059-5 | eISBN: 978-0-8165-9975-2.

Articles à comité de lecture / Peer-reviewed articles

2022

47. **Anni Määttänen**, S. Guilbon, J. Burgalat, F. Montmessin (2022). Development of a new cloud model for Venus (MAD-VenLA) using the Modal Aerosol Dynamics approach, *Advances in Space Research*, <https://doi.org/10.1016/j.asr.2022.09.063>.
46. T. Bertrand, M. Kahre, R. Urata, **Anni Määttänen**, F. Montmessin, J. Wilson, M. Wolff (2022). Impact of the coagulation of dust particles on Mars during the 2018 global dust storm Icarus, <https://doi.org/10.1016/j.icarus.2022.115239>

45. **Anni Määttä**nen, F. Lefèvre, L. Verdier, F. Montmessin, C. Listowski, S. Guilbon, A. Fedorova, O. Korablev (2022). Ozone vertical distribution in Mars Years 27–30 from SPICAM/MEX UV occultations, *Icarus*, 115162, <https://doi.org/10.1016/j.icarus.2022.115162>.

44. **Anni Määttä**nen, C. Mathé, J. Audouard, C. Listowski, E. Millour, F. Forget, F. González-Galindo, L. Falletti, D. Bardet, L. Teinturier, M. Vals, A. Spiga, F. Montmessin (2022). Troposphere-to-mesosphere microphysics of carbon dioxide ice clouds in a Mars Global Climate Model, *Icarus*, 115098, <https://doi.org/10.1016/j.icarus.2022.115098>.

2021

43. Lefèvre, F., Trokhimovskiy, A., Fedorova, A., Baggio, L., Lacombe, G., **Anni Määttä**nen, et al. (2021). Relationship between the Ozone and Water Vapor columns on Mars as Observed by SPICAM and Calculated by a Global Climate Model. *Journal of Geophysical Research: Planets*, 126, e2021JE006838. <https://doi.org/10.1029/2021JE006838>

42. A. Piccialli, A.C. Vandaele, L. Trompet, L. Neary, S. Viscardy, J.T. Erwin, **Anni Määttä**nen, F. Daerden, Y. Willame, S. Robert, S. Aoki, V. Wilquet, F. Lefèvre, F. Montmessin (2021). Impact of gradients at the martian terminator on the retrieval of ozone from SPICAM/MEx, *Icarus*, 353, 113598, <https://doi.org/10.1016/j.icarus.2019.113598>.

2020

41. A. Piccialli, J. A. Rathbun, A.-C. Levasseur-Regourd, **Anni Määttä**nen, A. Milillo, M. Rengel, A. Rotundi, M. Taylor, O. Witasse, F. Altieri, P. Drossart, and A. C. Vandaele: Participation of women scientists in ESA solar system missions: a historical trend. *Adv. Geosci.*, 53, 169–182, 2020.

40. Erard, S., Cecconi, B., Le Sidaner, P., Chauvin, C., Rossi, A.P., Minin, M., Capria, T., Ivanovski, S., Schmitt, B., Génot, V., André, N., Marmo, C., Vandaele, A.C., Trompet, L., Scherf, M., Hueso, R., **Anni Määttä**nen, Carry, B., Achilleos, N., Soucek, J., Pisa, D., Benson, K., Fernique, P. and Millour, E., 2020. Virtual European Solar & Planetary Access (VESPA): A Planetary Science Virtual Observatory Cornerstone. *Data Science Journal*, 19(1), p.22. DOI: <http://doi.org/10.5334/dsj-2020-022>. [arXiv https://arxiv.org/abs/1907.06521](https://arxiv.org/abs/1907.06521)

39. D. Banfield, A. Spiga, C. Newman, F. Forget, M. Lemmon, R. Lorenz, N. Murdoch, D. Viudez-Moreiras, J. Pla-Garcia, R. Garcia, P. Lognonné, C. Perrin, L. Martire, Ö. Karatekin, N. Teanby, B. Van Hove, J. Maki, B. Kenda, N. Mueller, S. Rodriguez, T. Kawamura, J. McClean, A. Stott, C. Charalambous, E. Millour, C. Johnson, A.

Mittelholz, **Anni Määttä**, S. Lewis, C. John, S. Stähler, S. Ceylan, D. Giardini, T. Warren, W. Pike, I. Daubar, M. Golombek, L. Rolland, R. Widmer-Schmidrig, D. Mimoun, E. Beucler, A. Jacob, A. Lucas, M. Baker, V. Ansan, K. Hurst, L. Mora-Sotomayor, S. Navarro Lopez, J. Torres, A. Lepinette, A. Molina, M. Marin-Jimenez, J. Gomez-Elvira, V. Peinado, J. Rodriguez-Manfredi, B. Carcich, S. Sackett, C. Russell, T. Spohn, S. Smrekar, and W. Banerdt (2020): The atmosphere of Mars as observed by InSight. *Nature Geoscience*. <https://doi.org/10.1038/s41561-020-0534-0>

38. A. A. Fedorova, F. Montmessin, O. Korablev, M. Luginin, A. Trokhimovskiy, D. A. Belyaev, N. I. Ignatiev, F. Lefèvre, J. Alday, P. G. J. Irwin, K. S. Olsen, J.-L. Bertaux, E. Millour, **Anni Määttä**, A. Shakun, A. V. Grigoriev, A. Patrakeev, S. Korsas, N. Kokonkov, L. Baggio, F. Forget, C. F. Wilson (2020): Stormy water on Mars: the distribution and saturation of atmospheric water during the dusty season. *Science*, aay9522. DOI: 10.1126/science.aay9522.

2019

[The following article was withdrawn by the authors due to data error: bias caused by atmospheric dust is currently being corrected by the SPICAM team and resubmission of the paper is planned before end of 2020.] **Anni Määttä**, F. Lefèvre, F. Montmessin, C. Listowski, S. Guilbon, A. Fedorova, O. Korablev (2019). Climatology of the ozone vertical distribution on Mars from SPICAM/MEX UV occultations. *Icarus*. <https://doi.org/10.1016/j.icarus.2019.113428>

37. Oleg Korablev, Ann Carine Vandaele, Franck Montmessin, Anna A. Fedorova, Alexander Trokhimovskiy, François Forget, Franck Lefèvre, Frank Daerden, Ian R. Thomas, Loïc Trompet, Justin T. Erwin, Shohei Aoki, Séverine Robert, Lori Neary, Sébastien Viscardy, Alexey V. Grigoriev, Nikolay I. Ignatiev, Alexey Shakun, Andrey Patrakeev, Denis A. Belyaev, Jean-Loup Bertaux, Kevin S. Olsen, Lucio Baggio, Juan Alday, Yuriy S. Ivanov, Bojan Ristic, Jon Mason, Yannick Willame, Cédric Depiesse, Laszlo Hetey, Sophie Berkenbosch, Roland Clairquin, Claudio Queirolo, Bram Beeckman, Eddy Neefs, Manish R. Patel, Giancarlo Bellucci, Jose-Juan Lopez-Moreno, Colin F. Wilson, Giuseppe Etiope, Lev Zelenyi, Håkan Svedhem, Jorge L. Vago & the **ACS & NOMAD Team** : No detection of methane on Mars from early ExoMars Trace Gas Orbiter observations. *Nature*, April 2019, <https://doi.org/10.1038/s41586-019-1096-4>.

36. Ann Carine Vandaele, Oleg Korablev, Frank Daerden, Shohei Aoki, Ian R. Thomas, Francesca Altieri, Miguel López-Valverde, Geronimo Villanueva, Giuliano Liuzzi, Mike Smith, Justin Erwin, Loïc Trompet, Anna A. Fedorova, Franck Montmessin, Alexander Trokhimovskiy, Denis Belyaev, Nikolay Ignatiev, Mikhail Luginin, David Bolsée, Todd Clancy, Ed Cloutis, Cédric Depiesse, Jean-Claude Gérard, Marco Giuranna, Bernd Funke, Maia Garcia-Comas, Francisco Gonzalez-Galindo, Jacek Kaminski, Ozgur Karatekin, Frank Lefèvre, Manuel López-Puertas, Arnaud Mahieux, Jon Mason, Mike Mumma, Lori Neary, Eddy Neefs, Bojan Ristic, Séverine Robert, Frédéric Schmidt, Nicholas A. Teanby, Sébastien Viscardy, Yannick Willame, James Whiteway, Valérie Wilquet, Mike Wolff, Alexey Grigoriev, Alexey Shakun, Andrey Patrakeev, Igor Maslov, Dmitry Patsaev, Daria Betsis, Jean-Loup Bertaux, Giancarlo Bellucci, Manish R. Patel,

Jose-Juan Lopez-Moreno, François Forget, Colin Wilson, Håkan Swedhem, Jorge L. Vago, D. Rodionov, and the NOMAD and ACS teams : Martian dust storm impact on atmospheric H₂O and D/H observed by ExoMars Trace Gas Orbiter. *Nature*, April 2019, <https://doi.org/10.1038/s41586-019-1097-3>

2018

35. A. Sánchez-Lavega, A. Garro, T. del Río-Gaztelurrutia, R. Hueso, I. Ordoñez-Etxeberria, H. Chen Chen, A. Cardesín-Moinelo, D. Titov, S. Wood, M. Almeida, A. Spiga, F. Forget, **Anni Määttänen**, H. Hoffmann, B. Gondet (2018). A seasonally recurrent annular cyclone in Mars northern latitudes and observations of a companion vortex. *Journal of Geophysical Research: Planets*, 123, 3020-3034. <https://doi.org/10.1029/2018JE005740>
34. Plane, J. M. C., Carrillo-Sanchez, J. D., Mangan, T. P., Crismani, M. M. J., Schneider, N. M. and **Anni Määttänen** (2018). Meteoric Metal Chemistry in the Martian Atmosphere. *Journal of Geophysical Research: Planets*, 123, 695–707. <https://doi.org/10.1002/2017JE005510>
33. Miguel A. Lopez-Valverde, Jean-Claude Gerard, Francisco Gonzalez-Galindo, Ann-Carine Vandaele, Ian Thomas, Oleg Korablev, Nikolai Ignatiev, Anna Fedorova, Franck Montmessin, **Anni Määttänen**, Sabrina Guilbon, Franck Lefevre, Manish R. Patel, Sergio Jimenez-Monferrer, Maya Garcia-Comas, Alejandro Cardesin, Colin F. Wilson, R. T. Clancy, Armin Kleinboehl, Daniel J. McCleese, David M. Kass, Nick M. Schneider, Michael S. Chaffin Jose Juan Lopez-Moreno, Julio Rodriguez (2018), Investigations of the Mars upper atmosphere with Exomars Trace Gas Orbiter. *Space Sci Rev* (2018) 214: 29.
32. **Anni Määttänen**, J. Merikanto, H. Henschel, J. Duplissy, R. Makkonen, I. K. Ortega and H. Vehkamäki (2018), New parameterizations for neutral and ion-induced sulfuric acid-water particle formation in nucleation and kinetic regimes, *J. Geophys. Res. Atmos.*, 122, doi:10.1002/2017JD027429.
31. J. M. C. Plane, G. J. Flynn, **Anni Määttänen**, J. E. Moores, A. R. Poppe, J. Di.Carrillo-Sanchez and C. Listowski (2018): Impacts of Cosmic Dust on Planetary Atmospheres and Surfaces. *Space Science Reviews* 214:23. (Chapter in: "Cosmic Dust from the Lab to the Stars", see item 4 in the list of book chapters above).
30. O. Korablev, F. Montmessin, A. Trokhimovskiy, A.A. Fedorova, A.V. Shakun, A.V. Grigoriev, B.E. Moshkin, N.I. Ignatiev, F. Forget, F. Lefevre, K. Anufreychik, I. Dzuban, Y. S. Ivanov, Y.K. Kalinnikov, T.O. Kozlova, A. Kungurov, V. Makarov, F. Martynovich, I. Maslov, D. Merzlyakov, P. P. Moiseev, Y. Nikolskiy, A. Patrakeev, D. Patsaev, A. Santos-Skripko, O. Sazonov, N. Semena, A. Semenov, V. Shashkin, A. Sidorov, A.V. Stepanov, I. Stupin, D. Timonin, A.Y. Titov, A. Viktorov, A. Zharkov, F. Altieri, G. Arnold, D.A. Belyaev, J.L. Bertaux, D.S. Betsis, N. Duxbury, T. Encrenaz, T. Fouchet, J.-C. Gerard, D. Grassi, S. Guerlet, P. Hartogh, Y. Kasaba, I. Khatuntsev, V.A. Krasnopolsky, R.O. Kuzmin, E. Lellouch, M.A. Lopez-Valverde, M. Luginin, **Anni Määttänen**, E. Marcq, J. Martin Torres, A.S. Medvedev, E. Millour, K.S. Olsen, M.R.

Patel, C. Quantin-Nataf, A.V. Rodin, V. I. Shematovich, I. Thomas, N. Thomas, L. Vazquez, M. Vincendon, V. Wilquet, C.F. Wilson, L.V. Zasova, L.M. Zelenyi, M.P. Zorzano (2018), "The Atmospheric Chemistry Suite (ACS) of Three Spectrometers for the ExoMars 2016 Trace Gas Orbiter", *Space Sci Rev* 214(7), DOI 10.1007/s11214-017-0437-6.

29. S. Erard, B. Cecconi, P. Le Sidaner, A.P. Rossi, M.T. Capria, B. Schmitt, V. Génot, N. André, A.C. Vandaele, M. Scherf, R. Hueso, **Anni Määttänen**, W. Thuillot, B. Carry, N. Achilleos, C. Marmo, O. Santolik, K. Benson, P. Fernique, L. Beigbeder, E. Millour, B. Rousseau, F. Andrieu, C. Chauvin, M. Minin, S. Ivanoski, A. Longobardo, P. Bollard, D. Albert, M. Gangloff, N. Jourdane, M. Bouchemit, J.-M. Glorian, L. Trompet, T. Al-Ubaidi, J. Juaristi, J. Desmars, P. Guio, O. Delaa, A. Lagain, J. Soucek, D. Pisa (2018), VESPA: A community-driven Virtual Observatory in Planetary Science, *Planetary and Space Science* 150, 65-85.

2017

28. F. Montmessin, O. Korablev, F. Lefèvre, J.-L. Bertaux, A. Fedorova, A. Trokhimovskiy, G. Lacombe, A. Reberac, L. Maltagliati, Y. Willame, S. Guslyakova, J.-C. Gérard, A. Stiepen, D. Fussen, N. Matshvili, **Anni Määttänen**, F. Forget, O. Witasse, F. Leblanc, A.C. Vandaele, E. Marcq, B. Sandel, B. Gondet, N. Schneider, M. Chaffin, N. Chapron (2017), SPICAM on Mars Express: a 10 year in-depth survey of the Martian atmosphere, *Icarus* 297, 195-216, <http://dx.doi.org/10.1016/j.icarus.2017.06.022>.

2016

27. Piccialli A., M.A. López-Valverde, **A. Määttänen**, F. González-Galindo, J. Audouard, F. Altieri, F. Forget, P. Drossart, B. Gondet, and J.-P. Bibring (2016), CO₂ non-LTE limb emissions in Mars' atmosphere as observed by OMEGA/Mars Express, *J. Geophys. Res. Planets*, 121, doi:10.1002/2015JE004981.

26. Merikanto, J., J. Duplissy, **A. Määttänen**, H. Henschel, N. M. Donahue, D. Brus, S. Schobesberger, M. Kulmala, and H. Vehkamäki (2016), Effect of ions on sulfuric acid-water binary particle formation I: Theory for kinetic and nucleation-type particle formation and atmospheric implications. *J. Geophys. Res. Atmos.*, 121, 1736-1751, doi:10.1002/2015JD023538.

25. Duplissy, J., J. Merikanto, A. Franchin, G. Tsagkogeorgas, J. Kangasluoma, D. Wimmer, H. Vuollekoski, S. Schobesberger, K. Lehtipalo, R. C. Flagan, **Anni Määttänen**, .. et al. (2016), Effect of ions on sulfuric acid-water binary particle formation II: Experimental data and comparison with QC-normalized classical nucleation theory. *J. Geophys. Res. Atmos.*, 121, 1752-1775, doi:10.1002/2015JD023539.

2015

24. B. Fleury, N. Carrasco, E. Marcq, L. Vettier, **Anni Määttänen**, Water formation in the upper atmosphere of the early Earth. *Astrophysical Journal (The)*, IOP Science, 2015, 807 (2), pp. L29. doi: 10.1088/2041-8205/807/2/L29

2014

23. **Anni Määttä**nen, M. Douspis: Estimating the variability of contact parameter temperature dependence with the Monte Carlo Markov Chain method. *GeoResJ* 3-4, 46-55, 2014. doi: 10.1016/j.grj.2014.09.002
22. T. Navarro, J.-B. Madeleine, F. Forget, A. Spiga, E. Millour, F. Montmessin and **Anni Määttä**nen: Global Climate Modeling of the Martian water cycle with improved microphysics and radiatively active water ice clouds. *J. Geophys. Res.* 119(7), 1479-1495, 2014, doi: 10.1002/2013JE004550.
21. J.-B. Madeleine, J. W. Head, F. Forget, T. Navarro, E. Millour, A. Spiga, A. Colaïtis, **Anni Määttä**nen, F. Montmessin, J. L. Dickson: Recent Ice Ages on Mars: The Role of Radiatively Active Clouds and Cloud Microphysics. *Geophys. Res. Lett.* 41(14), 4873-4879, 2014, doi: 10.1002/2014GL059861.
20. C. Listowski, **Anni Määttä**nen, F. Montmessin, A. Spiga, F. Lefèvre, Modeling the microphysics of CO₂ ice clouds within wave-induced cold pockets in the Martian mesosphere, *Icarus* 237, 239-261, 2014, doi: 10.1016/j.icarus.2014.04.022.
19. A. A. Fedorova, F. Montmessin, A. V. Rodin, O. I. Korablev, **Anni Määttä**nen, L. Maltagliati, Jean-Loup Bertaux, Evidence for a bimodal size distribution for the suspended aerosol particles on Mars, *Icarus* 231, 239-260, 2014, doi: 10.1016/j.icarus.2013.12.015.

2013

18. C. Listowski, **Anni Määttä**nen, I. Riipinen, F. Montmessin, F. Lefèvre: Near-pure vapor condensation in the martian atmosphere: CO₂ ice crystal growth. *J. Geophys. Res. Planets*, 118, 2153-2171, 2013, doi:10.1002/jgre.20149.
17. A. Spiga, J. Faure, J.-B. Madeleine, **A. Määttä**nen, F. Forget: Dust rocket storms and detached layers in the Martian atmosphere. *Journal of Geophysical Research (Planets)*, 118 (4), 746-767, 2013, doi: 10.1002/jgre.20046. Accessible à <http://arxiv.org/abs/1208.5030>.
16. L. Maltagliati, F. Montmessin, O. Korablev, A. Fedorova, F. Forget, **A. Määttä**nen, F. Lefèvre, J.-L. Bertaux: Annual survey of water vapor vertical distribution and water-aerosol coupling in the Martian atmosphere observed by SPICAM/MEx solar occultations. *Icarus* 223 (2), pp. 942-962, doi: 10.1016/j.icarus.2012.12.012, 2013.
15. **A. Määttä**nen, C. Listowski, F. Montmessin, L. Maltagliati, L. Joly, A. Reberac, J.-L. Bertaux: A complete climatology of the aerosol vertical distribution on Mars from MEx/SPICAM UV solar occultations. *Icarus* 223 (2), pp. 892-941, doi: 10.1016/j.icarus.2012.12.001, 2013.

2012

14. E. Hébrard, C. Listowski, P. Coll, B. Marticorena, G. Bergametti, **A. Määttänen**, F. Montmessin, F. Forget (2012): An aerodynamic roughness length map derived from extended martian rock abundance data. *J. Geophys. Res.*, 117, E04008, doi:10.1029/2011JE003942

2011

13. Francisco González-Galindo, **A. Määttänen**, Francois Forget, Aymeric Spiga, The martian mesosphere as revealed by CO₂ cloud observations and General Circulation Modeling, *Icarus* 216, 10-22, 2011, doi:10.1016/j.icarus.2011.08.006

12. A. Petrosyan, B. Galperin, S. E. Larsen, S. Lewis, **A. Määttänen**, P. Read, N. Rennó, P. Rogberg, H. Savijärvi, T. Siili, A. Spiga, A. Toigo, L. Vazquez: The Martian Atmospheric Boundary Layer, *Reviews of Geophysics* 49, RG3005, 46 pp., doi:10.1029/2010RG000351, 2011.

11. Ortega I.K., **Määttänen A.**, Kurtén T., Vehkamäki H.: Carbon dioxide - water clusters in the atmosphere of Mars. *Computational and Theoretical Chemistry* 965, 2-3 (2011) 353-358

2010

10. **A. Määttänen**, F. Montmessin, B. Gondet, F. Scholten, H. Hoffmann, E. Hauber, F. González-Galindo, A. Spiga, F. Forget, G. Neukum, J.-P. Bibring, J.-L. Bertaux: Mapping the mesospheric CO₂ clouds on Mars: MEx/OMEGA and MEx/HRSC observations and challenges for atmospheric models. *Icarus*, 209, 2, 452–469, 2010.

9. H. Savijärvi and **A. Määttänen**: Boundary layer simulations for the Mars Phoenix Lander site. *Q.J.Roy.Meteorol.Soc.*, 136, 651, 1497–1505, 2010.

8. F. Scholten, H. Hoffmann, **A. Määttänen**, F. Montmessin, B. Gondet, E. Hauber: Concatenation of HRSC color and OMEGA data for the determination and 3D-parametrization of high altitude CO₂ clouds in the Martian atmosphere. *Planet. Space Sci.* 58, 10, 1207–1214, 2010.

2009

7. **A. Määttänen**, T. Fouchet, O. Forni, F. Forget, H. Savijärvi, B. Gondet, R. Melchiorri, Y. Langevin, V. Formisano, M. Giuranna, J.-P. Bibring: A study of the properties of a local dust storm with Mars Express OMEGA and PFS data. *Icarus*, 201, 504–516, 2009

2007

6. **Anni Määttänen**, Hanna Vehkamäki, Antti Lauri, Ismo Napari and Markku Kulmala: Two-component nucleation kinetics and an application to Mars. *J. Chem. Phys.* **127**, 134710 (2007).

5. Hanna Vehkamäki, **Anni Määttänen**, Antti Lauri, Markku Kulmala, Paul Winkler, Aron Vrtala and Paul E. Wagner: Heterogeneous multicomponent nucleation theorems for the analysis of nanoclusters. *J. Chem. Phys.* **126**, 174707 (2007)

4. Hanna Vehkamäki, **Anni Määttänen**, Antti Lauri, Ismo Napari and Markku Kulmala: Technical note: The heterogeneous Zeldovich factor. *Atmospheric Chemistry and Physics*, **7**, 309, 2007.

2005

3. **Anni Määttänen**, Hanna Vehkamäki, Antti Lauri, Sini Merikallio, Janne Kauhanen, Hannu Savijärvi, Markku Kulmala: Nucleation studies in the Martian atmosphere. *Journal of Geophysical Research*, Vol. 110, No. E2, E02002, 2005.

2004

2. **Anni Määttänen**, Hannu Savijärvi: Sensitivity tests with a one-dimensional boundary-layer Mars model. *Boundary-layer Meteorology*, Vol. 113, pp. 305-320, 2004.

1. Hannu Savijärvi, **Anni Määttänen**, Janne Kauhanen, Ari-Matti Harri: Mars Pathfinder: new data and new model simulations. *Quarterly Journal of the Royal Meteorological Society*, Vol. 130, pp. 669-684, 2004.

Actes de conférences à comité de lecture / Peer-reviewed conference articles

2. **Anni Määttänen**, F. Ravetta, F. Montmessin, D. Bruneau, J.-F. Mariscal, M. Van Haecke, G. Fayolle, C. Montaron, D. Coscia: The MARBL experiment: towards a Martian wind lidar. 28th International Lidar-Radar Conference proceedings.

1. Puspitarini L., **Määttänen A.**, Fouchet T., Kleinboehl A., Kass D. M., Schofield J. T. : Analysis of high altitude clouds in the martian atmosphere based on Mars Climate Sounder observations. *Journal of Physics: Conference Series*, IOP Publishing, 2016, International Symposium on Sun, Earth, and Life (ISSEL), 771, pp. 012049.

Conférences aux congrès / Conference presentations

Conférences invitées / Invited talks

A. Määttänen, J. Merikanto, H. Henschel, J. Duplissy, R. Makkonen, I.K. Ortega, and H. Vehkamäki: Improved parameterizations for neutral and ion-induced H₂SO₄-H₂O particle formation. International Aerosol Modeling Algorithms Conference 2019, UC Davis, Davis, Etats-Unis, 4-6 Dec 2019.

A. Määttänen: Detecting, observing and explaining the mesospheric CO₂ clouds on Mars. Annual Aerosol Science Conference, University of Birmingham, UK, November 7, 2019.

A. Määttänen, C. Listowski: Evidence of Meteor Smoke Particles as precursors for formation of mesospheric clouds on Mars. EGU General Assembly 2017.

A. Määttänen, B. Gondet, F. Montmessin, H. Hoffmann, F. González-Galindo, A. Spiga, C. Listowski and J.-P. Bibring: Martian Mesospheric CO₂ Clouds: a Review of a Decade of Studies. 2016 AGU Fall Meeting, 12-16 Dec 2016, San Francisco, California, USA.

A. Määttänen, Montmessin F., Gondet B., Hoffmann H., Scholten F., Hauber E., Bibring J.-P., Neukum G.: Equatorial CO₂ clouds on Mars: OMEGA and HRSC data analysis. in the Third International Mars Atmosphere Modelling and Observations Workshop in Williamsburg, Virginia, USA, 10.-13.11.2008.

Invited panelist in the “New horizons” panel of promising young scientists in the 4th Mars Polar Science and Exploration Conference, Davos, Switzerland, 2.-6.10.2006.

Autres (présentations orales et posters) / Other(oral and poster presentations)

2021

172. Mathé C., Määttänen A., Audouard J., Listowski C., Millour E., Forget F., Spiga A., Bardet D., Teinturier L., Falletti L., Vals M. et al. : Global 3D modelling of Martian CO₂ clouds. European Planetary Science Congress. EPSC 2021, Sep 2021, Virtual Meeting, France. <10.5194/epsc2021-324>

171. Azria C., Määttänen A., Millour E., Schmidt F., Andrieu F., Stéphane E., Baptiste C., Le Sidaner P. : Planetary VO services on VESPA : MCD, SPICAM and EXOTOPO European Planetary Science Congress. EPSC 2021, Sep 2021, Virtual Meeting, France. <10.5194/epsc2021-267>

170. Mangan T., **Määttänen A.**, Murray B., Plane J.: Elusive ice clouds in the upper mesosphere of Venus. European Planetary Science Congress. EPSC 2021, Sep 2021, Virtual Meeting, Germany. <10.5194/epsc2021-742>

169. Erard, S. ; Cecconi, B. ; Le Sidaner, P. ; Rossi, A. P. ; Tomasik, L. ; Ivanovski, S. ; Schmitt, B. ; André, N. ; Trompet, L. ; Scherf, M. ; Hueso, R. ; Demleitner, M. ; Manaud, N. ; Taylor, M. ; Alexeev, I. ; **Määttänen, A.** ; Millour, E. ; Schmidt, F. ; Waldmann, I. ; Fernique, P. ; D'Amore, M. ; Brandt, C. ; Rothkaehl, H. ; Molinaro, M. ; Génot, V. ; Vandaale, A. C. : Planetary Data in the Virtual Observatory: VESPA (Virtual European Solar and Planetary Access) 5th Planetary Data Workshop & Planetary Science Informatics & Analytics, held virtually June 28-July 2, 2021. LPI Contribution No. 2549, id.7073

168. Mathé, Christophe ; **Määttänen, Anni** ; Audouard, Joachim ; Listowski, Constantino ; Millour, Ehouarn ; Forget, François ; Spiga, Aymeric ; Bardet, Déborah ; Teinturier, Lucas ; Falletti, Lola ; Vals, Margaux ; González-Galindo, Francisco ; Montmessin, Franck: Global 3D modelling of Martian CO₂ clouds. vEGU21, the 23rd EGU General Assembly, held online 19-30 April, 2021, id.EGU21-9457

167. Titov, Dmitrij ; Bibring, Jean-Pierre ; Cardesin, Alejandro search by orcid ; Carter, John ; Duxbury, Thomas ; Forget, François ; Giuranna, Marco ; González-Galindo, Francisco ; Holmström, Mats ; Jaumann, Ralf ; **Määttänen, Anni** ; Martin, Patrick ; Montmessin, Franck ; Orosei, Roberto ; Pätzold, Martin ; Plaut, Jeffrey ; Mex Sgs Team: Mars Express science highlights and future plans. vEGU21, the 23rd EGU General Assembly, held online 19-30 April, 2021, id.EGU21-12956

166. Caillé, Vincent ; **Määttänen, Anni** ; Spiga, Aymeric ; Falletti, Lola ; Neumann, Gregory A.: Cloud Catalog from Mars Orbiter Laser Altimeter / Mars Global Surveyor Data Using Machine Learning Algorithms. vEGU21, the 23rd EGU General Assembly, held online 19-30 April, 2021, id.EGU21-14672

2020

165. Caillé V., **Määttänen A.**, Spiga A., Falletti L., Neumann G. A.: Detecting Clouds in Mars Orbiter Laser Altimeter/Mars Global Surveyor Data with K-Means Methods AGU Fall Meeting 2020, Dec 2020, Online, United States

164. Caillé V., **Määttänen A.**, Spiga A., Falletti L., Neumann G.: Unsupervised Machine Learning Algorithms to Detect CO₂ Clouds on Mars. EPSC 2020, 14th Europlanet Science Congress 2020, Sep 2020, Virtual Meeting, Germany. 2020, (10.5194/epsc2020-758).

163. Mathé, Christophe ; **Määttänen, Anni** ; Audouard, Joachim ; Listowski, Constantino ; Millour, Ehouarn ; Forget, François ; Spiga, Aymeric ; Bardet, Déborah ; Teinturier, Lucas ; Falletti, Lola ; Vals, Margaux ; González-Galindo, Francisco ; Montmessin, Franck: Global 3D modelling of Martian CO₂ clouds. 14th Europlanet Science Congress 2020, held virtually, 21 September 2020 - 9 October, 2020. Online at <https://www.epsc2020.eu/>, id. EPSC2020-751

162. Erard, Stéphane ; Cecconi, Baptiste ; Le Sidaner, Pierre ; Rossi, Angelo Pio ; Brandt, Carlos ; Rothkaehl, Hanna ; Tomasik, Lucasz ; Ivanovski, Stavro ; Molinaro, Marco ; Schmitt, Bernard ; Génot, Vincent ; André, Nicolas ; Carine Vandaele, Ann ; Trompet, Loic ; Scherf, Manuel ; Hueso, Ricardo ; **Määttänen, Anni** ; Millour, Ehouarn ; Schmidt, Frédéric ; Waldmann, Ingo : Virtual European Solar & Planetary Access (VESPA): Progress and prospects. 14th Europlanet Science Congress 2020, held virtually, 21 September 2020 - 9 October, 2020. Online at <https://www.epsc2020.eu/>, id. EPSC2020-190

161. Titov, Dmitrij ; Bibring, Jean-Pierre ; Cardesin, Alejandro ; Duxbury, Tom ; Forget, François ; Giuranna, Marco ; González-Galindo, Francisco ; Holmström, Mats ; Jaumann, Ralf ; **Määttänen, Anni** ; Martin, Patrick ; Montmessin, Franck ; Orosei, Roberto ;

Pätzold, Martin ; Plaut, Jeffrey : Mars Express science highlights and future plans. 14th Europlanet Science Congress 2020, held virtually, 21 September 2020 - 9 October, 2020. Online at <https://www.epsc2020.eu/>, id. EPSC2020-720

160. Dmitrij Titov, Jean-Pierre Bibring, Alejandro Cardesin, Thomas Duxbury, Francois Forget, Marco Giuranna, Francisco Gonzalez-Galindo, Mats Holmström, Ralf Jaumann, **Anni Määttänen**, Patrick Martin, Franck Montmessin, Roberto Orosei, Martin Pätzold, and Jeff Plaut: Mars Express Science Highlights and Future Plans. EGU General Assembly 2020. EGU2020-22390

159. Arianna Piccialli, Julie A. Rathbun, Anny-Chantal Levasseur-Regourd, **Anni Määttänen**, Anna Milillo, Miriam Rengel, Alessandra Rotundi, Matt Taylor, Olivier Witasse, Francesca Altieri, Pierre Drossart, and Ann Carine Vandaele: Participation of women scientists in ESA Solar System missions: an historical trend. EGU General Assembly 2020. EGU2020-19310

158. Sebastien Lebonnois, Gabriella Gilli, Diogo Quirino, Vasco Silva, Thomas Navarro, Franck Lefevre, and **Anni Määttänen**: Exploring the variability of the venusian atmosphere above the clouds with the IPSL Venus GCM. EGU General Assembly 2020. EGU2020-18583

157. Anna Fedorova, Franck Montmessin, Oleg Korablev, Mikhail Luginin, Alexander Trokhimovskiy, Denis Belyaev, Juan Alday, Nikolay Ignatiev, Franck Lefevre, Kevin Olsen, Ehouarn Millour, Jean-Loup Bertaux, Alexey Shakun, Alexey Grigoriev, Andrey Patrakeev, Svyatoslav Korsa, Colin Wilson, Francois Forget, and **Anni Maattanen**: The distribution and saturation of water vapor as inferred from ACS during the first Martian year of TGO Science observations. EGU General Assembly 2020. EGU2020-17962

2019

156. **Anni Määttänen**, Franck Lefèvre, Franck Montmessin, Constantino Listowski, Sabrina Guilbon, Anna Fedorova and Oleg Korablev: Ozone Vertical Distribution on Mars from SPICAM/MEX UV Occultations. AGU Fall Meeting, San Francisco, 8-13 Dec 2019. Abstract P52C-03.

155. **A. Määttänen**, J. Merikanto, H. Henschel, J. Duplissy, R. Makkonen, I.K. Ortega, and H. Vehkamäki: Improved parameterizations for neutral and ion-induced H₂SO₄-H₂O particle formation. International Aerosol Modeling Algorithms Conference 2019, UC Davis, Davis, Etats-Unis, 4-6 Dec 2019.

154. **A. Määttänen**: Detecting, observing and explaining the mesospheric CO₂ clouds on Mars. Annual Aerosol Science Conference, University of Birmingham, UK, November 7, 2019.

153. Titov D., Bibring J.-P., Cardesin a., Duxbury T., Forget F., Giuranna M., Gonzalez-Galindo F., Holmström M., Jaumann R., **Määttänen A.**, Martin P. et al.: Mars Express science highlights and future plans. EPSC-DPS Joint Meeting 2019, Sep 2019, Geneva, Switzerland. pp. EPSC-DPS2019-190-1.

152. Piccialli A., Rathbun J. A., **Määttänen A.**, Lévassur-Regourd A. C., Vandaele A. C., Altieri F., Milillo A., Rotundi A., Rengel M., Drossart P.: Historical trend of participation of women scientists in ESA solar system missions. EGU General Assembly 2019, Apr 2019, Vienna, Austria. 21, pp. EGU2019-15200, Geophysical Research Abstracts.

151. Lefèvre F., **Määttänen A.**, Stolzenbach A., Guilbon S., Lebonnois S.: Composition and clouds, some insights and questions from the coupled IPSL Venus GCM. International Venus Conference, May 2019, Niseko, Hokkaido, Japan

2018

150. D. Titov, J.-P. Bibring, A. Cardesin, T. Duxbury, F. Forget, M. Giuranna, F. González-Galindo, M. Holmström, R. Jaumann, **Anni Määttänen**, P. Martin, F. Montmessin, R. Orosei, M. Pätzold, J. Plaut, and MEX SGS Team: Mars Express: 15 years of hard work and discoveries. Abstract EPSC2018-895. European Planetary Science Congress 2018, Berlin, Germany.

149. A. Piccialli, J. A. Rathbun, A. C. Vandaele, F. Altieri, **Anni Määttänen**, A. Milillo, A. Rotundi, M. Rengel, and P. Drossart: Participation of women scientists in ESA solar system missions: an historical trend. Abstract EPSC2018-772. European Planetary Science Congress 2018, Berlin, Germany.

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147. S. Erard, B. Cecconi, P. Le Sidaner, A. Pio Rossi, T. Capria, B. Schmitt, V. Génot, N. André, J.-M. Glorian, A. C. Vandaele, M. Scherf, R. Hueso, **Anni Määttänen**, B. Carry, N. Achilleos, C. Marmo, O. Santolik, J. Soucek, K. Benson, and P. Fernique: Virtual European Solar & Planetary Access (VESPA): Year 3. Abstract EPSC2018-348. European Planetary Science Congress 2018, Berlin, Germany.

146. **A. Määttänen**, F. Lefèvre, S. Guilbon, C. Listowski and F. Montmessin: Ozone vertical distribution on Mars from SPICAM/MEX UV occultations. Abstract EGU2018-17398, EGU General Assembly 2018, Vienna, Austria, April 2018.

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Carry, N. Achilleos, C. Marmo, O. Santolik, K. Benson, and P. Fernique: Virtual European Solar & Planetary Access (VESPA): a Virtual Observatory in Planetary Science. Abstract EGU2018-4993, EGU General Assembly 2018, Vienna, Austria, April 2018.

143. **A. Määttä**, F. Lefèvre, S. Guilbon, C. Listowski, F. Montmessin: OZONE VERTICAL DISTRIBUTION ON MARS FROM SPICAM/MEX UV OCCULTATIONS. Mars Science Workshop “From Mars Express to ExoMars”, Madrid, Spain, February 2018.

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2017

140. J.M.C. Plane, J. Audouard, C. Listowski, T. Mangan, **A.E. Maattanen**, F. Montmessin, F. Forget, E. Millour, A. Spiga, M.M.J. Crismani, N.M. Schneider : Formation of Mesospheric Clouds on Mars. P33I-01. AGU Fall Meeting, New Orleans, USA, December 2017

139. C. Listowski, **A. Määttä**, J. Audouard, and F. Montmessin: Formation of mesospheric clouds on Mars: new model results based on updated parameters. Abstract EPSC2017-600, European Planetary Science Congress, Riga, Latvia, 2017.

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137. A. Spiga, J.B. Madeleine, D. Hinson, E. Millour, F. Forget, T. Navarro, **A. Määttä**, and F. Montmessin: Original deep convection in the atmosphere of Mars driven by the radiative impact of dust and water-ice particles. Abstract EPSC2017-428, European Planetary Science Congress, Riga, Latvia, 2017.

136. J. Audouard, **A. Määttä**, C. Listowski, F. Forget, E. Millour, and A. Spiga: Martian GCM with complete CO₂ microphysics. Abstract EPSC2017-254, European Planetary Science Congress, Riga, Latvia, 2017.

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132. **A. Määttänen**, C. Listowski: Evidence of Meteor Smoke Particles as precursors for formation of mesospheric clouds on Mars. EGU General Assembly 2017. Abstract EGU2017-8003.
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130. **A. Määttänen**, F. Lefevre, S. Guilbon, C. Listowski, F. Montmessin: Vertical Distribution of Ozone at the Terminator on Mars. Sixth international workshop on the Mars atmosphere: Modelling and observations. Granada, Spain, January 17-20, 2017.
129. A. Leboucher, **A. Määttänen**, J. Audouard, B. Gondet, F. Montmessin: Mapping the Mesospheric CO₂ Clouds on Mars. Sixth international workshop on the Mars atmosphere: Modelling and observations. Granada, Spain, January 17-20, 2017.
128. J. Audouard, **A. Määttänen**, C. Listowski, F. Forget, A. Spiga and E. Millour: A Complete CO₂ Ice Clouds Model for GCMs and Mesoscale Models. Sixth international workshop on the Mars atmosphere: Modelling and observations. Granada, Spain, January 17-20, 2017.
127. S. Erard, Z. Yin, B. Cecconi, E. Millour, **A. Määttänen**, P. Le Sidaner: Interoperable Mars Atmosphere Data Services. Sixth international workshop on the Mars atmosphere: Modelling and observations. Granada, Spain, January 17-20, 2017.
126. D. Titov, A. Cardesin, P. Martin, T. Duxbury, F. Forget, M. Giuranna, F. González-Galindo, M. Holmström, R. Jaumann, **A. Määttänen**, F. Montmessin, R. Jaumann, R. Orosei, M. Pätzold, J. Plaut, and MEX SGS Team: MARS EXPRESS: Mission Status,

Recent Findings and future Plans. Sixth international workshop on the Mars atmosphere: Modelling and observations. Granada, Spain, January 17-20, 2017.

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125. **A. Määttänen**, B. Gondet, F. Montmessin, H. Hoffmann, F. González-Galindo, A. Spiga, C. Listowski and J.-P. Bibring: Martian Mesospheric CO₂ Clouds: a Review of a Decade of Studies. Invited presentation at the 2016 AGU Fall Meeting, 12-16 Dec 2016, San Francisco, California, USA.

124. S. Erard, , B. Cecconi, P. Le Sidaner, A. Pio Rossi, M. T. Capria, B. Schmitt, N. Andre, A.-C. Vandaele, M. Scherf, R. Hueso, **A. Määttänen**, W. Thuillot, N. Achilleos, C. Marmo, O. Santolik, K. Benson : One year on VESPA, a community-driven Virtual Observatory in Planetary Science. 2016 AGU Fall Meeting, 12-16 Dec 2016, San Francisco, California, USA.

123. **A. Maattanen**, F. Lefevre, S. Guilbon, C. Listowski, F. Montmessin : Vertical distribution of ozone at the terminator on Mars. The joint DPS 48/ EPSC 11 Meeting, 16-21 Oct, 2016, Pasadena, California, USA. Poster.

122. S. Guilbon, **A. Määttänen**, J. Burgalat, F. Montmessin, A. Stolzenbach, S. Bekki : MAD-VenLA: a microphysical modal representation of clouds for the IPSL Venus GCM. The joint DPS 48/ EPSC 11 Meeting, 16-21 Oct, 2016, Pasadena, California, USA. Poster.

121. J. Audouard, **A. Määttänen**, C. Listowski, E. Millour, F. Forget, A. Spiga : Modeling CO₂ clouds with a Mars Global Climate Model. The joint DPS 48/ EPSC 11 Meeting, 16-21 Oct, 2016, Pasadena, California, USA. Poster.

120. S. Erard, , B. Cecconi, P. Le Sidaner, A. Pio Rossi, M. T. Capria, B. Schmitt, N. Andre, A.-C. Vandaele, M. Scherf, R. Hueso, **A. Määttänen**, W. Thuillot, N. Achilleos, C. Marmo, O. Santolik, K. Benson : VESPA: A Community-driven Virtual Observatory In Planetary Science. AOGS 13th Annual Meeting, 31 July - 5 Aug, 2016, Beijing, China.

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118. L. Puspitarini, **A. Määttänen**, T. Fouchet, A. Kleinboehl, D. M. Kass, J.T. Schofield: Analysis of High Altitude Clouds in the Martian Atmosphere based on Mars Climate Sounder Observations. International Symposium on Sun, Earth, and Life, Institut Teknologi Bandung, Bandung, Indonesia, June 3-4, 2016.

117. **Määttänen A.**, Guilbon S., Stolzenbach A., Bekki S., Montmessin F. : The LATMOS Venus cloud model VenLA: Status report. International Venus Conference 2016, Apr 2016, Oxford, United Kingdom.

116. S. Guilbon, **A. Määttänen**, F. Montmessin, J. Burgalat, S. Bekki: Comparison of sectional and modal cloud microphysics representations for Venus: VenLA vs. MAD-VenLA. International Venus Conference 2016, Apr 2016, Oxford, United Kingdom.

115. F. Lefèvre, A. Stolzenbach, **A. Määttänen**, S. Bekki, S. Lebonnois: Three-dimensional modelling of Venus photochemistry. International Venus Conference 2016, Apr 2016, Oxford, United Kingdom.

2015

114. A. Stolzenbach, F. Lefèvre, S. Lebonnois, **A. Maattanen** and S. Bekki: Three-Dimensional Modelling of Venus Photochemistry. American Geophysical Union Fall Meeting, 14-18 December, San Francisco, USA, 2015.

113. S. Erard, B. Cecconi, P. Le Sidaner, M. T. Capria, A. Pio Rossi, B. Schmitt, N. André, A. C. Vandaele, M. Scherf, R. Hueso, **A. Maattanen**, W. Thuillot, N. Achilleos, C. Marmo, O. Santolik, K. Benson: VESPA: Developing the Planetary Science Virtual Observatory in H2020. American Geophysical Union Fall Meeting, 14-18 December, San Francisco, USA, 2015.

112. **A. Määttänen**, S. Guilbon, A. Stolzenbach, S. Bekki, and F. Montmessin: VenLA: The LATMOS Venus cloud model. European Planetary Science Congress 2015, Sep 2015, Nantes, France. EPSC2015-634, 2015

111. S. Erard, B. Cecconi, P. Le Sidaner, T. Capria, A. P. Rossi, B. Schmitt, N. André, A.-C. Vandaele, M. Scherf, R. Hueso, **A. Määttänen**, W. Thuillot, N. Achilleos, C. Marmo, O. Santolik, K. Benson, and Ph. Bollard: VESPA: Developing the Planetary Science Virtual Observatory in H2020. European Planetary Science Congress 2015, Sep 2015, Nantes, France. EPSC2015-270, 2015

110. Sabrina Guilbon, **A. Määttänen**, Franck Montmessin. Modeling Venus' clouds with the moment method: paving the way for 3D GCM simulations. European Planetary Science Congress 2015, Sep 2015, Nantes, France. EPSC2015-614, 2015

109. C. F. Wilson, E. Marcq, W.J. Markiewicz, F. Montmessin, A. Fedorova, V. Wilquet, E.V. Petrova, N.I. Ignatiev, O.S. Shalygina, **A.E. Määttänen**, K.M. McGouldrick, G.L. Hashimoto, T. Imamura, L. Rossi, M. Luginin, J. Oschlisniok, R. Haus, C.D. Parkinson, D.V. Titov, L.V. Zasova, and S.S. Limaye: The Clouds of Venus – an overview of Venus Express results. European Planetary Science Congress 2015, Sep 2015, Nantes, France. 10, pp.EPSC2015-762-1, 2015.

108. **A. Määttänen**, Constantino Listowski, Kristell Pérot, Sabrina Guilbon, Slimane Bekki, Franck Montmessin, A. Hauchecorne. High-altitude clouds on Earth, Mars and Venus. International Union of Geodesy and Geophysics, Jun 2015, Prague, Czech Republic.

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107. **A. Määttänen**, M. Douspis: Using the Monte Carlo Markov Chain method to estimate contact parameter temperature dependence: implications for Martian cloud modelling. Geophysical Research Abstracts Vol. 17, EGU2015-3802, 2015, EGU General Assembly 2015. Poster.

106. Franck Montmessin and **the SPICAM Team**: SPICAM on Mars Express: a 10 year in-depth survey of the Martian atmosphere. Geophysical Research Abstracts Vol. 17, EGU2015-6376-1, 2015, EGU General Assembly 2015. Oral.

2014

105. **A. Määttänen**, B. Gondet, F. Montmessin, H. Hoffmann, F. González-Galindo, A. Spiga, C. Listowski and J.-P. Bibring: Mesospheric CO₂ clouds on Mars: detection, properties and origin. 8th International Conference on Mars, Abstract #1133, oral presentation.

104. **A. Määttänen**, C. Listowski, F. Montmessin, L. Maltagliati, L. Joly, A. Reberac, J.-L. Bertaux: SPICAM aerosol vertical distribution climatology from UV occultations. 8th International Conference on Mars, Abstract #1135, poster presentation.

103. F. Montmessin, F. Lefèvre, O. Korablev, A. Fedorova, J.-L. Bertaux, J.-Y. Chaufray, M. Chaffin, N. Schneider, L. Maltagliati, **A. Määttänen**, A.V. Trokhimovsky: Highway to Space: the Direct Connection between the Lower and the Upper Atmosphere of Mars sheds a New Light on the History of Water. 8th International Conference on Mars, Abstract #1188, poster presentation.

102. A. Spiga, F. Forget, J.-B. Madeleine, I. Smith, E. Millour, T. Bertrand, L. Montabone, A. Pottier, T. Navarro, **A. Määttänen**, J. Holt: A new vision on the Martian atmosphere and surface through mesoscale modeling. 8th International Conference on Mars, Abstract #1412, oral presentation.

101. T. Widemann, **A. Määttänen**, V. Wilquet, K. McGouldrick, K. L. Jessup, C. Wilson, S. Limaye, and the EuroVenus consortium: Dynamics and chemistry of Venus' large and complex cloud system : a science case for an in-situ long-term chemical laboratory. Geophysical Research Abstracts Vol. 16, EGU2014-9273, 2014 EGU General Assembly 2014. PICO presentation.

100. A. Stolzenbach, F. Lefèvre, S. Lebonnois, **A. Määttänen** and S. Bekki: Three-dimensional modelling of Venus photochemistry. Geophysical Research Abstracts Vol. 16, EGU2014-5315, 2014. EGU General Assembly 2014. Oral presentation.

99. **A. Määttänen**, S. Bekki, H. Vehkamäki, J. Julin, F. Montmessin, I. K. Ortega, and S. Lebonnois: Modeling the clouds on Venus: model development and improvement of a nucleation parameterization. Geophysical Research Abstracts Vol. 16, EGU2014-1943, 2014. EGU General Assembly 2014. Poster presentation.

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