

Liste de communications scientifiques de Gaetano Mileti

61 articles publiés dans des journaux avec revue de pair (+ 1 soumis)

5 articles publiés dans des livres

21 articles dans des publications ESA (Europ. Space Agency) et SPIE (Int. Society of Optics and Photonics)

98 articles publiés dans des comptes rendus de conférences scientifiques internationales

104 autres communications (exposés ou posters) à des conférences scientifiques

Autres: conférences grand public, manifestations, médiation scientifique et médias (en p. 19-20)

1. Articles dans des journaux avec revue (61 + 1 soumis)

W. Moreno, C. Affolderbach, M. Pellaton, G. Mileti, *Impact of microwave-field inhomogeneity in an alkali vapour cell using Ramsey double-resonance spectroscopy*, **Quantum Electronics**, 49 (3), 293-297, (2018)

N. Almat, M. Pellaton, W. Moreno, F. Gruet, C. Affolderbach, G. Mileti, *Rb vapor-cell clock demonstration with a frequency-doubled telecom laser*, **Applied Optics**, **57**, 4707-4713, (2018)

W. Moreno, C. Affolderbach, M. Pellaton, G. Mileti, *Barometric effect in vapor cell atomic clocks*, **IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control**, **65**, 1500-1503, (2018)

M. Pellaton, C. Affolderbach, A. K. Skrivervik, A. E. Ivanov, T. Debogovic, E. de Rijk, G. Mileti, *3D printed microwave cavity for atomic clock applications: proof of concept*, **Electronics Letters**, **54**, 691-693, <http://dx.doi.org/10.1049/el.2017.4176>, (2018), [Electronics Letters editorial about this article](#)

C. Affolderbach, W. Moreno, A. E. Ivanov, T. Debogovic, M. Pellaton, A. K. Skrivervik, E. de Rijk, G. Mileti, *Study of additive manufactured microwave cavities for pulsed optically pumped atomic clock applications*, **Applied Physics Letters**, **112**, 113502, (2018)

N. Almat, W. Moreno, M. Pellaton, F. Gruet, C. Affolderbach, G. Mileti, *Characterization of Frequency-Doubled 1.5- μ m Lasers for High Performance Rb Clocks*, **IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control**, **65**, 919-926, (2018)

M. Gharavipour, C. Affolderbach, F. Gruet, I. Radojičić, A. Krmpot, B. Jelenkovic, G. Mileti, *Optically-Detected Spin-Echo method for relaxation times measurements in a Rb atomic vapor*, **New Journal of Physics**, Volume 19, 063027, (2017)

A. Ivanov, C. Affolderbach, G. Mileti, A. K. Skrivervik, *Design of Atomic Clock Cavity Based on a Loop-gap Geometry and Modified Boundary Conditions*, **International Journal of Microwave and Wireless Technologies**, June (2017)

M. Gharavipour, C. Affolderbach, S. Kang, and G. Mileti, *Double-resonance spectroscopy in Rubidium vapour-cells for high performance and miniature atomic clocks*, **Journal of Physics: Conf. Series**, 793, 012007 (2017)

M. Gharavipour, C. Affolderbach, S. Kang, T. Bandi, F. Gruet, M. Pellaton, G. Mileti, *High performance vapor cell frequency standards*, **Journal of Physics: Conference Series**, 723, 012006, (2016)

R. Matthey, W. Moreno, F. Gruet, P. Brochard, S. Schilt, G. Mileti, *Rb-based stabilized laser at 1572 nm for CO2 monitoring*, **Journal of Physics: Conference Series**, 723 012034, (2016)

Y. Salvadé, F. Przygodda, M. Rohner, A. Ploster, Y. Meyer, O. Gloriot, M. Llera, R. Matthey, J. Di Francesco, F. Gruet, G. Mileti, *Interferometric measurements beyond the coherence length of the laser source*, **Optics Express**, 24 (19), 21729-21743 (2016)

S. Kang, M. Gharavipour, C. Affolderbach, G. Mileti, *Stability limitations from optical detection in Ramsey-type vapour-cell atomic clocks*, **Electronics Letters**, **51**, 1767-1769, (2015)

S. Abdullah, C. Affolderbach, F. Gruet, and G. Mileti, *Aging studies on micro-fabricated alkali buffer-gas cells for miniature atomic clocks*, **Applied Physics Letters**, 106, 163505, (2015)

R. Matthey, F. Gruet, S. Schilt, G. Mileti, *Compact Rubidium-Stabilized Multi-Frequency Reference Source in the 1.55- μ m Region*, **Optics Letters**, 40 (11), 2576-2579, (2015)

- K. Masuda, C. Affolderbach, G. Mileti, J.-C. Diels, L. Arissian, *Self-induced transparency and coherent population trapping of ^{87}Rb vapor in a mode-locked laser*, **Optics Letters**, 40, 2146-2149, (2015)
- C. Affolderbach, G.-X. Du, T. Bandi, A. Horsley, P. Treutlein, G. Mileti, *Imaging Microwave and DC Magnetic Fields in a Vapor-Cell Rb Atomic Clock*, **IEEE Transactions on Instrumentation and Measurement**, Volume 64, Issue 12, 3629-3637, (2015)
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- T. Bandi, C. Affolderbach, C. Stefanucci, F. Merli, A. K. Skrivervik, G. Mileti, *Compact high-performance continuous-wave double-resonance rubidium standard with $1.4 \times 10^{-13} \tau^{-1/2}$ stability*, **IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control**, 61, 1769 – 1778 (2014)
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- M. Violetti, M. Pellaton, F. Merli, J.-F. Zürcher, C. Affolderbach, G. Mileti, A. K. Skrivervik, *The Micro Loop-Gap Resonator: A Novel Miniaturized Microwave Cavity for Double-Resonance Rubidium Atomic Clocks*, **IEEE Journal of Sensors**, 14, 9, (2014)
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- V. Venkatraman, S. Kang, C. Affolderbach, H. Shea and G. Mileti, *Optical pumping in a microfabricated Rb vapor cell using a microfabricated Rb discharge light source*, **Applied Physics Letters**, 104, 054104, (2014)
- A. Horsley, G.-X. Du, M. Pellaton, C. Affolderbach, G. Mileti, P. Treutlein, *Imaging of Relaxation Times and Microwave Field Strength in a Microfabricated Vapor Cell*, **Physical Review A**, 88, 063407, (2013)
- F. Gruet, E. Kroemer, L. Bimboes, D. Miletic, C. Affolderbach, A. Al-Samaneh, D. Wahl, R. Boudot, G. Mileti and R. Michalzik, *Metrological Characterization of Custom-Designed 894 nm VCSELs for Chip Scale Atomic Clocks*, **Optics Express**, 21, issue 5, 5781-5792, (2013)
- R. Straessle, M. Pellaton, Y. Pétremand, C. Affolderbach, D. Briand, G. Mileti, and N. F. de Rooij, *Low-Temperature Indium Hermetic Sealing of Alkali Vapor-Cells for Chip Scale Atomic Clocks*, submitted to **Journal of Applied Physics**, 113, issue 6, 064501/1-8, (2013)
- F. Gruet, F. Vecchio, C. Affolderbach, Y. Pétremand, N. F. de Rooij, T. Maeder, G. Mileti, *A Miniature Frequency-Stabilized VCSEL system emitting at 795 nm based on LTCC modules*, **Optics and Lasers in Engineering**, 51, issue 8, 1023–1027, (2013)
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- D. Miletic, C. Affolderbach, M. Hasegawa, R. Boudot, C. Gorecki, G. Mileti, *AC Stark-shift in CPT based Cs miniature atomic clocks*, **Applied Physics B**, Volume 109, Issue 1, 89-97, September (2012)
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- M. L. Pellaton, C. Affolderbach, Y. Petremand, N. de Rooij, G. Mileti, *Study of laser-pumped double-resonance clock signals using a microfabricated cell*, **Physica Scripta**, T149, 014013, (2012)

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- E. Breschi, G. Kazakov, R. Lammegger, G. Mileti, B. Matisov, L. Windholz, *Quantitative study of destructive quantum interference effect on the $lin||lin$ CPT*, **Physical Review A**, **79**, 063837, (2009)
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- S. Schilt, R. Matthey, D. Kauffmann-Werner, C. Affolderbach, G. Mileti, L. Thévenaz, *Laser offset-frequency locking up to 20 GHz using a low-frequency electrical filter technique*, **Applied Optics**, Vol. 47, No. 24, p. 4336, (2008)
- S. Schiller, A. Görlitz, A. Nevsky, J. C. J. Koelemeij, A. Wicht, P. Gill, H. A. Klein, H. S. Margolis, G. Mileti, U. Sterr, F. Riehle, E. Peik, C. Tamm, W. Ertmer, E. Rasel, V. Klein, C. Salomon, G. M. Tino, P. Lemonde, R. Holzwarth, T. W. Hänsch, *Optical clocks in space*, **Nuclear Physics B**, Volume 166, pp. 300-302, (2006)
- R. Matthey, S. Schilt, C. Affolderbach, D. Werner, L. Thévenaz, G. Mileti, *Diode laser frequency stabilisation for water vapour differential absorption sensing*, **Applied Physics B**, Vol. 85, N. 2-3, pp. 477-485, (2006)
- C. Affolderbach, F. Droz, G. Mileti, *Experimental demonstration of a compact and high-performance laser-pumped Rubidium gas-cell atomic frequency standard*, **IEEE Transactions on Instrumentation and Measurements**, Vol. 55, No. 2, pp. 429-435, April (2006)
- G. Kazakov, B. Matisov, I. Mazets, G. Mileti, and J. Delporte, *Pseudoresonance mechanism of all-optical frequency-standard operation*, **Physical Review A**, Volume 72, 063408, December (2005)
- G. Kazakov, B. Matisov, I. Mazets, and G. Mileti, *Optimised scheme of a Rubidium all-optical frequency standard*, **Technical Physics Letters**, Volume 31, No. 12, pp. 1009-1010, December (2005)
- C. Affolderbach, G. Mileti, *A compact laser head with high-frequency stability for Rb atomic clocks and optical instrumentation*, **Review of Scientific Instruments**, Volume 76, 073108, (2005)
- G. Kazakov, I. Mazets, Yu. Rozhdestvensky, G. Mileti, J. Delporte, and B. Matisov, *High-contrast dark resonance on the D_2 - line of ^{87}Rb in a vapor cell with different directions of the pump - probe waves*, **The European Physical Journal D**, Volume 35, pp. 445-448, February (2005)
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- G. Di Domenico, N. Castagna, G. Mileti, and P. Thomann, A. V. Taichenachev, V. I. Yudin, *Laser collimation of a continuous beam of cold atoms using Zeeman shift degenerate Raman sideband cooling*, **Physical Review A**, Volume 69, 063403, (2004)

- G. Di Domenico, G. Mileti, and P. Thomann, *Pump-probe spectroscopy and velocimetry of cold atoms in a slow beam*, **Physical Review A**, 043408, Volume 64, Issue 4, October, (2001)
- G. Dudle, A. Joyet, P. Berthoud, G. Mileti, P. Thomann, *First results with a cold cesium continuous fountain resonator*, **IEEE Transactions on Instrumentations and Measurement** (Special issue on CPEM 2000), Volume 50, Number 2, p. 510-514, April (2001)
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Soumis, en phase de revue (1):

- N. Almat, M. Gharavipour, W. Moreno, F. Gruet, C. Affolderbach, G. Mileti, *Long-Term Stability Analysis Towards 10^{-14} Level for a Highly Compact POP Rb Cell Atomic Clock*, soumis à **IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control**, (2019)

2. Articles dans des livres (5)

- E. Breschi, G. Mileti, G. Kazakov, B. Matisov, R. Lammegger, L. Windholz, *Evaluation of the lin||lin CPT for compact and high performance frequency standards*, **7th Symposium on Frequency Standards and Metrology**, USA, October 5-11 2008, editor L. Maleki, World Scientific, pp. 468-472, (2009)
- C. Affolderbach, F. Gruet, D. Miletic, G. Mileti, *Optimizing a high-stability cw laser-pumped Rubidium gas-cell frequency standard*, **7th Symposium on Frequency Standards and Metrology**, USA, October 5-11 2008, editor L. Maleki, World Scientific, pp. 363-367, (2009)
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3. Articles dans des publications spéciales SPIE et ESA (21)

N. Von Bandel, M. Garcia, M. Lecomte, A. Larrue, Y. Robert, E. Vinet, O. Driss, O. Parillaud, M. Krakowski, F. Gruet, R. Matthey, G. Mileti, *DBF-ridge laser diodes at 894 nm for Cesium atomic clocks*, SPIE Photonic West, San Francisco, USA, February 13-18, Proceedings Volume 9755: Quantum Sensing and Nano Electronics and Photonics XIII, (2016)

J. Di Francesco, F. Gruet, C. Schori, C. Affolderbach, R. Matthey, G. Mileti, Y. Salvadé, Y. Petremand, N. De Rooij, *Evaluation of the frequency stability of a VCSEL locked to a micro-fabricated Rubidium vapour cell*, SPIE Photonics Europe, Bruxelles, April, Proceedings Volume 7720: Semiconductor Lasers and Laser Dynamics IV, (2010)

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R. Giannini, E. Breschi, C. Affolderbach, G. Bison, G. Mileti, H. P. Herzig, A. Weis, *Sub-Doppler diode laser frequency stabilization with the DAVLL scheme on the D_1 line of a ^{87}Rb vapor-cell*, Proceedings of the SPIE (Vol. 6604, 6604oL-1), 14th International School on Quantum Electronics "Laser physics and applications", Burgas, Bulgaria, (2006)

C. Affolderbach, E. Breschi, C. Schori, G. Mileti, *Gas-cell atomic clocks for space: new results and alternative schemes*, 6th Int. Conference on Space Optics (ICSO), ESA Special Publication, (2006)

R. Matthey, C. Affolderbach, G. Mileti, S. Schilt, L. Thévenaz, *Frequency-stabilised laser reference system for trace-gas sensing applications from space*, 6th International Conference on Space Optics (ICSO), ESA Special Publication, (2006)

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D. Slavov, C. Affolderbach, N. Laleu, S. Lecomte, P. Berthoud, G. Erbert, A. Klehr, H. Wenzel, G. Mileti, *DFB laser diodes for laser-pumped Cesium beam atomic clocks*, ESA Special Publication "First Workshop on Optical Clocks", pp. 147-153, (2006)

G. Mileti, C. Affolderbach, F. Droz, E. Murphy, *Navigating more precisely with laser clocks*, ESA bulletin, vol. 122 (May), p. 53, (2005)

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D. Slavov, C. Affolderbach, G. Mileti, *Spectral characterisation of tuneable, narrow-band diode lasers for Rb atomic spectroscopy and precision instruments*, Proceedings of the SPIE, 13th Intern. School on Quantum Electronics "Laser physics and applications", Burgas (BG), Proc. SPIE, vol. 5830, p. 281, (2005)

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C. Affolderbach, C. Andreeva, S. Cartaleva, G. Mileti, D. Slavov, *Frequency stability comparison of diode lasers locked to Doppler and sub-Doppler resonances*, in: "Eighth International Conference on Lasers and Laser Technologies" (LTL), SPIE, vol. 5449, p. 396-403, (2004)

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T. Karaulanov, C. Andreeva, S. Cartaleva, Y. Dancheva, B. Todorov, A. Yanev, S. Jaquet, G. Di Domenico, P. Thomann, G. Mileti, *Light shift and laser sidebands in gas-cell atomic clocks using optical pumping and coherent population trap-ping*, Proc. SPIE, vol. 5137, p. 364, (2003)

C. Andreeva, S. Cartaleva, G. Di Domenico, S. Jaquet, T. Karaulanov, G. Mileti, P. Thomann, B. Todorov, A. Yanev, *Influence of external parameters on the locking position of a diode laser*, SPIE v. 5226, p. 124, (2003)

R. Matthey, V. Mitev, G. Mileti, V. Makarov, A. Turin, M. Morandi, V. Santacesaria, *Miniature aerosol Lidar for automated airborne application*, Proc. EOS/SPIE Int. Symposium on Envirosense, (1999), (SPIE , Vol. 4035, Laser Radar Technology and Applications V, 2000)

4. Articles dans des comptes rendus de conférences et autres revues (98)

2019 (3):

N. Almat, M. Gharavipour, W. Moreno, C. Affolderbach, G. Mileti, *Long-Term Stability Analysis Towards $< 10^{-14}$ Level for a Highly Compact POP Rb Cell Atomic Clock*, proceedings of the joint IEEE International Frequency Control Symposium (IFCS) and European Frequency and Time Forum (EFTF), Orlando, Florida, USA, April 14-18, (2019)

G. W. Hoth, R. Elvin, M. Wright, B. Lewis, A. Arnold, P. Griffin, E. Riis, F. Gruet, C. Affolderbach, G. Mileti, *Impact of Laser Frequency Noise in Coherent Population Trapping with Cold Atoms*, proceedings of the joint IEEE International Frequency Control Symposium (IFCS) and European Frequency and Time Forum (EFTF), Orlando, Florida, USA, April 14-18, (2019)

W. Moreno, M. Pellaton, N. Almat, M. Gharavipour, C. Affolderbach, G. Mileti, *Investigations on Microwave Power Shift in Compact Vapor-Cell Atomic Clock*, proceedings of the joint IEEE International Frequency Control Symposium (IFCS) and European Frequency and Time Forum (EFTF), Orlando, Florida, USA, April 14-18, (2019)

2018 (3):

C. Affolderbach, N. Almat, M. Gharavipour, F. Gruet, W. Moreno, M. Pellaton, G. Mileti, *Selected studies on high performance laser-pumped Rubidium atomic clocks*, proceedings of the International Frequency Control Symposium (IFCS), Olympic Valley, California, USA, May 22-24, (2018)

S. Schilt, R. Matthey, W. Moreno, F. Gruet, K. Hey Tow, L. Thévenaz, G. Mileti, T. Südmeyer, *Frequency stabilized seed lasers for CO₂ DIAL systems*, 2nd International workshop on space-based LIDAR remote sensing techniques and emerging technologies, Milos, Greece, June 4-8, (2018)

W. Moreno, C. Affolderbach, A. E. Ivanov, T. Debogovic, M. Pellaton, A. K. Skrivervik, E. de Rijk, G. Mileti, *Ramsey-mode Rb cell clock demonstration with a 3D-printed microwave cavity*, proceedings of the European Frequency and Time Forum (EFTF), Torino, Italy, April 10-12, (2018)

2017 (2):

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2016 (6):

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C. Affolderbach, M. Gharavipour, F. Gruet, W. Moreno, M. Pellaton, G. Mileti, *Precision measurements for compact vapor-cell atomic clocks*, invited oral presentation at Photonica, Belgrade, Serbia, (2017)

N. Almat, W. Moreno, M. Pellaton, F. Gruet, C. Affolderbach, G. Mileti, *Frequency-doubled laser sources stabilized to Rb-cell references*, Poster at Photonica, Belgrade, Serbia, (2017)

W. Moreno, M. Pellaton, M. Gharavipour, F. Gruet, C. Affolderbach, G. Mileti, *Light-shift in pulsed optically pumped Rubidium atomic clock*, Oral presentation at Photonica, Belgrade, Serbia, (2017)

C. Affolderbach, N. Almat, M. Gharavipour, F. Gruet, W. Moreno, M. Pellaton, G. Mileti, *Laser-pumped high performance vapor-cell atomic clocks*, Oral presentation at the Annual Meeting of the Swiss Physical Society, Geneva, Switzerland, 21-25 August (2017)

C. Affolderbach, N. Almat, M. Gharavipour, F. Gruet, R. Matthey, W. Moreno, G. Mileti, *High performance and miniature laser-pumped vapour-cell frequency standards*, **Invited plenary talk** at the 3rd URSI – Regional Conference on Radio Science 2017, Tirupati, India, March 1-3 (2017)

2016 (5):

C. Affolderbach, M. Gharavipour, F. Gruet, R. Matthey, W. Moreno, G. Mileti, *Double Resonance Spectroscopy in Rb Vapour Cells for High-Performance and Miniature Atomic Clocks*, Invited oral presentation at the 7th International Symposium and School Modern Problems of Laser Physics, Novosibirsk, Russia, August 22-28, (2016)

M. Gharavipour, I.S. Radojicic, F. Gruet, C. Affolderbach, A.J. Krmpot, B. M. Jelenkovic, G. Mileti, *Light Shifts Studies in CW and Ramsey Double Resonance Vapour Cell Frequency Standards*, Oral #1102, EFTF 2016, 30th European Frequency and Time Forum, York, UK, April 4-7, 2016

M. Gharavipour, A.E. Ivanov, C. Affolderbach, A. Skrivervik, G. Mileti, *Microwave Cavity Characterization for Rubidium Frequency Standards*, Poster #1101, EFTF 2016, 30th European Frequency and Time Forum, York, UK, April 4-7, (2016)

A. E. Ivanov, C. Affolderbach, G. Mileti, A.K. Skrivervik, *Study of the Misalignment between Electromagnetic Fields Interacting with Rb Atoms in a Cavity with Losses*, Poster #1072, EFTF 2016, 30th European Frequency and Time Forum, York, UK, April 4-7, (2016)

M. Gharavipour, I. S. Radojicic, F. Gruet, C. Affolderbach, A. J. Krmpot, B. M. Jelenkovic, G. Mileti, *Comparison of relaxation times in a Rb vapor-cell measured with different methods*, Oral #515, Annual Meeting of the Swiss Physical Society, Lugano, Switzerland; August 23-25, (2016)

2015 (8):

P. Berthoud, M. Haldimann, L. Schneller, C. Ducommun, A. Michaud, C. Affolderbach, F. Gruet, S. Abdullah, G. Mileti, M. Stojanovic, P. Kejik, P.-A. Farine, C. Jacq, G. Farine, T. Maeder, P. Ryser, Y. Pétremand, *Quantime: Low Cost Miniature Atomic Clock for Telecom*, Poster #5421, IFCS-EFTF 2015 Joint Conference, Denver, USA, April 12-16, (2015)

K. Masuda, C. Affolderbach, G. Mileti, J.-C. Diels, L. Arissian, *Coherent interaction of intracavity pulses and Rb-87 vapor*. Oral presentation #5184, IFCS-EFTF 2015 Joint Conference, Denver, USA, (2015)

C. Affolderbach, S. Kang, M. Gharavipour, F. Gruet, G. Mileti, *Relaxation times and stability studies for a compact pulsed optically pumped vapor cell clock*, Poster, 8th Frequency Standard and Metrology Symposium, Potsdam, Germany, October 12-16, (2015)

F. Levi, C. E. Calosso, A. Godone, B. François, S. Micalizio, R. Boudot, C. Affolderbach, S. Kang, M. Gharavipour, F. Gruet, G. Mileti, *Pulsed Optically Pumped Rb clock*, Poster, 8th Frequency Standard and Metrology Symposium, Potsdam, Germany, October 12-16, (2015)

M. Gharavipour, S. Kang, F. Gruet, C. Affolderbach and G. Mileti, *Relaxation time measurements in a 25 mm Rb vapor cell for high-performance Rb atomic clocks*, PHOTONICA, Belgrade, (2015)

W. Moreno, F. Gruet, R. Matthey, P. Brochard, S. Schilt, G. Mileti, *Rb-based Stabilized Laser at 1572 nm for CO₂ Monitoring*, PHOTONICA, Belgrade, (2015)

M. Gharavipour, S. Kang, F. Gruet, C. Affolderbach, G. Mileti, *Relaxation time measurements in a buffer-gas Rb vapor cell for high-performance Rb atomic clocks*, Poster # 561, Joint Annual Meeting of the Austrian & Swiss Phys. Societies, Vienna, Austria, September 1-4, (2015)

W. Moreno, F. Gruet, R. Matthey, G. Mileti, *Rb-based Stabilized Laser at 1572 nm for CO₂ monitoring*, Poster # 574, Joint Annual Meeting of the Austrian & Swiss Phys. Societies, Vienna, Austria, September 1-4, (2015)

2014 (5):

Koji Masuda, Matthieu Pellaton, Gaetano Mileti, Ladan Arissian and Jean-Claude Diels, *Push-pull optical pumping with a mode-locked laser*, poster at the European Frequency and Time Forum (EFTF), Neuchâtel, June 23-27, (2014)

R. Matthey, F. Gruet, S. Schilt, G. Mileti, *Compact Rubidium-Stabilized Optical Frequency Comb as Source of Reference Frequencies in the 1.55-micrometer Region*, Annual Meeting of the Swiss Physical Society (SPS), Fribourg, Switzerland, June 30 – July 2, 2014. (poster presentation)

G.-X. Du, A. Horsley, P. Treutlein, M. Pellaton, T. Bandi, C. Affolderbach, G. Mileti, *In situ imaging of the microwave field of a vapor cell atomic clock*, Annual Meeting of the Swiss Physical Society (SPS), Fribourg, Switzerland, June 30 – July 2, 2014. (oral presentation no. 513)

A. Horsley, G.-X. Du, M. Pellaton, C. Affolderbach, G. Mileti, P. Treutlein, *Imaging of Relaxation and Microwave Field Strength in Vapor Cells*, Annual Meeting of the Swiss Physical Society (SPS), Fribourg, Switzerland, June 30 – July 2, 2014. (poster presentation no. 531)

A. Horsley, G.-X. Du, M. Pellaton, C. Affolderbach, G. Mileti, P. Treutlein, *Microfabricated Vapor Cells for Atomic Clock and Microwave Field Sensing Applications*, Young Atom Opticians conference 2013 (YAO 2013), Birmingham, UK, April 08-12, 2013. (oral presentation)

2013 (2):

T. Bandi, C. Affolderbach, C. Stefanucci, F. Merli, A. K. Skrivervik, C. Calosso, G. Mileti, *Compact, High-Performance CW Double-Resonance Rb frequency Standard: present status*, Talk at the joint IEEE International Frequency Control Symposium (IFCS) and European Frequency and Time Forum (EFTF), Prague, July 21-25, (2013)

G.-X. Du, A. Horsley, M. Pellaton, C. Affolderbach, G. Mileti, P. Treutlein, *Microwave field imaging using microfabricated vapor cells*, DPG Frühjahrstagung, Hannover, Germany, March 18-22, 2013. (oral presentation)

2012 (3):

C. Affolderbach, G. Barwood, S. Bize, K. Bongs, I. Ernsting, B. Faure, P. Gill, O. Grosjean, J. Guéna, K. Jaldehag, S. Kundermann, Ph. Laurent, S. Lecomte, T. Legero, T. Lévèque, P. Lindqvist, M. Lours, D. Massonnet, G. Mileti, A. Nevsky, N. Poli, M. Prevedelli, S. Schiller, H. Schnatz, A. Stefanov, U. Sterr, G. M. Tino, P. Tuckey, S. Webster, *The STE-QUEST cold atoms Rb clock using a comb-based microwave source for fundamental physics in space*, talk at the IEEE International Frequency Control Symposium, Baltimore, USA, May 21-25, (2012)

C. Affolderbach, G. Barwood, S. Bize, K. Bongs, I. Ernsting, B. Faure, P. Gill, O. Grosjean, J. Guéna, K. Jaldehag, S. Kundermann, Ph. Laurent, S. Lecomte, T. Legero, T. Lévèque, P. Lindqvist, M. Lours, D. Massonnet, G. Mileti, A. Nevsky, N. Poli, M. Prevedelli, S. Schiller, H. Schnatz, A. Stefanov, U. Sterr, G. M. Tino, P. Tuckey, S. Webster, *A cold rubidium frequency standard for the fundamental physics mission STE-QUEST*, talk at the European Frequency and Time Forum (EFTF), Gothenburg, Sweden, April 24-27, (2012)

V. Venkatraman, Y. Petremand, C. Affolderbach, G. Mileti, N. de Rooij, H. Shea, *Chip-scale rubidium dielectric barrier discharge lamp for miniature atomic clocks and magnetometers*, Invited talk at the 4th International Symposium on Advanced Plasma Science, Aichi, Japan, March 4-8, (2012)

2011 (11):

G. Mileti, *Études sur Terre et dans l'espace pour la chronométrie de demain*, Swiss Space Days, Neuchâtel, (2011)

M. Pellaton, C. Affolderbach, Y. Petremand, N. de Rooij and G. Mileti, *Study of laser-pumped double-resonance clock signals using a micro-fabricated cell*, Poster at Photonica 2011, III International School and Conference on Photonics, Aug. 29 – Sept. 2, Belgrade, Serbia, (2011)

D. Miletic, C. Affolderbach, T. Bandi and G. Mileti, *AC Stark-shift in Double Resonance and Coherent Population Trapping in Wall-Coated Cells for Compact Rb Atomic Clocks*, Poster at Photonica 2011, III International School and Conference on Photonics, Aug. 29 – Sept. 2, Belgrade, Serbia, (2011)

C. Affolderbach, M. Pellaton, Y. Petremand, N. De Rooij, G. Mileti, *Laser-microwave double-resonance spectroscopy in mm-scale Rb vapour cells for atomic clocks*, talk at the joint annual meeting of the Swiss Physical Society (SPS) and Austrian Physical Society with the Swiss and Austrian Societies for Astronomy and Astrophysics, EPF Lausanne, June 15-17, (2011)

D. Miletic, T. Bandi, C. Affolderbach, G. Mileti, *Double-resonance (DR) and Coherent Population Trapping (CPT) in wall-coated cells for compact Rb atomic clocks*, poster at the 43rd congress of the European group on atomic systems (EGAS), June 28 –July 2, Fribourg, Switzerland, (2011)

T. Bandi, C. Affolderbach, and G. Mileti, *High-Resolution Double Resonance (DR) Spectroscopy of the Clock Transition in ⁸⁷Rb Atomic Vapour*, poster at the 43rd congress of the European group on atomic systems (EGAS), June 28 –July 2, Fribourg, Switzerland, (2011)

R. Boudot, D. Miletic, P. Dziuban, M. Hasegawa, P. Knapkiewicz, J. Dziuban, C. Affolderbach, G. Mileti, V. Giordano and C. Gorecki, *Cs collisional frequency shift measurements in microcells filled with a Ne-Ar buffer gas mixture*, poster at the Joint Meeting of the European Frequency and Time Forum (EFTF) and the IEEE International Frequency Control Symposium (FCS), San Francisco, May 2-5, (2011)

F. Gruet, T. Bandi, G. Mileti, R. Phelan, B. Kelly, J. O'Carroll, J. O'Gorman, *Development and spectral characterisation of Discrete Mode Laser Diodes (DMLDs) emitting at 780 nm for Rubidium atomic clocks*, poster at the European Conference on Lasers and Electro-Optics and the XIIth European Quantum Electronics Conference (CLEO/Europe-EQEC), Munich, Germany, 22-26 May, (2011)

F. Gruet, L. Bimboes, D. Miletic, C. Affolderbach, G. Mileti, A. Al-Samaneh, D. Wahl, R. Michalzik, *Spectral characterisation of VCSELs emitting at 894.6 nm for CPT-based miniature atomic clocks*, poster at the European Conference on Lasers and Electro-Optics and the XIIth European Quantum Electronics Conference (CLEO/Europe-EQEC), Munich, Germany, 22-26 May, (2011)

M. Pellaton, Y. Pétremand, C. Affolderbach, N. de Rooij, G. Mileti, *Laser-pumped double-resonance atomic clock using a micro-fabricated Rubidium cell*, talk at the European Conference on Lasers and Electro-Optics and the XIIth European Quantum Electronics Conference (CLEO/Europe-EQEC), Munich, Germany, 22-26 May, (2011)

2010 (3):

L. Bimboes, F. Gruet, C. Affolderbach, R. Matthey, G. Mileti, A. Al-Samaneh, D. Wahl, R. Michalzik, *Spectral characterization of 894 nm VCSELs for MEMS atomic clocks*, Atelier Arc-et-Senans, September 16-17 (2010)

F. Gruet, T. Bandi, M. Pellaton, C. Affolderbach, R. Matthey, J. Di Francesco and G. Mileti, *Compact stabilized laser heads for frequency standards and spectroscopy*, Workshop on Optical Clocks, Istituto Nazionale di Ricerca Metrologica (INRIM), Torino, Italy December 1 - 3, (2010)

E. Breschi, N. Castagna, S. Knappe, H. Robinson, G. Mileti, A. Weis, J. Kitching, *DROM-spectroscopy in pure paraffin wall-coated cell*, 22nd International Conference on Atomic Physics, ICAP, 25-30 July 2010, Cairns, Australia (2010)

2009 (9):

R. Matthey, C. Affolderbach, E. Breschi, S. Schilt, C. Schori, G. Mileti, *Application potentials of gas-cell atomic clock techniques for optical combs*, 3rd ESA International workshop on optical atomic clocks, ICAP, ESRI, Frascati, Italy, October 14-16, (2009)

D. Miletic, C. Schori, Y. Petremand, N. De Rooij, G. Mileti, *CPT spectroscopy on miniature rubidium vapour cells*, Joint Annual Meeting of the Austrian Physical Society, Swiss Physical Society, and Austrian Society of Astronomy and Astrophysics, Innsbruck, September 2-4, (2009)

R. Lammegger, E. Breschi, G. Kazakov, G. Mileti, L. Windholz, *Investigations on Coherent Population Trapping resonances in lin//lin configuration*, Joint Annual Meeting of the Austrian Physical Society, Swiss Physical Society, and Austrian Society of Astronomy and Astrophysics, Innsbruck September, 2 - 4, (2009)

T. Bandi, G. Mileti, *Laser and Microwave-Laser Double Resonance Spectroscopy of Alkali Atoms in Wall-coated cells*, Joint Annual Meeting of the Austrian Physical Society, Swiss Physical Society, and Austrian Society of Astronomy and Astrophysics, Innsbruck September, 2 - 4, (2009)

D. Miletic, C. Affolderbach, G. Mileti, *AC Stark shift and temperature shift in laser pumped Rubidium frequency standards*, Joint Annual Meeting of the Austrian Physical Society, Swiss Physical Society, and Austrian Society of Astronomy and Astrophysics, Innsbruck September 2 - 4, (2009)

D. Miletic, C. Affolderbach, F. Gruet, M. Durrenberger, G. Mileti, *Progress on the optimization of a compact laser-pumped Rubidium frequency standard*, Proceedings of the Joint Meeting of the European Frequency and Time Forum (EFTF) and the IEEE International Frequency Control Symposium (FCS), Besançon, April 20-24, (2009)

C. Schori, Y. Petremand, F. Seigneur, T. Maeder, H. R. Shea, N. De Rooij, G. Mileti, P. Thomann, *CPT spectroscopy on low-temperature sealed MEMS rubidium vapour cells*, Proceedings of the Joint Meeting of the European Frequency and Time Forum (EFTF) and the IEEE International Frequency Control Symposium (FCS), Besançon, April 20-24, (2009)

F. Gruet, T. Bandi, D. Mileti, C. Affolderbach, E. Breschi, G. Mileti, *Spectral characterization of 780/894 nm DFB laser diodes and wall-coated cell spectroscopy for gas-cell clocks*, Proceedings of the Joint Meeting of the European Frequency and Time Forum (EFTF) and the IEEE International Frequency Control Symposium (FCS), Besançon, April 20-24, (2009)

E. Breschi, G. Mileti, *Relaxation of HF-ground state coherence of Rb atoms contained in wall-coated cell*, The 19th International Conference on Laser Spectroscopy (ICOLS 2009), Hokkaido (Japan), 7-13 June (2009)

2008 (14):

C. Affolderbach, F. Gruet, D. Miletic, G. Mileti, *Optimizing a High-Stability CW Laser-Pumped Rubidium Gas-Cell Frequency Standard*, 7th Symposium on Frequency Standards and Metrology – Pacific Grove, California (USA), October 5-11, (2008)

E. Breschi, G. Mileti, G. Kazakov, B. Matisov, R. Lammegger, L. Windholz, *Study of "lin || lin" CPT for applications in vapour cell atomic clocks*, 7th Symposium on Frequency Standards and Metrology – Pacific Grove, California (USA), October 5-11, (2008)

C. Schori, M. Pellaton, S. Jeanneret, G. Bergonzi, Yves Petreman, N. De Rooij, G. Mileti, *Spectroscopy of micro-fabricated Rubidium vapour cells for atomic clocks*, Atelier LEA (Laboratoire Européen Associé) - Microtechnique d'Arc-et-Senans, 8-9 septembre (2008)

C. Affolderbach, F. Gruet, D. Miletic, G. Mileti, *Compact Atomic Rubidium Clocks for Satellite Navigation Systems (Galileo)*, Atelier LEA (Laboratoire Européen Associé) - Microtechnique d'Arc-et-Senans, 8-9 septembre (2008)

F. Gruet, C. Affolderbach, G. Mileti, *Study of laser diodes for optical pumping in Rb atomic clocks*, Atelier LEA (Laboratoire Européen Associé) - Microtechnique d'Arc-et-Senans, 8-9 septembre (2008)

E. Breschi, G. Mileti, *Laser spectroscopy in wall-coated alkali vapour cells*, International Conference on Atomic Physics (ICAP), University of Connecticut (USA), July 27 – August 1st, (2008)

R. Lammegger, E. Breschi, G. Kazakov, G. Mileti, B. Matisov, L. Windholz, *Investigations on the lin//lin CPT and its applications in quantum sensors*, 40th European Group on Atomic Physics (EGAS), Graz, (2008)

C. Schori, P. Scherler, Y. Petremand, G. Bergonzi, S. Jeanneret, G. Mileti, N. De Rooij, *Laser spectroscopy of micro-fabricated Rubidium vapour cells*, Salon international Environnement Professionnel MicroTechnologies (EPMT), Swiss Society for Optics and Microscopy, Beaulieu, Lausanne, 3-6 juin (2008)

F. Gruet, C. Affolderbach, G. Mileti, *Study of laser diodes for optical pumping in Rb atomic clocks*, Salon international Environnement Professionnel MicroTechnologies (EPMT), Swiss Society for Optics and Microscopy, Beaulieu, Lausanne, 3-6 juin (2008)

G. Mileti, *Time, frequency and atomic clocks*, **Invited talk** at the "SPS Swiss Physical Society – Annual meeting 2008", Geneva, March 26 – 27, (2008)

C. Schori, G. Mileti, V. Radojkovic, S. Tanner, G. Bergonzi, Y. Petremand, *Components for a micro-fabricated atomic clock*, Poster at the "SPS Swiss Physical Society – Annual meeting", Geneva, March 26 – 27, (2008)

C. Affolderbach, F. Gruet, G. Mileti, L. Falco, *Experimental study of a narrow-linewidth fibre Bragg laser for optical pumping in Rb atomic clocks*, Poster at the "SPS Swiss Physical Society – Annual meeting", Geneva, March 26 – 27, (2008)

E. Breschi, G. Kazakov, R. Lammegger, B. Matisov, L. Windholz, G. Mileti, *Study of lin//lin CPT for application in vapour-cell atomic clocks*, Poster at the "SPS Swiss Physical Society – Annual meeting", Geneva, March 26 – 27, (2008)

R. Lammegger, E. Breschi, G. Kazakov, G. Mileti, B. Matisov, L. Windholz, *observation on Coherent Population Trapping Pseudo-Resonances in magnetic fields*, Poster at "ESF-FWF Conference in Partnership with LFUI Quantum Optics: From Photons and Atoms to Molecules and Solid State Systems", Obergurgl, Austria, February 24 – March 1 (2008)

2007 (5):

G. Mileti, *Physics of atomic clocks*, **Invited talk** at the "SSOM Engelberg lectures on optics 2007 – Photonics in space: a challenge for modern technologies", Engelberg, March 5 – 7, (2007)

R. Giannini, E. Breschi, C. Affolderbach, G. Bison, G. Mileti, H. P. Herzig, A. Weis, *Laser frequency stabilization using Doppler-Free Dichroic Atomic Vapor Laser Locking (DAVLL)*, Poster at the "Swiss Physical Society – Annual Meeting", Zurich, February 20 – 21, (2007)

R. Giannini, E. Breschi, G. Bison, G. Mileti, H. P. Herzig, A. Weis, *Laser frequency stabilization using Doppler-free DAVLL: practical realization and ways of improvement*, Poster at the European Frequency and Time Forum (EFTF), Geneva, (2007)

C. Affolderbach, G. Mileti, F. Droz, *A laser optically-pumped Rubidium vapour-cell frequency standard using a DFB laser diode*, Poster at the European Frequency and Time Forum (EFTF), Geneva, (2007)

E. Breschi, G. Kazakov, R. Lammegger, L. Windholz, B. Matisov, G. Mileti, *Lin||lin Coherent Population Trapping and its application for vapor-cell-atomic-clocks*, Poster at the CLEO – EUROPE / EQEC 2007 (European Conference on Lasers and Electro-Optics / European Quantum electronics Conference), Munich, Germany, June (2007)

2006 (7):

C. Affolderbach, S. Lecomte, E. Breschi, C. Schori, G. Mileti, M. Fischer, A. Sizmann, R. Holzwarth, *Application potentials of gas-cell atomic clock techniques for optical frequency combs*, Workshop "Optical Frequency Combs for Space", National Physical Laboratory, Teddington (UK), October 2-3, (2006)

E. Breschi, R. Giannini, C. Affolderbach, G. Mileti, G. Bison, A. Weis, *Comparison of sub-Doppler DAVLL and SA laser frequency stabilization schemes*, 38th Conference of the European Group on Atomic Spectroscopy (EGAS), Ischia (I), June (2006)

E. Breschi, C. Affolderbach, G. Mileti, G. Kazakov, B. Matisov, I. Mazets, *Investigations on the CPT effect in π configuration: the 'pseudo-resonance' mechanism*, 38th Conference of the European Group on Atomic Spectroscopy (EGAS), Ischia (I), June (2006)

S. Schiller, A. Nevsky, A. Görlitz, C. Salomon, P. Lemonde, U. Sterr, G. Tino, P. Gill, H. Klein, H. Margolis, R. Holzwarth, T. Hänsch, G. Mileti, V. Klein, *Optical clocks in space*, 20th European Frequency & Time Forum EFTF, Braunschweig, D, (2006)

A. Hugi, C. Schori, G. Mileti, *Tuning an external-cavity diode laser using an intracavity liquid crystal*, Annual meeting of the Swiss Physical Society (SPS), EPFL, Lausanne, Switzerland, February (2006)

R. Matthey, C. Affolderbach, G. Mileti, S. Schilt, D. Werner, S. H. Chin, L. Thévenaz, *Four-wavelength frequency-stabilised diode laser reference system in the 935 nm wavelength region for water vapour sensing*, Annual meeting of the Swiss Physical Society (SPS), EPFL, Lausanne, Switzerland, February (2006)

E. Breschi, C. Affolderbach, G. Mileti, *Experimental investigation of Coherent Population Trapping in Rubidium vapor for applications in high performances and chip scale atomic clock*, Annual meeting of the Swiss Physical Society (SPS), EPFL, Lausanne, Switzerland, February (2006)

2005 (5):

C. Affolderbach, C. Andreeva, S. Cartaleva, T. Karaulanov, G. Mileti, D. Slavov, *Light shift suppression in optically pumped vapour-cell atomic frequency standards by frequency-modulated pump laser light*, 4th International Symposium "Laser Technologies and Lasers" (LTL), Plovdiv, Bulgaria, October (2005)

C. Affolderbach, P. Berthoud, N. Castagna, F. Füzesi, D. Goujon, D. Gritti, J. Guena, A. Jornod, S. Lecomte, G. Mileti, M. Plimmer, R. Ruffieux, H. Schweda, P. Thomann, Q. Wang, *Atomuhren für den Weltraum - Forschung und Entwicklung am Observatorium Neuenburg*, Space Forum, Air Force Center Neubrandenburg, October (2005)

S. Schilt, D. Werner, L. Thévenaz, R. Matthey, C. Affolderbach, G. Mileti, *Simultaneous stabilization of four laser diodes in the 935-nm water vapour spectrum for space applications*, 5th International Conference on "Tunable Diode Laser Spectroscopy" (TDLS), Florence, Italy, July (2005)

C. Affolderbach, G. Mileti, F. Droz, *A compact, high-performance laser-pumped Rb atomic frequency standard*, CLEO - EUROPE / EQEC 2005 (European Conference on Lasers and Electro-Optics / European Quantum electronics Conference), Munich, Germany, June (2005)

R. Matthey, C. Affolderbach, G. Mileti, D. Werner, S. Schilt, L. Thévenaz, *Frequency-stabilised laser reference system for water vapour spectroscopy and sensing applications*, CLEO - EUROPE / EQEC 2005 (European Conf. on Lasers and Electro-Optics / European Quantum electronics Conf.), Munich (D), (2005)

2004 (5):

R. Matthey, C. Affolderbach, G. Mileti, D. Werner, S. Schilt, L. Thévenaz, *Narrow-band and frequency stabilised diode lasers for water vapour spectroscopy and a space differential absorption lidar*, 13th International School on Quantum Electronics "Laser physics and applications", Burgas, Bulgaria, (2004)

C. Affolderbach, G. Mileti, *Buffer-gas and AC Stark shift induced effects in laser / microwave double resonance spectroscopy in alkali atomic vapour*, European Conference on Atomic and Molecular Physics (ECAMP8) & European Group on Atomic Spectroscopy (EGAS36) conference, Rennes, France, July (2004)

D. Slavov, C. Andreeva, S. Cartaleva, C. Affolderbach, G. Mileti, *Long-term stability limits of Doppler and sub-Doppler diode laser stabilization for high-precision instruments*, European Conference on Atomic and Molecular Physics (ECAMP8) & European Group on Atomic Spectroscopy (EGAS36), Rennes, France, (2004)

C. Affolderbach, G. Mileti, *AC-Stark shift and buffer-gas related effects in laser/microwave double-resonance experiments with a 87Rb atomic vapour*, Annual Meeting of the Swiss Physical Society (SPS), Neuchâtel, March (2004)

G. Mileti, C. Affolderbach, R. Matthey, A. Vuillemin, *Development, characterisation and comparison of tunable, narrow-band and frequency-controlled laser diodes for research and precision instruments*, Annual Meeting of the Swiss Physical Society (SPS), Neuchâtel, March (2004)

2003 (3):

C. Affolderbach, D. Slavov, C. Andreeva, T. Karaulanov, S. Cartaleva, G. Mileti, *Experimental demonstration of light shift suppression in optically pumped Rb-cell atomic clocks*, EGAS 35 (European Group on Atomic Spectroscopy), Brussels, July (2003)

D. Slavov, C. Andreeva, S. Cartaleva, C. Affolderbach, G. Mileti, *Frequency stability of diode lasers locked to Doppler- and sub-Doppler resonances (abstract title: Frequency stability comparison of diode lasers locked to Doppler- and sub-Doppler resonances)*, EGAS 35 (European Group on Atomic Spectroscopy), (2003)

C. Affolderbach, G. Mileti, *A compact, frequency stabilized laser head for optical pumping in space Rb clocks*, poster at the NavSat-Show / Space Application Services, Geneva, Switzerland, June 24-27, (2003)

2002 (2):

P. Berthoud, A. Jornod, G. Mileti, P. Thomann, and A. Maurissen, *Development of frequency standards at Observatory of Neuchâtel, Switzerland*, Proc. of the XXVIIth General Assembly of the International Union of Radio Science, August 17-24, 2002, Maastricht, The Netherlands, ref. n°1692, (2002)

S. Jaquet, G. Di Domenico, G. Mileti, P. Thomann, C. Andreeva, S. Cartaleva, T. Karaulanov, *Compact precision gas-cell atomic references for lasers and quartz oscillators*, 34th EGAS (European Group for Atomic Spectroscopy) Conference, Sofia, Bulgaria, Europhysics Conference Abstracts 26C, p. 283, (2002)

1994 – 2000 (5):

A. Joyet, P. Berthoud, G. Di Domenico, G. Mileti, G. Dudle, P. Thomann, *A continuous fountain of cold Cs atoms in a primary frequency standard*, International Conference on Atomic Physics (ICAP), Florence, (2000)

V. Mitev, G. Mileti, and R. Matthey, *Mars lander lidar (MLL) for aerosol and cloud experiment (ACE)*, Mars exploration program & sample return missions international symposium, Paris, (1999)

Patrick Berthoud, Gaetano Mileti, Emmanuel Fretel, Pierre Thomann, *Bright, slow and continuous beam of laser-cooled cesium atoms*, European Group on Atomic Spectroscopy (EGAS), June (1999)

G. Mileti, *Study of the Signal/Noise in an optical-microwave double resonance using a laser pumped atomic vapour*, Swiss Physical Society annual conference, Bern, March (1995)

G. Mileti, *Light-shift saturation in laser pumped Rubidium atoms*, Swiss Physical Society annual conference, Bern, March (1994)

6. Conférences grand public, manifestations, médiation scientifique et médias

Conférences grand public:

G. Mileti, *Lasers and atomic clocks for space*, World Conference of Science Journalist, Swiss Science Lounge, 4 juillet 2019

G. Mileti, *Recherches neuchâteloises sur les horloges atomiques*, Formation et excellence, 60^{ème} anniversaire du Musée de l'horlogerie du Locle, Salle 407, Ancienne Poste, Jeudi 20 juin 2019
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(Août 2019)