

List of publications

Éric Buchlin

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1 Thesis

- [1] **Buchlin, E.** (2004). *Signatures et modélisations du chauffage coronal turbulent à micro-échelles — Modelli ed osservazioni di turbolenza a piccola scala nel riscaldamento della corona solare*. PhD thesis, University of Paris Sud and University of Florence.

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2 Refereed papers

- [2] **Buchlin, E.**, Aletti, V., Galtier, S., Velli, M., Einaudi, G. and Vial, J.-C. (2003). A simplified numerical model of coronal energy dissipation based on reduced MHD. *Astron. Astrophys.*, **406**, 1061–1070.
- [3] **Buchlin, E.**, Galtier, S. and Velli, M. (2005). Influence of the definition of dissipative events on their statistics. *Astron. Astrophys.*, **436**, 355–362.
- [4] **Buchlin, E.**, Vial, J.-C. and Lemaire, P. (2006). A statistical study of SUMER spectral images: events, turbulence, and intermittency. *Astron. Astrophys.*, **451**, 1091–1099.
- [5] Parenti, S., **Buchlin, E.**, Cargill, P. J., Galtier, S. and Vial, J.-C. (2006). Modelling the radiative signatures of turbulent heating in coronal loops. *Astrophys. J.*, **651**, 1219–1228.
- [6] Galtier, S. and **Buchlin, E.** (2007). Multi-scale Hall-MHD turbulence in the solar wind. *Astrophys. J.*, **656**, 560–566.
- [7] **Buchlin, E.** and Velli, M. (2007). Shell-models of RMHD turbulence and the heating of solar coronal loops. *Astrophys. J.*, **662**, 701–714.
- [8] **Buchlin, E.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. (2007). Profiles of heating in turbulent coronal magnetic loops. *Astron. Astrophys.*, **469**, 347–354.
- [9] **Buchlin, E.** (2007). Intermittent heating of the solar corona by MHD turbulence. *Nonlin. Proc. Geophys.*, **14**, 649–654.
- [10] Verdini, A., Velli, M. and **Buchlin, E.** (2009). Turbulence in the sub-Alfvénic solar wind driven by reflection of low-frequency Alfvén waves. *Astrophys. J. Lett.*, **700**, 39–42.
- [11] **Buchlin, E.** and Vial, J.-C. (2009). Electron density in the quiet solar transition region from SoHO/SUMER measurements of S VI line radiance and opacity. *Astron. Astrophys.*, **503**, 559–568.
- [12] Galtier, S. and **Buchlin, E.** (2010). Exact nonlinear diffusion equations for anisotropic MHD turbulence with cross-helicity. *Astrophys. J.*, **722**, 1977–1983.
- [13] **Buchlin, E.** (2011). Intermittent turbulent dynamo at very low and high magnetic Prandtl numbers. *Astron. Astrophys.*, **534**, L9.

In preparation

- [14] **Buchlin, E.**, Bradshaw, S. J. and Cargill, P. J. Dynamic evolution of a loop with self-consistent turbulent heating. In preparation for *Astron. Astrophys.*

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3 International conferences

3.1 With refereed proceedings

- [15] **Buchlin, E.**, Aletti, V., Galtier, S., Velli, M. and Vial, J.-C. (2003). A solar cellular automata model issued from reduced MHD. *AIP Conf. Proc. 679: Solar Wind Ten*, pages 335–338. Poster, *Solar Wind X*, Pisa, Italy, June 2002.
- [16] Galtier, S. and **Buchlin, E.** (2007). Hall-MHD turbulence in the solar wind. *Advances in Turbulence XI*, J. M. L. M. Palma and A. Silva Lopes Eds., Springer proceedings in Physics 117, pages 70–72. Oral presentation (S. Galtier), 11th EUROMECH European Turbulence Conference, Porto, Portugal, June 2007.
- [17] **Buchlin, E.** Intermittent heating of the solar corona by MHD turbulence. Oral presentation (**invited**), *6th Nonlinear Waves and Turbulence Workshop*, Fukuoka, Japan, October 2006.
- [18] Verdini, A., Velli, M. and **Buchlin, E.** (2009). Reflection driven MHD turbulence in the solar atmosphere and wind. *Proceedings of the 2nd European Assembly of the International Heliophysical Year. Earth, Moon, and Planets*, **104**, 121–125. Poster, *IHY 2nd European Assembly*, Torino, Italy, June 2007.

3.2 With proceedings

- [19] **Buchlin, E.**, Vial, J.-C., Lemaire, P. and Galtier, S. (2004). Statistical study of SoHO/SUMER full-Sun images. *Proceedings of the Conference SOHO 13 'Waves, Oscillations and Small-Scale Transient Events in the Solar Atmosphere: A Joint View from SOHO and TRACE' ESA SP-547*, 337–340. Poster, *SOHO13*, Palma de Mallorca, Spain, September 2003.
- [20] **Buchlin, E.**, Velli, M. and Galtier, S. (2004). Simplified simulations of MHD in a coronal loop by coupled shell-models. *Proceedings of the Conference SOHO 15 'Coronal Heating' ESA SP-575*, 120–125. Oral presentation, *SOHO15*, St-Andrews, Scotland, September 2004.
- [21] Parenti, S., **Buchlin, E.**, Galtier, S. and Vial, J.-C. (2004). Modelling the radiative signature of turbulent heating in coronal loops. *Proceedings of the Conference SOHO 15 'Coronal Heating' ESA SP-575*, 497–500. Poster, *SOHO15*, St-Andrews, Scotland, September 2004.
- [22] **Buchlin, E.** and Velli, M. (2005). Shell-model simulations of MHD in a solar coronal loop. *Proceedings of the Conference Solar Wind XI — SOHO 16, ESA SP-592*, 153. Oral presentation, *Solar Wind XI — SOHO 16*, Whistler, British Columbia, June 2005.
- [23] Parenti, S., **Buchlin, E.**, Galtier, S. and Vial, J.-C. (2005). Radiative Signatures of Coronal Loops Submitted to Turbulent Heating. *Proceedings of the Conference Solar Wind XI — SOHO 16, ESA SP-592*, 523. Poster, *Solar Wind XI — SOHO 16*, Whistler, British Columbia, June 2005.

- [24] Parenti, S., **Buchlin, E.**, Cargill, P. J., Galtier, S. and Vial, J.-C. (2006). Looking for signatures of coronal heating in the radiative emission of a coronal loop. *Proceedings of the Conference SOHO 17: 10 Years of SOHO and Beyond, ESA-SP617*, 104. Poster, *SOHO17*, Giardini Naxos, Italy, May 2006.
- [25] Verdini, A., **Buchlin, E.**, and Velli, M. (2006). Alfvén waves and turbulence in the inner corona. *Proceedings of the Conference SOHO 17: 10 Years of SOHO and Beyond, ESA-SP617*, 115. Poster, *SOHO17*, Giardini Naxos, Italy, May 2006.
- [26] **Buchlin, E.** and Vial, J.-C. (2006). Coronal turbulence and intermittency from Solar Orbiter observations. *Proceedings of the 2nd Solar Orbiter workshop, ESA SP-641*. Oral presentation, *2nd Solar Orbiter workshop*, Athens, Greece, October 2006.
- [27] **Buchlin, E.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. Spectroscopic Hinode observables from turbulent heating and cooling of coronal loops (2008). *First results from Hinode, ASP Conference Series 397*, 83. Oral presentation, *Announcing first results from Hinode*, Dublin, Ireland, August 2007.
- [28] Boutry, C., **Buchlin, E.** and Vial, J.-C. (2010). Flows in a small active region as seen by Hinode and SoHO. *ASP Conference Series*, in press. Poster, *3rd Hinode Science Meeting*, Tokyo, Japan, December 2009.
- [29] Boutry, C., **Buchlin, E.**, Vial, J.-C. and Régnier, S. Flows in the vicinity of two Active Regions as seen by Hinode, STEREO, and SoHO. *ASP Conference Series*, in press. Oral presentation, *4th Hinode Science Meeting*, Palermo, Italy, October 2010.

3.3 With publication of abstracts

- [30] **Buchlin, E.** and Hassler, D. M. (2000). Recent SOHO/SUMER Observations of a Polar and Equatorial Coronal Hole. *Bulletin of the American Astronomical Society*, **32**, 810. Poster, *Solar Physics Division (AAS) meeting*, Lake Tahoe, Nevada, June 2000.
- [31] **Buchlin, E.**, Galtier, S., Velli, M. and Vial, J.-C. (2003). Distributions of coronal events: simulations and event definitions. *Astron. Nachrichten, Supp. 3*, **324**, 109. Poster, *Tagung der Astronomische Gesellschaft*, Freiburg im Breisgau, Germany, September 2003.

3.4 Other communications

- [32] **Buchlin, E.**, Galtier, S., Velli, M. and Vial, J.-C. Distributions of coronal events: RMHD-based cellular automata, and shell-model simulations. Poster, *EGS-AGU-EUG Joint Assembly*, Nice, France, April 2003.
- [33] **Buchlin, E.**, Velli, M., Galtier, S. and Vial, J.-C. Statistical simulations of simplified MHD. Poster, *1st EGU General Assembly*, Nice, France, April 2004.
- [34] **Buchlin, E.**, Vial, J.-C. and Lemaire, P. Statistical properties of turbulence and intermittency in the solar corona observed in EUV by SOHO/SUMER. Oral presentation, *35th COSPAR Scientific Assembly*, Paris, France, July 2004.
- [35] **Buchlin, E.**, Velli, M. and Galtier, S. Simplified simulations of non-linear interactions in an anisotropic plasma. Oral presentation, *35th COSPAR Scientific Assembly*, Paris, France, July 2004.
- [36] **Buchlin, E.**, Velli, M. and Galtier, S. Shell-model simulations of MHD turbulence in a solar coronal loop. Oral presentation, *AGU-SEG-NABS-SPD/AAS Joint Assembly*, New Orleans, Louisiana, May 2005.

- [37] Velli, M., Rappazzo, F., **Buchlin, E.** and Einaudi, G. Reduced MHD and Shell-Model Simulations of Coronal Heating in Magnetized Loops: Scaling Laws. Oral presentation (M. Velli), *AGU Fall Meeting*, San Francisco, California, December 2005.
- [38] **Buchlin, E.**, Velli, M. and Verdini, A.. Simulations of MHD turbulence in the solar corona by coupled shell-models. Oral presentation, *IHY 1st European Assembly*, Paris, France, January 2006.
- [39] **Buchlin, E.** Turbulence, heating and particle acceleration. Oral presentation, *RHESSI Workshop*, Meudon, France, April 2006.
- [40] **Buchlin, E.** Statistics of coronal fields and turbulence with remote-sensing instruments. Poster, *5th STEREO/SECCHI consortium meeting*, Orsay, France, March 2007.
- [41] **Buchlin, E.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. Turbulent heating and cooling of coronal loops. Oral presentation, *EGU General Assembly*, Vienna, Austria, April 2007.
- [42] **Buchlin, E.**, Verdini, A., Velli, M., and Cargill, P. J. Turbulence in anisotropic MHD plasmas. Poster, *EGU General Assembly*, Vienna, Austria, April 2007.
- [43] Galtier, S. and **Buchlin, E.** Multi-scale Hall-MHD turbulence in the Solar Wind. Poster, *EGU General Assembly*, Vienna, Austria, April 2007.
- [44] Verdini, A., Velli, M. and **Buchlin, E.** Evolution and dissipation of Alfvénic turbulence in the polar solar wind: implications on the plasma heating and on the wind acceleration in coronal holes. Poster, *SOHO20*, Ghent, Belgium, August 2007.
- [45] **Buchlin, E.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. Forward-modelling of UV observables from the turbulent heating in coronal loops. Oral presentation, *EGU General Assembly*, Vienna, Austria, April 2008.
- [46] **Buchlin, E.** and Vial, J.-C. Densities in the quiet coronal transition region from SoHO/SUMER S VI observations. Poster, *12th European Solar Physics Meeting*, Freiburg im Breisgau, Germany, September 2008.
- [47] **Buchlin, E.** and Vial, J.-C. Measurements of the transition region temperature and density profiles with SO/SPICE. Poster, *3rd Solar Orbiter Workshop*, Sorrento, Italy, May 2009.
- [48] **Buchlin, E.**, Bradshaw, S. J., Cargill, P. J., Verdini, A. and Velli, M. Simulations of turbulent loops and open regions: heating and cooling. Poster, *3rd Hinode Science Meeting*, Tokyo, Japan, December 2009.
- [49] Verdini, A., Velli, M. and **Buchlin, E.** Turbulence in the Sub-Alfvénic Solar Wind Driven by Reflection of Low-Frequency Alfvén Waves. Oral presentation (A. Verdini, **invited**), *American Geophysical Union, Fall Meeting 2009*, San Francisco, California, December 2009.
- [50] **Buchlin, E.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. Turbulent heating and cooling of coronal loops: coupled simulations. Oral presentation, *38th COSPAR Scientific Assembly*, Bremen, Germany, July 2010.
- [51] **Buchlin, E.**, Mercier, C. and Vial, J.-C. Automated detection of filaments and their eruptions from SDO data. Oral presentation, *38th COSPAR Scientific Assembly*, Bremen, Germany, July 2010.
- [52] Parenti, S., Bocchialini, K., Soubrié, É., Alingery, P., Auchère, F., Ballans, H., **Buchlin, E.**, Gabriel, A., Mercier, C., Poulleau, G. and Vial, J.-C. The SDO data center at IDOC/MEDOC in France. Poster, *38th COSPAR Scientific Assembly*, Bremen, Germany, July 2010.

- [53] **Buchlin, E.**, Mercier, C. and Vial, J.-C. Automated detection of filaments and their eruptions from SDO data. Oral presentation, *5th Solar Image Processing Workshop*, Les Diablerets, Switzerland, September 2010.
- [54] Delouille, V. and **Buchlin, E.** Report on the working group on solar disk features. Oral presentation, *5th Solar Image Processing Workshop*, Les Diablerets, Switzerland, September 2010.
- [55] Delouille, V., Auchère, F., **Buchlin, E.**, Colak, T., Dalla, S. Dudok de Wit, T., Gallagher, P., Hochedez, J.-F., Hurlburt, N., Higgins, P., Innes, D., Kretzschmar, M., Labrosse, N., Martens, P., Parenti, S., Qahwaji, R., Régnier, S., Schrijver, K., Verbeeck, C., Walsh, R., and Watson, F. Mining and exploiting the NASA-SDO data in Europe. Poster, *5th Solar Image Processing Workshop*, Les Diablerets, Switzerland, September 2010.
- [56] **Buchlin, E.** and Vial, J.-C. Is there something wrong with a monotonous transition region? Poster, *Solar Plasma Spectroscopy: Achievements and Future Challenges: Celebrating the Career of Dr Helen Mason*, Cambridge, England, September 2010.
- [57] Boutry, C., **Buchlin, E.**, Régnier, S. and Vial, J.-C. Magnetic topology around a downflow at the edge of AR10943: a large scale flow from AR10942? Oral presentation, *Solar Plasma Spectroscopy: Achievements and Future Challenges: Celebrating the Career of Dr Helen Mason*, Cambridge, England, September 2010.
- [58] **Buchlin, E.**, Mercier, C., and Vial, J.-C. Automated detection of filaments from SDO data. Oral presentation, *First LWS/SDO Workshop: The Many Spectra of Solar Activity*, Squaw Creek, Olympic Valley, California, May 2011.
- [59] Koleva, K., Duchlev, P., Madjarska, M. S., Dechev, M., **Buchlin, E.**, and Vial, J.-C. Eruptive Prominence 2010 March 30 as observed with SDO/AIA and complementary instrumentation. Poster, *First LWS/SDO Workshop: The Many Spectra of Solar Activity*, Squaw Creek, Olympic Valley, California, May 2011.
- [60] Vial, J.-C., Koleva, K., Duchlev, P., Madjarska, M. S., Dechev, M., Schrijver, C. J., and **Buchlin, E.** Kinematics and Helicity Evolution of a Loop-Like Eruptive Prominence observed on 30 March 2010 with AIA on SDO. Poster, *13th European Solar Physics Meeting*, Rhodes, Greece, September 2011.
- [61] Teriaca, L., Andretta, V., Auchère, F., Brown, C. M., **Buchlin, E.**, Cauzzi, G., Culhane, J. L., Curdt, W., Davila, J. M., Del Zanna, G., Doschek, G. A., Fineschi, S., Fludra, A., Gallagher, P. T., Green, L., Harra, L. K., Imada, S., Innes, D., Kliem, B., Korendyke, C., Mariska, J. T., Martínez-Pillet, V., Parenti, S., Patsourakos, S., Peter, H., Poletto, L., Rutten, R., Schühle, U., Siemer, M., Shimizu, T., Socas-Navarro, H., Solanki, S. K., Spadaro, D., Trujillo-Bueno, J., Vargas Dominguez, S., Vial, J.-C., Walsh, R., Warren, H. P., Wiegmann, T., Winter, B., and Young, P. LEMUR: Large European Module for Solar Ultraviolet Research. Oral presentation (L. Teriaca), *13th European Solar Physics Meeting*, Rhodes, Greece, September 2011.
- [62] **Buchlin, E.**, Mercier, C., and Vial, J.-C. Automated detection of filaments from SDO data. Oral presentation (**invited**), *Fourth French-Chinese meeting on Solar Physics*, Nice, France, November 2011.
- [63] Vial, J.-C., Koleva, K., Duchlev, P., Madjarska, M. S., Dechev, M., Schrijver, C. J., and **Buchlin, E.** Kinematics and Helicity Evolution of a Loop-Like Eruptive Prominence. Poster, *Fourth French-Chinese meeting on Solar Physics*, Nice, France, November 2011.
- [64] **Buchlin, E.**, Mercier, C., and Vial, J.-C. Automated detection of filaments from SDO data. Oral presentation, *8th European Space Weather Week*, Namur, Belgium, December 2011.

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4 National conferences

4.1 With proceedings

- [65] **Buchlin, E.**, Aletti, V., Galtier, S., Velli, M., and Vial, J.-C. (2003). A solar cellular automata model issued from reduced MHD. *SF2A-2002, F. Combes and D. Barret (eds)*, EDP-Sciences, 129. Poster, *Semaine de l'Astrophysique Française*, Paris, France, June 2002.
- [66] **Buchlin, E.**, Velli, M., Galtier, S. and Vial, J.-C. (2005). Simplified simulations of MHD in a magnetic loop of the solar corona. *SF2A-2004, F. Combes, D. Barret, T. Contini, F. Meynadier and L. Pagani (eds)*, EDP-Sciences, 91. Oral presentation, *Semaine de l'Astrophysique Française*, Paris, France, June 2004.
- [67] **Buchlin, E.** (2006). Heating of the solar corona. *SF2A-2006, D. Barret, F. Casoli, T. Contini, G. Lagache, A. Lecavelier, and L. Pagani (eds)*, 529. Oral presentation, *Semaine de l'Astrophysique Française*, Paris, France, June 2006 (**invited review**).
- [68] **Buchlin, E.**, Mercier, C., Engin, S., Parenti, S. and Vial, J.-C. (2010). Détection automatisée de filaments et de leurs éruptions dans les données SDO. *SF2A-2010, S. Boissier, M. Heydari-Malayeri, R. Samadi and D. Valls-Gabaud (eds)*, 299. Poster, *Semaine de l'Astrophysique Française*, Marseille, France, June 2010.
- [69] Galtier, S. and **Buchlin, E.** (2010). Nonlinear diffusion equation for MHD turbulence. *SF2A-2010, S. Boissier, M. Heydari-Malayeri, R. Samadi and D. Valls-Gabaud (eds)*, 297. Poster, *Semaine de l'Astrophysique Française*, Marseille, France, June 2010.

4.2 Other communications

- [70] **Buchlin, E.**, Velli, M., Galtier, S. and Vial, J.-C.. . Simulations de MHD simplifiée: automates cellulaires et shell-models. Oral presentation, *Atelier du Projet national Soleil-Terre*, Autrans, France, January 2004.
- [71] **Buchlin, E.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. Turbulent heating and cooling of coronal loops. Oral presentation, *Semaine de l'Astrophysique Française*, Grenoble, France, July 2007.
- [72] **Buchlin, E.**, Verdini, A. and Velli, M. SHELL-ATM: a model for Reduced-MHD turbulence. Oral presentation, *Semaine de l'Astrophysique Française*, Grenoble, France, July 2007.
- [73] Galtier, S. and **Buchlin, E.** Multi-scale Hall-MHD turbulence in the solar wind. Poster, *Semaine de l'Astrophysique Française*, Grenoble, France, July 2007.
- [74] **Buchlin, E.** Forward-modelling of heating in coronal loops. Oral presentation, *Royal Astronomical Society Discussion Meeting on Coronal Heating*, London, England, January 2008.
- [75] **Buchlin, E.** Chauffage turbulent dans des plasmas collisionnels. Oral presentation, *Colloque à mi-parcours du Projet National Soleil-Terre*, Obernai, France, March 2008 (**invited review**).
- [76] **Buchlin, E.**, Verdini, A., Velli, M. and Cargill, P. J. Turbulence dans des plasmas MHD anisotropes solaires. Poster, *Colloque à mi-parcours du Projet National Soleil-Terre*, Obernai, France, March 2008.

- [77] Galtier, S. and **Buchlin, E.** Turbulence MHD-Hall multi-échelles dans le vent solaire. Poster, *Colloque à mi-parcours du Projet National Soleil-Terre*, Obernai, France, March 2008.
- [78] **Buchlin, E.**, Verdini, A., Velli, M., and Cargill, P. J. Turbulence in anisotropic MHD plasmas. Poster, *Semaine de l'Astrophysique Française*, Paris, France, July 2008.
- [79] **Buchlin, E.** Chauffage et refroidissement de la couronne. Oral presentation, *Colloque de prospective du Projet National Soleil-Terre*, Palaiseau, France, September 2009 (**invited review**).
- [80] **Buchlin, E.** and Vial, J.-C. Measurements of the transition region temperature and density profiles with SO/SPICE. Poster, *Colloque de prospective du Projet National Soleil-Terre*, Palaiseau, France, September 2009.
- [81] **Buchlin, E.**, Revel, A. and Vial, J.-C. Détection automatisée de filaments dans les données de SDO. Poster, *Colloque de prospective du Projet National Soleil-Terre*, Palaiseau, France, September 2009.
- [82] Boutry, C., **Buchlin, E.** and Vial, J.-C. Recherche d'événements coronaux à petites échelles avec Hinode/EIS. Poster, *Colloque de prospective du Projet National Soleil-Terre*, Palaiseau, France, September 2009.
- [83] Auchère, F., Vial, J.-C., Inhester, B., Rouesnel, F., Cabral, A., Gallagher, P., Mercier, R., Moses, D., Rochus, P., Vacelet, A., Abreu, M., Akambita, I., Appourchaux, T., Bocchialini, K., **Buchlin, E.**, Dallavedova, F., Defise, J.-M., Derouich, M., Innes, D., McAteer, J., Parenti, S., Rebordão, J., Robbrecht, E., Soubrié, S., Stockman, Y. and Teriaca, L. ECLIPSE: European Coronal Investigation in Permanent Solar Eclipse. Poster, *Colloque de prospective du Projet National Soleil-Terre*, Palaiseau, France, September 2009.
- [84] **Buchlin, E.** Chromospheric and coronal heating. Oral presentation, *EST (European Solar Telescope) - France workshop*, Meudon, France, May 2010 (**invited review**).
- [85] **Buchlin, E.**, Bocchialini, K., Parenti, S., Auchère, F., Vial, J.-C., Soubrié, É. and Mercier, C. Relations Soleil-Terre: la nouvelle donne SDO. *Journée scientifique sur les relations Soleil-Terre*, Paris, France, June 2010.
- [86] **Buchlin, E.**, Mercier, C., Vial, J.-C., and Madsen, C. (2011). Détection automatisée de filaments à partir de données SDO. Oral presentation, *Semaine de l'Astrophysique Française*, Paris, France, June 2011.

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5 Workshops and summer schools

5.1 Oral presentations

- [87] Small-scale heating in coronal loops. *1st Coronal Loops Workshop*, Orsay, France, November 2002.
- [88] Statistical approaches of small-scale coronal heating. Summer school *Basic processes of turbulent plasmas*, Chalkidiki, Greece, September 2003.
- [89] Observations de petits événements coronaux avec SUMER, et définitions d'événements. *Atelier du Projet national Soleil-Terre*, Autrans, France, January 2004.
- [90] Events and intermittency from time series of energy dissipation. Summer school *Analysis techniques for turbulent plasmas*, Copanello, Italy, September 2004.

- [91] Signatures of nanoflares and turbulence observed in EUV by SOHO/SUMER. *Four Solar Cycles of Space Instrumentation, in honour of Philippe Lemaire's retirement*, Orsay, France, November 2004.
- [92] Numerical methods and parallel techniques used in a model of MHD turbulence in a solar coronal loop. “*Grand Challenge Problems in Computational Astrophysics*” *Culminating Conference*, Lake Arrowhead, California, June 2005 (**invited**).
- [93] Shell-model simulations of MHD turbulence in a solar coronal loop. Summer school *Turbulence and Fine Scale Structure in Solar and Astrophysical Plasmas*, Montegufoni, Italy, October 2005.
- [94] Turbulent heating in the solar corona and turbulence in the solar wind. “*Grand Challenge Problems in Computational Astrophysics*” *1st Reunion Conference*, Lake Arrowhead, California, December 2006 (**invited**).
- [95] Numerical simulations of coronal heating. *ISSI team on Coronal Heating*, Bern, Switzerland, February 2007.
- [96] Observation de la turbulence dans la couronne solaire. Journée scientifique *Turbulence dans les plasmas spatiaux: aspects expérimentaux*, Université Pierre et Marie Curie, Paris, France, February 2007 (**invited**).
- [97] Turbulent heating and cooling of coronal loops. *3rd Coronal Loops Workshop*, Santorini, Greece, June 2007.
- [98] Heating and cooling model of a coronal loop. *ISSI team on Coronal Heating*, Bern, Switzerland, October 2007.
- [99] Heating and cooling of the solar corona. “*Grand Challenge Problems in Computational Astrophysics*” *2nd Reunion Conference*, Lake Arrowhead, California, December 2007 (**invited**).
- [100] Latest results from the coronal loop model. *ISSI team on Coronal Heating*, Bern, Switzerland, January 2009.
- [101] Simulations of turbulent heating and cooling of coronal loops. *4th Coronal Loops Workshop*, Florence, Italy, July 2009.

5.2 Posters

- [102] Chauffage turbulent dans la couronne solaire. *Journées Jeunes Chercheurs CNES*, Toulouse, France, October 2008 (**invited**).

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6 Seminars and other oral presentations

- [103] 08 October 2002: Journées des thésards, IAS, Orsay, France (and organization).
- [104] 06 May 2003: Meeting of the TOSTISP network, Orsay, France.
- [105] 19 October 2003: Fête de la Science, IAS, Orsay, France.
- [106] 14 January 2004: Observatoire d’Arcetri, Florence, Italy.
- [107] 03 February 2004: Journées des thésards, IAS, Orsay, France.
- [108] 02 February 2005: Observatory, Aristotle University of Thessaloniki, Greece.
- [109] 23 February 2005: Meeting of the TOSTISP network, London, England.
- [110] 28 March 2005: IPAM, UCLA, Los Angeles, California.

- [111] 18 May 2005: IAS, Orsay, France.
- [112] 01 October 2005: Meeting of the Marie Curie Fellows Association, Pontedera, Italy (and organization).
- [113] 01 December 2005: CETP, Vélizy, France.
- [114] 22 February 2006: LUTH, Paris Observatory, Meudon, France.
- [115] 28 September 2006: Space physics group PPARC rolling grant review panel, Imperial College, London, England.
- [116] 09 March 2007: LESIA, Paris Observatory, Meudon, France.
- [117] 05 November 2007: DAMTP, University of Cambridge, England.
- [118] 20 November 2007: Imperial College, London, England.
- [119] 08 February 2008: IAP, Paris, France.
- [120] 27 February 2008: LUTH, Paris Observatory, Meudon, France.
- [121] 14 April 2010: LUTH, Paris Observatory, Meudon, France.



7 Books and parts of books

- [122] Corrected Centrale-Supélec admission examination. *Annales des concours 2008* (collective), H&K, Paris, France.



8 Internal reports

- [123] **Buchlin, E.** (2000). *Recent Observations of an Equatorial Coronal Hole*. Internship report, ENS Paris and Southwest Research Institute, Boulder.
- [124] **Buchlin, E.** (2001). *Simulations d'événements solaires par automates cellulaires et propriétés statistiques*. Report of "DEA" internship, Institut d'Astrophysique Spatiale, École Doctorale Astronomie & Astrophysique d'Île-de-France, Paris.



9 Numerical simulation code

- [125] **Buchlin, E.**, Velli, M. and Verdini, A. The SHELL-ATM code. Under GPL license, with manual (65 pages). <http://www.arcetri.astro.it/~eric/shell-atm/codedoc/>



10 Other publications and outreach

- [126] **Buchlin, E.**, with Bessière, M. (2004). *Le 8 juin 2004: la planète Vénus passera devant le Soleil*. Press release of Paris Sud University.
- [127] **Buchlin, E.**, with Degrez, G. (2004). *Vénus Beauté. Plein Sud, le magazine d'information de l'Université Paris Sud*, 58, May-June 2004.
- [128] Parenti, S. and **Buchlin, E.** (2005). *Chauffage de la couronne solaire par micro-éruptions*. SF2A 2005 press conference, Observatoire astronomique, Université Louis Pasteur, Strasbourg, France.

- [129] **Buchlin, E.** (2008). Interest in policy: new imperative for young scientists? *Euro-Science Open Forum*, Barcelona, Spain.
- [130] Personal web site: <http://eric.buchlin.org/>, and some other web sites for associations.