

# List of publications

Éric Buchlin

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## 1 Thesis

- [1] **Buchlin, É.** (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, Univ. Paris-Sud and Univ. of Florence.
- [2] **Buchlin, É.** (2014). *Dynamique turbulente de la couronne et du vent solaires*. Habilitation thesis, Univ. Paris-Sud.

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## 2 Refereed papers

- [3] **Buchlin, É.**, 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.
- [4] **Buchlin, É.**, Galtier, S. and Velli, M. (2005). Influence of the definition of dissipative events on their statistics. *Astron. Astrophys.*, **436**, 355–362.
- [5] **Buchlin, É.**, Vial, J.-C. and Lemaire, P. (2006). A statistical study of SUMER spectral images: events, turbulence, and intermittency. *Astron. Astrophys.*, **451**, 1091–1099.
- [6] Parenti, S., **Buchlin, É.**, 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.
- [7] Galtier, S. and **Buchlin, É.** (2007). Multi-scale Hall-MHD turbulence in the solar wind. *Astrophys. J.*, **656**, 560–566.
- [8] **Buchlin, É.** and Velli, M. (2007). Shell-models of RMHD turbulence and the heating of solar coronal loops. *Astrophys. J.*, **662**, 701–714.
- [9] **Buchlin, É.**, Cargill, P. J., Bradshaw, S. J. and Velli, M. (2007). Profiles of heating in turbulent coronal magnetic loops. *Astron. Astrophys.*, **469**, 347–354.
- [10] **Buchlin, É.** (2007). Intermittent heating of the solar corona by MHD turbulence. *Nonlin. Proc. Geophys.*, **14**, 649–654.
- [11] Verdini, A., Velli, M. and **Buchlin, É.** (2009). Turbulence in the sub-Alfvénic solar wind driven by reflection of low-frequency Alfvén waves. *Astrophys. J. Lett.*, **700**, 39–42.
- [12] **Buchlin, É.** 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.

- [13] Galtier, S. and **Buchlin, É.** (2010). Nonlinear diffusion equations for anisotropic MHD turbulence with cross-helicity. *Astrophys. J.*, **722**, 1977–1983.
- [14] **Buchlin, É.** (2011). Intermittent turbulent dynamo at very low and high magnetic Prandtl numbers. *Astron. Astrophys.*, **534**, L9.
- [15] Koleva, K., Madjarska, M. S., Duchlev, P., Schrijver, C. J., Vial, J.-C., **Buchlin, É.** and Dechev, M. (2012). Kinematics and helicity evolution of a loop-like eruptive prominence. *Astron. Astrophys.*, **540**, A127.
- [16] Teriaca, L., Andretta, V., Auchère, F., Brown, C. M., **Buchlin, É.**, 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., Tsuneta, S., Dominguez, S. V., Vial, J.-C., Walsh, R., Warren, H. P., Wiegmann, T., Winter, B., and Young, P. (2012). LEMUR: Large European Module for Solar Ultraviolet Research. *Exp. Astron.*, **34**, 273-309.
- [17] Boutry, C., **Buchlin, É.**, Vial, J.-C. and Régnier, S. (2012). Flows at the edge of an active region: observation and interpretation. *Astrophys. J.*, **752**, 13.
- [18] Froment, C., Auchère, F., Bocchialini, K., **Buchlin, É.**, Guennou, C. and Solomon, J. (2015). Evidence for evaporation-incomplete condensation cycles in warm coronal loops. *Astrophys. J.*, **807**, 158.
- [19] Joulin, V., **Buchlin, É.**, Solomon, J. and Guennou, C. (2016). Energetic characterisation and statistics of solar coronal brightenings. *Astron. Astrophys.*, **591**, A148.
- [20] Auchère, F., Froment, C., Bocchialini, K., **Buchlin, É.** and Solomon, J. (2016). On the Fourier and Wavelet Analysis of Coronal Time-Series. *Astrophys. J.*, **825**, 110.
- [21] Auchère, F., Froment, C., Bocchialini, K., **Buchlin, É.** and Solomon, J. (2016). Thermal Non-Equilibrium Revealed by Periodic Pulses of Random Amplitudes in Solar Coronal Loops. *Astrophys. J.*, **827**, 152.
- [22] Froment, C., Auchère, F., Aulanier, G., Mikić, Z., Bocchialini, K., **Buchlin, É.** and Solomon, J. (2016). Long-period intensity pulsations in coronal loops explained by thermal non-equilibrium cycles. *Astrophys. J.*, **835**, 272.

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### 3 International conferences

#### 3.1 With refereed proceedings

- [23] **Buchlin, É.**, 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.
- [24] Galtier, S. and **Buchlin, É.** (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.
- [25] **Buchlin, É.** (2007). Intermittent heating of the solar corona by MHD turbulence. *Nonlin. Proc. Geophys.*, **14**, 649–654. Oral presentation (**invited**), *6th Nonlinear Waves and Turbulence Workshop*, Fukuoka, Japan, October 2006.

- [26] Verdini, A., Velli, M. and **Buchlin, É.** (2009). Reflection driven MHD turbulence in the solar atmosphere and wind. *Earth, Moon, and Planets*, **104**, 121–125. Poster, *2nd European Assembly of the International Heliophysical Year*, Torino, Italy, June 2007.
- [27] Fludra, A., Griffin, D., Caldwell, M., Eccleston, P., Cornaby, J., Drummond, D., Grainger, W., Greenway, P., Grundy, T., Howe, C., McQuirk, C., Middleton, K., Poyntz-Wright, O., Richards, A., Rogers, K., Sawyer, C., Shaughnessy, B., Sidher, S., Tosh, I., Beardsley, S., Burton, G., Marshall, A., Waltham, N., Woodward, S., Appourchaux, T., Philippon, A., Auchère, F., **Buchlin, É.**, Gabriel, A., Vial, J.-C., Schühle, U., Curdt, W., Innes, D., Meining, S., Peter, H., Solanki, S., Teriaca, L., Gyo, M., Büchel, V., Haberleiter, M., Pfiffner, D., Schmutz, W., Carlsson, M., Haugan, S.V., Davila, J., Jordan, P., Thompson, W., Hassler, D., Walls, B., Deforest, C., Hanley, J., Johnson, J., Phelan, P., Blecha, L., Cottard, H., Paciotti, G., Autissier, N., Allemand, Y., Relecom, K., Munro, G., Butler, A., Klein, R. and Gottwald, A. (2013). SPICE EUV spectrometer for the Solar Orbiter mission. *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, **8862**, 88620F. Oral presentation (A. Fludra, **invited**), SPIE conference Solar Physics and Space Weather Instrumentation V, San Diego, California, August 2013.

### 3.2 With proceedings

- [28] **Buchlin, É.**, 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.
- [29] **Buchlin, É.**, 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.
- [30] Parenti, S., **Buchlin, É.**, 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.
- [31] **Buchlin, É.** 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.
- [32] Parenti, S., **Buchlin, É.**, 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.
- [33] Parenti, S., **Buchlin, É.**, 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.
- [34] Verdini, A., **Buchlin, É.**, 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.

- [35] **Buchlin, É.** 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.
- [36] **Buchlin, É.**, 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.
- [37] Boutry, C., **Buchlin, É.** and Vial, J.-C. (2012). Flows in a small active region as seen by Hinode and SoHO. *ASP Conference Series 454*, 233. Poster, *3rd Hinode Science Meeting*, Tokyo, Japan, December 2009.
- [38] Boutry, C., **Buchlin, É.**, Vial, J.-C. and Régnier, S. (2012). Flows in the vicinity of two Active Regions as seen by Hinode, STEREO, and SoHO. *ASP Conference Series 455*, 83. Oral presentation, *4th Hinode Science Meeting*, Palermo, Italy, October 2010.
- [39] **Buchlin, É.**, Mercier, C., and Vial, J.-C. (2012). Automated detection of filaments from SDO data. *Understanding Solar Activity: Advances and Challenges, EAS Publications Series 55*, 175. Oral presentation (**invited**), *Fourth French-Chinese meeting on Solar Physics*, Nice, France, November 2011.

### 3.3 With publication of abstracts

- [40] **Buchlin, É.** 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.
- [41] **Buchlin, É.**, 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

- [42] **Buchlin, É.**, Velli, M., Galtier, S. and Vial, J.-C.. Small-scale heating in coronal loops. Oral presentation, *1st Coronal Loops Workshop*, Orsay, France, November 2002.
- [43] **Buchlin, É.**, 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.
- [44] **Buchlin, É.**, Velli, M., Galtier, S. and Vial, J.-C. Statistical simulations of simplified MHD. Poster, *1st EGU General Assembly*, Nice, France, April 2004.
- [45] **Buchlin, É.**, 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.
- [46] **Buchlin, É.**, 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.
- [47] **Buchlin, É.**, 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.

- [48] Velli, M., Rappazzo, F., **Buchlin, É.** 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.
- [49] **Buchlin, É.**, 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.
- [50] **Buchlin, É.** Turbulence, heating and particle acceleration. Oral presentation, *RHESSI Workshop*, Meudon, France, April 2006.
- [51] **Buchlin, É.** Statistics of coronal fields and turbulence with remote-sensing instruments. Poster, *5th STEREO/SECCHI consortium meeting*, Orsay, France, March 2007.
- [52] **Buchlin, É.**, 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.
- [53] **Buchlin, É.**, Verdini, A., Velli, M., and Cargill, P. J. Turbulence in anisotropic MHD plasmas. Poster, *EGU General Assembly*, Vienna, Austria, April 2007.
- [54] Galtier, S. and **Buchlin, É.** Multi-scale Hall-MHD turbulence in the Solar Wind. Poster, *EGU General Assembly*, Vienna, Austria, April 2007.
- [55] **Buchlin, É.**, Velli, M., Galtier, S. and Vial, J.-C.. Turbulent heating and cooling of coronal loops. Oral presentation, *3rd Coronal Loops Workshop*, Santorini, Greece, June 2007.
- [56] Verdini, A., Velli, M. and **Buchlin, É.** 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.
- [57] **Buchlin, É.**, 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.
- [58] **Buchlin, É.** 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.
- [59] **Buchlin, É.** Turbulent dynamo at very low and high Prandtl numbers. Oral presentation, *Frontiers in Dynamo Theory*, Paris, France, March 2009.
- [60] **Buchlin, É.** 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.
- [61] **Buchlin, É.**, Bradshaw, S. J., Cargill, P. J. and Velli, M.. Simulations of turbulent heating and cooling of coronal loops. Oral presentation, *4th Coronal Loops Workshop*, Florence, Italy, July 2009.
- [62] **Buchlin, É.**, 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.
- [63] Verdini, A., Velli, M. and **Buchlin, É.** 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*, San Francisco, California, December 2009.

- [64] **Buchlin, É.**, 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.
- [65] **Buchlin, É.**, 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.
- [66] Parenti, S., Bocchialini, K., Soubrié, É., Alingery, P., Auchère, F., Ballans, H., **Buchlin, É.**, 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.
- [67] **Buchlin, É.**, 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.
- [68] Delouille, V. and **Buchlin, É.** Report on the working group on solar disk features. Oral presentation, *5th Solar Image Processing Workshop*, Les Diablerets, Switzerland, September 2010.
- [69] Delouille, V., Auchère, F., **Buchlin, É.**, 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.
- [70] **Buchlin, É.** 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, United Kingdom, September 2010.
- [71] Boutry, C., **Buchlin, É.**, 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, United Kingdom, September 2010.
- [72] **Buchlin, É.**, 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.
- [73] Koleva, K., Duchlev, P., Madjarska, M. S., Dechev, M., **Buchlin, É.**, and Vial, J.-C. Eruptive Prominence on 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.
- [74] Vial, J.-C., Koleva, K., Duchlev, P., Madjarska, M. S., Dechev, M., Schrijver, C. J., and **Buchlin, É.** 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.
- [75] Teriaca, L., Andretta, V., Auchère, F., Brown, C. M., **Buchlin, É.**, 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., Dominguez, S. V., 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.
- [76] Vial, J.-C., Koleva, K., Duchlev, P., Madjarska, M. S., Dechev, M., Schrijver, C. J., and **Buchlin, É.** Kinematics and Helicity Evolution of a Loop-Like Eruptive Prominence. Poster, *Fourth French-Chinese meeting on Solar Physics*, Nice, France, November 2011.
- [77] **Buchlin, É.**, Mercier, C. and Vial, J.-C. Automated detection of filaments from SDO data. Oral presentation, *8th European Space Weather Week*, Namur, Belgium, December 2011.
- [78] **Buchlin, É.**, Velli, M., and Verdini, A. Shell-models for reduced MHD turbulence. *Turbulent cascade in the solar wind: anisotropy and dissipation*, Meudon, France, September 2012.
- [79] **Buchlin, É.**, Mercier, C., and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *LWS Solar Dynamics Observatory Science Workshop: Exploring the Network of SDO Science*, Cambridge, Maryland, March 2013.
- [80] Joulin, V., **Buchlin, É.**, and Solomon, J. Energetic characterisation and statistics of solar coronal bright points with SDO/AIA. Oral presentation (V. Joulin), *LWS Solar Dynamics Observatory Science Workshop: Exploring the Network of SDO Science*, Cambridge, Maryland, March 2013.
- [81] Alingery, P., Soubrié, É., Auchère, F., Bocchialini, K., **Buchlin, É.**, Malapert, J.-C., Parenti, S., and Boignard, J.-P. MEDIA: MEDoc Interface for AIA. Poster, *LWS Solar Dynamics Observatory Science Workshop: Exploring the Network of SDO Science*, Cambridge, Maryland, March 2013.
- [82] **Buchlin, É.**, Mercier, C., and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *IAU Symposium 300: nature of prominences, and their role in space weather*, Paris, France, June 2013.
- [83] Joulin, V., **Buchlin, É.**, and Solomon, J. Energy distributions of small brightenings in the solar corona with SDO/AIA. Poster, *6th Coronal Loops Workshop*, La Roche-en-Ardenne, Belgium, June 2013.
- [84] Joulin, V., **Buchlin, É.**, Solomon, J. and Guennou, C. Energy distributions of small brightenings in the solar corona. Poster, *7th Hinode Science Meeting*, Takayama, Japan, November 2013.
- [85] **Buchlin, É.** and Baudin, F. UV/EUV solar spectral imaging data for space weather. Oral presentation, *10th European Space Weather Week*, Antwerp, Belgium, November 2013.
- [86] Baudin, F. and **Buchlin, É.** Solar data and related tools at MEDOC. Fair stand, *10th European Space Weather Week*, Antwerp, Belgium, November 2013.
- [87] **Buchlin, É.**, Mercier, C., Goujon, J.-B. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Oral presentation, *40th COSPAR Scientific Assembly*, Moscow, Russia, August 2014.
- [88] Froment, C., Auchère, F., Bocchialini, K., Solomon, J., **Buchlin, É.** and Guennou, C. Observations and possible interpretations of very long period intensity pulsations in solar coronal loops. Oral presentation (C. Froment), *40th COSPAR Scientific Assembly*, Moscow, Russia, August 2014.

- [89] Joulin, V., **Buchlin, É.** and Solomon, J. Energetic characterisation and statistics of solar coronal brightenings. Poster, *40th COSPAR Scientific Assembly*, Moscow, Russia, August 2014.
- [90] Froment, C., Auchère, F., Bocchialini, K., Solomon, J., **Buchlin, É.** and Guennou, C. Observations and possible interpretations of very long period intensity pulsations in solar coronal loops. Oral presentation (C. Froment), *European Solar Physics Meeting*, Dublin, Ireland, September 2014.
- [91] **Buchlin, É.**, Mercier, C., Goujon, J.-B. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *11th European Space Weather Week*, Liège, Belgium, November 2014.
- [92] **Buchlin, É.** and Génot, V. MEDOC and CDDP connected services for space weather applications. Fair stand, *11th European Space Weather Week*, Liège, Belgium, November 2014.
- [93] Froment, C., Auchère, F., Bocchialini, K., **Buchlin, É.**, Guennou, C. and Solomon, J. Evidence for evaporation-incomplete condensation cycles in warm solar coronal loops. Oral presentation (C. Froment), *7th Coronal Loops Workshop*, Cambridge, United Kingdom, July 2015.
- [94] Froment, C., Auchère, F., Bocchialini, K., **Buchlin, É.**, Guennou, C. and Solomon, J. Evidence for evaporation-incomplete condensation cycles in warm solar coronal loops. Poster, *1st Joint Solar Probe Plus-Solar Orbiter Workshop*, Artimino, Italy, September 2015.
- [95] Froment, C., Auchère, F., Bocchialini, K., **Buchlin, É.**, Guennou, C., Solomon, J. and Aulanier, G. Evidence for a highly-stratified heating in coronal loops. Oral presentation (C. Froment), *Hinode 9 International Science Meeting*, Belfast, United Kingdom, September 2015.
- [96] **Buchlin, É.** Coronal heating. Oral presentation, *Multi-Wavelength Studies of the Solar Atmosphere: Celebrating the Career of Costas Alissandrakis*, Ioannina, Greece, September 2015 (**invited review**).
- [97] **Buchlin, É.** and Génot, V. MEDOC and CDDP connected services for space weather applications. Fair stand, *12th European Space Weather Week*, Oostende, Belgium, November 2015.
- [98] Alissandrakis, C. E., Vial, J.-C., Koukras, A., **Buchlin, É.** and Chane-Yook, M. (2016). Spectral signatures of spicules in the IRIS channels: observations and preliminary modeling. Oral presentation (C. Alissandrakis), *6th IRIS workshop*, Stockholm, Sweden, June 2016.
- [99] Alingery, P., Wang, G., **Buchlin, É.**, Caminade, S., Ballans, H., Baudin, F. and Parenti, S. The SDO AIA and HMI archive at MEDOC. Poster, *SDO 2016: Unraveling the Sun's Complexity*, Burlington, Vermont, October 2016.
- [100] Auchère, F., Froment, C., Bocchialini, K., Solomon, J. and **Buchlin, É.** Periodic Pulses or Random Amplitudes in Coronal Loops as Signatures of Thermal Non-Equilibrium. Poster, *SDO 2016: Unraveling the Sun's Complexity*, Burlington, Vermont, October 2016.
- [101] **Buchlin, É.**, Mercier, C. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *SDO 2016: Unraveling the Sun's Complexity*, Burlington, Vermont, October 2016.



- [102] Froment, C., Auchère, F., Bocchialini, K., **Buchlin, É.**, Guennou, C., Solomon, J. and Aulanier, G. Long-Period Intensity Pulsations as the Manifestation of the Heating Stratification and Timescale in Coronal Loops. Oral presentation (C. Froment), *SDO 2016: Unraveling the Sun's Complexity*, Burlington, Vermont, October 2016.
- [103] Guennou, C., Auchère, F., Bocchialini, K., Soubrié, É., Mercier, C., Parenti, S. and Alingery, P. GAIA-DEM: a database providing SDO/AIA DEM maps. Oral presentation (É. Buchlin), *SDO 2016: Unraveling the Sun's Complexity*, Burlington, Vermont, October 2016.
- [104] Joulin, V., **Buchlin, É.**, Solomon, J. and Guennou, C. Energetic characterisation and statistics of solar coronal brightenings. Oral presentation (É. Buchlin), *SDO 2016: Unraveling the Sun's Complexity*, Burlington, Vermont, October 2016.
- [105] Hassler, D., Auchère, F., **Buchlin, É.**, Caminade, S., Janvier, M., Mercier, C., Parenti, S., Fludra, A., Carlsson, M., Peter, H., et al. SPICE Operations and Scientific Exploitation Team Consortium. Poster, *7th Solar Orbiter Workshop: Exploring the solar environs*, Granada, Spain, April 2017.
- [106] Georgoulis, M. K., Bloomfield, D. S., **Buchlin, É.**, et al. The FLARECAST project for solar flare forecasting. Poster, *7th Solar Orbiter Workshop: Exploring the solar environs*, Granada, Spain, April 2017.
- [107] **Buchlin, É.**, Mercier, C. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *7th Solar Orbiter Workshop: Exploring the solar environs*, Granada, Spain, April 2017.
- [108] **Buchlin, É.**, Génot, V., Rouillard, A. P., et al. MEDOC and CDPP connected services for Solar Orbiter and for space weather applications. Poster, *7th Solar Orbiter Workshop: Exploring the solar environs*, Granada, Spain, April 2017.
- [109] Zhang, P., **Buchlin, É.** and Vial, J.-C. Launch of an eruptive prominence as observed with IRIS and AIA/SDO. Poster, *7th Solar Orbiter Workshop: Exploring the solar environs*, Granada, Spain, April 2017.
- [110] Pinto, R. F., Rouillard, A. P., Génot, V., Amari, T., **Buchlin, É.** and Arge, N. Connecting the surface of the Sun to the heliosphere. Oral presentation (R. Pinto), *7th Solar Orbiter Workshop: Exploring the solar environs*, Granada, Spain, April 2017.
- [111] Pinto, R. F., Rouillard, A. P., Génot, V., Amari, T., **Buchlin, É.**, Arge, N., Sasso, C., Andretta, V. and Bemporad, A. Validating coronal magnetic field reconstruction methods using solar wind simulations and synthetic imagery. Poster, *EGU General Assembly*, Vienna, Austria, April 2017.
- [112] Zhang, P., **Buchlin, É.** and Vial, J.-C. Launch of an eruptive prominence as observed with IRIS and AIA/SDO. Poster, *1st China-Europe Solar Physics Meeting*, Kunming, China, May 2017.
- [113] **Buchlin, É.**, Génot, V., Rouillard, A. P., et al. MEDOC and CDPP connected services for Solar Orbiter and for space weather applications. Poster, *1st China-Europe Solar Physics Meeting*, Kunming, China, May 2017.
- [114] **Buchlin, É.**, Mercier, C. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *1st China-Europe Solar Physics Meeting*, Kunming, China, May 2017.

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## 4 National conferences

### 4.1 With proceedings

- [115] **Buchlin, É.**, 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.
- [116] **Buchlin, É.**, 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.
- [117] **Buchlin, É.** (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**).
- [118] **Buchlin, É.**, 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.
- [119] Galtier, S. and **Buchlin, É.** (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.
- [120] Rouillard, A. P., Pinto, R. F., R. F., Brun, A. S., Briand, C., Bourdarie, S., Dudok de Wit, T., Amari, T., Blelly, P.-L., **Buchlin, É.**, Chambodut, A., Claret, A., Corbard, T., Génot, V., Guennou, C., Klein, K. L., Koechlin, L., Lavarra, M., Lavraud, B., Leblanc, F., Lemorton, J., Lilensten, J., Lopez-Ariste, A., Marchaudon, A., Masson, S., Pariat, É., Reville, V., Turc, L., Vilmer, N. and Zuccarello, F. P. (2017). Space-weather assets developed by the French space-physics community. *SF2A-2016, C. Reylé, J. Richard, L. Cambrésy, M. Deleuil, E. Pécontal, L. Tresse and I. Vauglin (eds)*, 297.

### 4.2 Other communications

- [121] **Buchlin, É.**, Velli, M., Galtier, S. and Vial, J.-C. . Simulations de MHD simplifiée: automates cellulaires et shell-models. Oral presentation, *Atelier du Programme National Soleil-Terre*, Autrans, France, January 2004.
- [122] **Buchlin, É.**, 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.
- [123] **Buchlin, É.**, Verdini, A. and Velli, M. SHELL-ATM: a model for Reduced-MHD turbulence. Oral presentation, *Semaine de l'Astrophysique Française*, Grenoble, France, July 2007.
- [124] Galtier, S. and **Buchlin, É.** Multi-scale Hall-MHD turbulence in the solar wind. Poster, *Semaine de l'Astrophysique Française*, Grenoble, France, July 2007.
- [125] **Buchlin, É.** Forward-modelling of heating in coronal loops. Oral presentation, *Royal Astronomical Society Discussion Meeting on Coronal Heating*, London, United Kingdom, January 2008.

- [126] **Buchlin, É.** Chauffage turbulent dans des plasmas collisionnels. Oral presentation, *Colloque à mi-parcours du Programme National Soleil-Terre*, Obernai, France, March 2008 (**invited review**).
- [127] **Buchlin, É.**, Verdini, A., Velli, M. and Cargill, P. J. Turbulence dans des plasmas MHD anisotropes solaires. Poster, *Colloque à mi-parcours du Programme National Soleil-Terre*, Obernai, France, March 2008.
- [128] Galtier, S. and **Buchlin, É.** Turbulence MHD-Hall multi-échelles dans le vent solaire. Poster, *Colloque à mi-parcours du Programme National Soleil-Terre*, Obernai, France, March 2008.
- [129] **Buchlin, É.**, Verdini, A., Velli, M., and Cargill, P. J. Turbulence in anisotropic MHD plasmas. Poster, *Semaine de l'Astrophysique Française*, Paris, France, July 2008.
- [130] **Buchlin, É.** Chauffage et refroidissement de la couronne. Oral presentation, *Colloque de prospective du Programme National Soleil-Terre*, Palaiseau, France, September 2009 (**invited review**).
- [131] **Buchlin, É.** and Vial, J.-C. Measurements of the transition region temperature and density profiles with SO/SPICE. Poster, *Colloque de prospective du Programme National Soleil-Terre*, Palaiseau, France, September 2009.
- [132] **Buchlin, É.**, Revel, A. and Vial, J.-C. Détection automatisée de filaments dans les données de SDO. Poster, *Colloque de prospective du Programme National Soleil-Terre*, Palaiseau, France, September 2009.
- [133] Boutry, C., **Buchlin, É.** and Vial, J.-C. Recherche d'événements coronaux à petites échelles avec Hinode/EIS. Poster, *Colloque de prospective du Programme National Soleil-Terre*, Palaiseau, France, September 2009.
- [134] 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, É.**, 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 Programme National Soleil-Terre*, Palaiseau, France, September 2009.
- [135] **Buchlin, É.** Chromospheric and coronal heating. Oral presentation, *EST (European Solar Telescope) - France workshop*, Meudon, France, May 2010 (**invited review**).
- [136] **Buchlin, É.**, 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.
- [137] **Buchlin, É.**, Mercier, C., Vial, J.-C., and Madsen, C. Détection automatisée de filaments à partir de données SDO. Oral presentation, *Semaine de l'Astrophysique Française*, Paris, France, June 2011.
- [138] **Buchlin, É.**, Mercier, C., and Vial, J.-C. Détection automatisée de filaments et de leurs éruptions dans les données SDO. Poster, *Colloque de prospective du Programme National Soleil-Terre*, La Londe-Les Maures, France, March 2012.
- [139] Joulin, V., **Buchlin, É.**, and Solomon, J. Observations of small-scale coronal EUV brightenings with SDO. Poster, *Colloque de prospective du Programme National Soleil-Terre*, La Londe-Les Maures, France, March 2012.
- [140] **Buchlin, É.** Intermittent turbulent dynamo at very low and high magnetic Prandtl numbers. Poster, *Semaine de l'Astrophysique Française*, Nice, June 2012.

- [141] Joulin, V., **Buchlin, É.**, Solomon, J. and Guennou, C. Étude des distributions des énergies des petits événements dans la couronne solaire. Poster, *Colloque du Programme National Soleil-Terre: bilan et prospective*, Sète, France, February 2014.
- [142] **Buchlin, É.**, Mercier, C., Goujon, J.-B. and Vial, J.-C. Détection, caractérisation et suivi automatiques des filaments solaires à partir des données spatiales en UV. Oral presentation, *Colloque du Programme National Soleil-Terre: bilan et prospective*, Sète, France, February 2014.
- [143] **Buchlin, É.**, Baudin, F., Bocchialini, K., Auchère, F., Parenti, S., Ballans, H., Caminade, S., Mercier, C., Poulleau, G., Alingery, P., Goujon, J.-B. and Jacob, J. Données solaires et outils disponibles à MEDOC. Poster, *Colloque du Programme National Soleil-Terre: bilan et prospective*, Sète, France, February 2014.
- [144] Froment, C., Auchère, F., Bocchialini, K., Solomon, J., Guennou, C. and **Buchlin, É.** Pulsations de longues périodes dans les boucles coronales solaires: détection avec SDO/AIA. Poster, *Colloque du Programme National Soleil-Terre: bilan et prospective*, Sète, France, February 2014.
- [145] **Buchlin, É.**, Hassler, D., and Parenti, S. Solar Orbiter/SPICE: Contribution to Solar Orbiter science objectives, data, and operations. Oral presentation, *Atelier PNST Quels outils pour l'analyse de Solar Orbiter?*, Toulouse, France, October 2014.
- [146] **Buchlin, É.** and Boumier, P. Collecte, archivage et redistribution de données: Quelques éléments de réflexion qui pourraient être utiles aux projets nanosatellites. Oral presentation, *Nanosats et météo de l'espace*, Grenoble, France, June 2015 (**invited**).
- [147] **Buchlin, É.** and Baudin, F. UV/EUV solar spectral imaging data for space weather. Poster, *Météorologie: de l'atmosphère à l'espace*, Meudon, France, June 2015.
- [148] **Buchlin, É.**, Mercier, C. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *Meteorologie: de l'atmosphère à l'espace*, Meudon, France, June 2015.
- [149] **Buchlin, É.**, Mercier, C., Goujon, J.-B. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *Royal Astronomical Society Discussion Meeting on Modern data-analysis in solar physics*, London, United Kingdom, January 2016.
- [150] **Buchlin, É.** and the MEDOC team. Data and tools for automated solar data analysis at MEDOC. Poster, *Royal Astronomical Society Discussion Meeting on Modern data-analysis in solar physics*, London, United Kingdom, January 2016.
- [151] **Buchlin, É.** and the MEDOC team. Solar data, data products, and tools at MEDOC. Oral presentation (**invited**), *Colloque à mi-parcours du PNST*, Hendaye, France, March 2016.
- [152] **Buchlin, É.**, Mercier, C. and Vial, J.-C. Automated detection, characterization, and tracking of filaments from SDO data. Poster, *Colloque à mi-parcours du PNST*, Hendaye, France, March 2016.
- [153] Froment, C., Auchère, F., Aulanier, G., Mikić, Z., Bocchialini, K., **Buchlin, É.** and Solomon, J. Evidence for highly stratified and quasi-steady heating of solar coronal loops. Poster, *Colloque à mi-parcours du PNST*, Hendaye, France, March 2016.
- [154] Solomon, J., Froment, C., Auchère, F., Bocchialini, K. and **Buchlin, É.** Chauffage impulsif des boucles coronales et pulsations en intensité de longues périodes: approximation analytique. Poster, *Colloque à mi-parcours du PNST*, Hendaye, France, March 2016.

- [155] Auchère, F., Froment, C., Bocchialini, K., Solomon, J. and **Buchlin, É.** Periodic Pulses or Random Amplitudes in Coronal Loops as Signatures of Thermal Non-Equilibrium. Poster, *Colloque à mi-parcours du PNST*, Hendaye, France, March 2016.
- [156] **Buchlin, É.** and the MEDOC team. Données solaires, produits et outils à MEDOC. Oral presentation, *Semaine de l'Astrophysique Française*, Lyon, France, June 2016.

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## 5 Workshops and summer schools

### 5.1 Oral presentations

- [157] Statistical approaches of small-scale coronal heating. Summer school *Basic processes of turbulent plasmas*, Chalkidiki, Greece, September 2003.
- [158] Observations de petits événements coronaux avec SUMER, et définitions d'événements. *Atelier du Programme national Soleil-Terre*, Autrans, France, January 2004.
- [159] Events and intermittency from time series of energy dissipation. Summer school *Analysis techniques for turbulent plasmas*, Copanello, Italy, September 2004.
- [160] 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.
- [161] 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**).
- [162] 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.
- [163] 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**).
- [164] Numerical simulations of coronal heating. *ISSI team on Coronal Heating*, Bern, Switzerland, February 2007.
- [165] 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**).
- [166] Heating and cooling model of a coronal loop. *ISSI team on Coronal Heating*, Bern, Switzerland, October 2007.
- [167] Heating and cooling of the solar corona. "Grand Challenge Problems in Computational Astrophysics" *2nd Reunion Conference*, Lake Arrowhead, California, December 2007 (**invited**).
- [168] Latest results from the coronal loop model. *ISSI team on Coronal Heating*, Bern, Switzerland, January 2009.

### 5.2 Posters

- [169] 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

- [170] 08 October 2002: Journées des thésards, IAS, Orsay, France (and organization).
- [171] 06 May 2003: Meeting of the TOSTISP network, Orsay, France.
- [172] 19 October 2003: Fête de la Science, IAS, Orsay, France.
- [173] 14 January 2004: Observatoire d’Arcetri, Florence, Italy.
- [174] 03 February 2004: Journées des thésards, IAS, Orsay, France.
- [175] 02 February 2005: Observatory, Aristotle University of Thessaloniki, Greece.
- [176] 23 February 2005: Meeting of the TOSTISP network, London, United Kingdom.
- [177] 28 March 2005: IPAM, UCLA, Los Angeles, California.
- [178] 18 May 2005: IAS, Orsay, France.
- [179] 01 October 2005: Meeting of the Marie Curie Fellows Association, Pontedera, Italy (and organization).
- [180] 01 December 2005: CETP, Vélizy, France.
- [181] 22 February 2006: LUTH, Paris Observatory, Meudon, France.
- [182] 28 September 2006: Space physics group PPARC rolling grant review panel, Imperial College, London, United Kingdom.
- [183] 09 March 2007: LESIA, ParisObservatory, Meudon, France.
- [184] 05 November 2007: DAMTP, University of Cambridge, United Kingdom.
- [185] 20 November 2007: Imperial College, London, United Kingdom.
- [186] 08 February 2008: IAP, Paris, France.
- [187] 27 February 2008: LUTH, Paris Observatory, Meudon, France.
- [188] 14 April 2010: LUTH, Paris Observatory, Meudon, France.

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## 7 Books and parts of books

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

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## 8 Internal reports

- [190] **Buchlin, É.** (2000). *Recent Observations of an Equatorial Coronal Hole*. Internship report, ENS Paris and Southwest Research Institute, Boulder.
- [191] **Buchlin, É.** (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.
- [192] Basa, S., **Buchlin, É.**, Ceccarelli, C., Désert, F.-X., Dudok de Wit, T., Hameury, J.-M., Leblanc, F., Le Fèvre, O., Maurice, S., Pointecouteau, É., Reynaud, S., Rouan, D., Soubiran, C. and Tobie, G. (2015). Groupe D: Lien avec la prospective spatiale 2015-2020. In *Document de prospective en Astronomie et Astrophysique 2015-2020*, CNRS-INSU.

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## 9 Numerical simulation code

- [193] **Buchlin, É.**, Velli, M. and Verdini, A. The SHELL-ATM code. Under GPL license, with manual (65 pages).

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## 10 Other publications and outreach

- [194] **Buchlin, É.**, with Bessièrè, M. (2004). *Le 8 juin 2004: la planète Vénus passera devant le Soleil*. Press release of Paris Sud University.
- [195] **Buchlin, É.**, with Degrez, G. (2004). *Vénus Beauté. Plein Sud, le magazine d'information de l'Université Paris Sud*, 58, May-June 2004.
- [196] Parenti, S. and **Buchlin, É.** (2005). Chauffage de la couronne solaire par micro-éruptions. SF2A 2005 press conference, Observatoire astronomique, Université Louis Pasteur, Strasbourg, France.
- [197] **Buchlin, É.** (2008). Interest in policy: new imperative for young scientists? Oral presentation, *EuroScience Open Forum*, Barcelona, Spain.
- [198] Personal web site: <http://eric.buchlin.org/>, and some other web sites for associations.
- [199] **Buchlin, É.** (2012). La couronne solaire: du calme à la tempête. Oral presentation, La Coupole, centre d'histoire et de mémoire du Nord-Pas-de-Calais, Saint-Omer, France, 19 October 2012.
- [200] **Buchlin, É.** (2014). La couronne solaire: du calme à la tempête. Oral presentation and observation, Collège Louis Pasteur, Longjumeau, France, 11 April 2014.
- [201] **Buchlin, É.** (2015). La couronne solaire: du calme à la tempête. Oral presentation and observation (Solar eclipse), Collège Juliette Adam, Gif-sur-Yvette, France, 20 March 2015.
- [202] **Buchlin, É.** (2016). La couronne solaire: du calme à la tempête. Oral presentation, Collège Juliette Adam, Gif-sur-Yvette, France, 19 May 2016.