

## 1 List of publications of the geodynamo team from its creation (1997) to the end of 2020

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, ?, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199]

## References

- [199] M. G. Pamato, Y. Li, D. Antonangeli, F. Miozzi, G. Morard, I. G. Wood, L. Vocadlo, J. P. Brodholt, and M. Mezouar. Equation of state of hcp fe-c-si alloys and the effect of c incorporation mechanism on the density of hcp fe alloys at 300 k. *Journal Of Geophysical Research-Solid Earth*, 125(12), 2020.
- [198] F. Gerick, D. Jault, J. Noir, and J. Vidal. Pressure torque of torsional alfvén modes acting on an ellipsoidal mantle. *Geophysical Journal International*, 222(1):338–351, 2020.
- [197] S. Boccato, R. Torchio, S. Anzellini, E. Boulard, F. Guyot, T. Irifune, M. Harmand, I. Kantor, F. Miozzi, P. Parisiades, A. D. Rosa, D. Antonangeli, and G. Morard. Melting properties by x-ray absorption spectroscopy: common signatures in binary fe-c, fe-o, fe-s and fe-si systems. *Scientific Reports*, 10(1), 2020.
- [196] L. Bosse, J. Lilenstein, N. Gillet, S. Rochat, A. Delboulbe, S. Curaba, A. Roux, Y. Magnard, M. G. Johnsen, U. P. Lovhaug, P. O. Amblard, N. Le Bihan, M. Nabon, H. Marif, F. Auriol, and C. Nous. On the night-glow polarisation for space weather exploration. *Journal Of Space Weather And Space Climate*, 10, 2020.
- [195] F. Plunian, A. Teimurazov, R. Stepanov, and M. K. Verma. Inverse cascade of energy in helical turbulence. *Journal Of Fluid Mechanics*, 895, 2020.
- [194] J. Vidal and D. Cebron. Acoustic and inertial modes in planetary-like rotating ellipsoids. *Proceedings Of The Royal Society A-Mathematical Physical And Engineering Sciences*, 476(2239), 2020.

- [193] R. Torchio, S. Boccato, F. Miozzi, A. D. Rosa, N. Ishimatsu, I. Kantor, N. Sevelin-Radiguet, R. Briggs, C. Meneghini, T. Irifune, and G. Morard. Melting curve and phase relations of fe-ni alloys: Implications for the earth's core composition. *Geophysical Research Letters*, 47(14), 2020.
- [192] J. A. Hernandez, G. Morard, M. Guaraguaglini, R. Alonso-Mori, A. Benuzzi-Mounaix, R. Bolis, G. Fiquet, E. Galtier, A. E. Gleason, S. Glenzer, F. Guyot, B. Ko, H. J. Lee, W. L. Mao, B. Nagler, N. Ozaki, A. K. Schuster, S. H. Shim, T. Vinci, and A. Ravasio. Direct observation of shock-induced disordering of enstatite below the melting temperature. *Geophysical Research Letters*, 47(15), 2020.
- [191] L. Huder, N. Gillet, C. C. Finlay, M. D. Hammer, and H. Tchoungui. Cov-obs.x2: 180 years of geomagnetic field evolution from ground-based and satellite observations. *Earth Planets And Space*, 72(1), 2020.
- [190] S. Su, D. Cebron, H. C. Nataf, P. Cardin, J. Vidal, M. Solazzo, and Y. Do. Acoustic spectra of a gas-filled rotating spheroid. *European Journal Of Mechanics B-Fluids*, 84:302–310, 2020.
- [189] D. H. Jeong, A. Kvasnickova, J. B. Boutin, D. Cebron, and A. Sauret. Deposition of a particle-laden film on the inner wall of a tube. *Physical Review Fluids*, 5(11), 2020.
- [188] D. Andrault, G. Morard, G. Garbarino, M. Mezouar, M. A. Bouhifd, and T. Kawamoto. Melting behavior of sio<sub>2</sub> up to 120 gpa. *Physics And Chemistry Of Minerals*, 47(2), 2020.
- [187] E. Edmund, F. Miozzi, G. Morard, E. Boulard, A. Clark, F. Decremps, G. Garbarino, V. Svitlyk, M. Mezouar, and D. Antonangeli. Axial compressibility and thermal equation of state of hcp fe-5wt% ni-5wt% si. *Minerals*, 10(2), 2020.
- [186] J. Vidal, S. Su, and D. Cebron. Compressible fluid modes in rigid ellipsoids: towards modal acoustic velocimetry. *Journal Of Fluid Mechanics*, 885, 2020.
- [185] F. Plunian and T. Alboussiere. Axisymmetric dynamo action is possible with anisotropic conductivity. *Physical Review Research*, 2(1), 2020.
- [184] T. Alboussiere, K. Drif, and F. Plunian. Dynamo action in sliding plates of anisotropic electrical conductivity. *Physical Review E*, 101(3), 2020.
- [183] F. Xu, L. J. Xie, A. Yoneda, N. Guignot, A. King, G. Morard, and D. Antonangeli. Tic-mgo composite: an x-ray transparent and machinable heating element in a multi-anvil high pressure apparatus. *High Pressure Research*, 40(2):257–266, 2020.

- [182] Y. Kuwayama, G. Morard, Y. Nakajima, K. Hirose, A. Q. R. Baron, S. I. Kawaguchi, T. Tsuchiya, D. Ishikawa, N. Hirao, and Y. Ohishi. Equation of state of liquid iron under extreme conditions. *Physical Review Letters*, 124(16), 2020.
- [181] D. Jault. Tangential stress at the core-mantle interface. *Geophysical Journal International*, 221(2):951–967, 2020.
- [180] L. J. Xie, A. Yoneda, F. Xu, Y. J. Higo, C. Wang, Y. Tange, A. King, D. Antonangeli, G. Morard, and N. Guignot. Boron-mgo composite as an x-ray transparent pressure medium in the multi-anvil apparatus (vol 91, 043903, 2020). *Review Of Scientific Instruments*, 91(6), 2020.
- [179] G. Morard, J. A. Hernandez, M. Guaraguaglini, R. Bolis, A. Benuzzi-Mounaix, T. Vinci, G. Fiquet, M. A. Baron, S. H. Shim, B. Ko, A. E. Gleason, W. L. Mao, R. Alonso-Mori, H. J. Lee, B. Nagler, E. Galtier, D. Sokaras, S. H. Glenzer, D. Andrault, G. Garbarino, M. Mezouar, A. K. Schuster, and A. Ravasio. In situ x-ray diffraction of silicate liquids and glasses under dynamic and static compression to megabar pressures. *Proceedings Of The National Academy Of Sciences Of The United States Of America*, 117(22):11981–11986, 2020.
- [178] D. Cebron, R. Laguerre, J. Noir, and N. Schaeffer. Precessing spherical shells: flows, dissipation, dynamo and the lunar core. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 219(1):S34–S57, OCT 2019. 16th Symposium of Study of the Earth’s Deep Interior (SEDI), Edmonton, CANADA, JUL 08-13, 2018.
- [177] Franck Plunian, Rodion Stepanov, and Mahendra Kumar Verma. On uniqueness of transfer rates in magnetohydrodynamic turbulence. *JOURNAL OF PLASMA PHYSICS*, 85(5), OCT 2019.
- [176] R. Monville, J. Vidal, D. Cebron, and N. Schaeffer. Rotating double-diffusive convection in stably stratified planetary cores. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 219(1):S195–S218, OCT 2019. 16th Symposium of Study of the Earth’s Deep Interior (SEDI), Edmonton, CANADA, JUL 08-13, 2018.
- [175] N. Gillet, L. Huder, and J. Aubert. A reduced stochastic model of core surface dynamics based on geodynamo simulations. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 219(1):522–539, OCT 2019.
- [174] Z. Tigrine, H. C. Nataf, N. Schaeffer, P. Cardin, and F. Plunian. Torsional Alfvén waves in a dipolar magnetic field: experiments and simulations. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 219(1):S83–S100, OCT 2019. 16th Symposium of Study of the Earth’s Deep Interior (SEDI), Edmonton, CANADA, JUL 08-13, 2018.

- [173] J. Vidal, D. Cebron, A. Ud-Doula, and E. Alecian. Fossil field decay due to nonlinear tides in massive binaries. *ASTRONOMY & ASTROPHYSICS*, 629, SEP 19 2019.
- [172] Shubhadeep Sadhukhan, Roshan Samue, Franck Plunian, Rodion Stepanov, Ravi Samtaney, and Mahendra Kumar Varma. Enstrophy transfers in helical turbulence. *PHYSICAL REVIEW FLUIDS*, 4(8), AUG 28 2019.
- [171] Martin Schreiber, Nathanael Schaeffer, and Richard Loft. Exponential integrators with parallel-in-time rational approximations for the shallow-water equations on the rotating sphere. *PARALLEL COMPUTING*, 85:56–65, JUL 2019.
- [170] Celine Guervilly, Philippe Cardin, and Nathanael Schaeffer. Turbulent convective length scale in planetary cores. *NATURE*, 570(7761):368+, JUN 20 2019.
- [169] O. Barrois, N. Gillet, J. Aubert, M. D. Hammer, C. C. Finlay, Y. Martin, and N. Gillet. ‘Contributions to the geomagnetic secular variation from a reanalysis of core surface dynamics’ and ‘Assimilation of ground and satellite magnetic measurements: inference of core surface magnetic and velocity field changes’ (vol 211, pg 50, 2018). *GEOPHYSICAL JOURNAL INTERNATIONAL*, 216(3):2106–2113, MAR 2019.
- [168] Mahendra K. Verma, R. Stepanov, and F. Plunian. ENERGY TRANSFERS IN MHD TURBULENCE AND ITS APPLICATIONS TO DYNAMO. *MAGNETOHYDRODYNAMICS*, 55(1-2, SI):215–223, 2019.
- [167] Joao Domingos, Maria Alexandra Pais, Dominique Jault, and Mioara Mandea. Temporal resolution of internal magnetic field modes from satellite data. *EARTH PLANETS AND SPACE*, 71, JAN 10 2019.
- [166] L. Huder, N. Gillet, and F. Thollard. pygeodyn 1.1.0: a python package for geomagnetic data assimilation. *Geoscientific Model Development*, 12(8):3795–3803, 2019.
- [165] G Hellio and N Gillet. Erratum: Time-correlation-based regression of the geomagnetic field from archeological and sediment records. *Geophysical Journal International*, 215(3):1930–1930, 10 2018.
- [164] G. Hellio and N. Gillet. Time-correlation-based regression of the geomagnetic field from archeological and sediment records (vol 214, pg 1585, 2018). *GEOPHYSICAL JOURNAL INTERNATIONAL*, 215(3):1930, DEC 2018.
- [163] Rodion Stepanov and Franck Plunian. Kinematic dynamo in a tetrahedron of Fourier modes. *FLUID DYNAMICS RESEARCH*, 50(5), OCT 2018.

- [162] O. Barrois, M. D. Hammer, C. C. Finlay, Y. Martin, and N. Gillet. Assimilation of ground and satellite magnetic measurements: inference of core surface magnetic and velocity field changes. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 215(1):695–712, OCT 2018.
- [161] G. Hellio and N. Gillet. Time-correlation-based regression of the geomagnetic field from archeological and sediment records. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 214(3):1585–1607, SEP 2018.
- [160] Jeremie Vidal, David Cebron, Nathanael Schaeffer, and Rainer Hollerbach. Magnetic fields driven by tidal mixing in radiative stars. *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*, 475(4):4579–4594, APR 2018.
- [159] E. J. Kaplan, H. C. Nataf, and N. Schaeffer. Dynamic domains of the Deriviche Tourneur sodium experiment: Simulations of a spherical magnetized Couette flow. *PHYSICAL REVIEW FLUIDS*, 3(3), MAR 29 2018.
- [158] Anne Barnoud, Claire Bouligand, Olivier Coutant, and Julie Carlut. Magnetic structure of Basse-Terre volcanic island (Guadeloupe, Lesser Antilles) inferred from 3D inversion of aeromagnetic data. *JOURNAL OF VOLCANOLOGY AND GEOTHERMAL RESEARCH*, 348:1–11, DEC 15 2017.
- [157] Jeremie Vidal and David Cebron. Inviscid instabilities in rotating ellipsoids on eccentric Kepler orbits. *JOURNAL OF FLUID MECHANICS*, 833:469–511, NOV 6 2017.
- [156] N. Schaeffer, D. Jault, H. C. Nataf, and A. Fournier. Turbulent geodynamo simulations: a leap towards Earth’s core. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 211(1):1–29, OCT 2017.
- [155] O. Barrois, N. Gillet, and J. Aubert. Contributions to the geomagnetic secular variation from a reanalysis of core surface dynamics. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 211(1):50–68, OCT 2017.
- [154] C. Guervilly and P. Cardin. Multiple zonal jets and convective heat transport barriers in a quasi-geostrophic model of planetary cores. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 211(1):455–471, OCT 2017.
- [153] Joao Domingos, Dominique Jault, Maria Alexandra Pais, and Mioara Mandea. The South Atlantic Anomaly throughout the solar cycle. *EARTH AND PLANETARY SCIENCE LETTERS*, 473:154–163, SEP 1 2017.
- [152] N. Gillet, D. Jault, and E. Canet. Excitation of travelling torsional normal modes in an Earth’s core model. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 210(3):1503–1516, SEP 2017.

- [151] D. Lemasquerier, A. M. Grannan, J. Vidal, D. Cebron, B. Favier, M. Le Bars, and J. M. Aurnou. Libration-driven flows in ellipsoidal shells. *JOURNAL OF GEOPHYSICAL RESEARCH-PLANETS*, 122(9):1926–1950, SEP 2017.
- [150] E. J. Kaplan, N. Schaeffer, J. Vidal, and P. Cardin. Subcritical Thermal Convection of Liquid Metals in a Rapidly Rotating Sphere. *PHYSICAL REVIEW LETTERS*, 119(9), AUG 31 2017.
- [149] David Cebron, Sylvain Viroulet, Jeremie Vidal, Jean-Paul Masson, and Philippe Viroulet. Experimental and theoretical study of magnetohydrodynamic ship models. *PLOS ONE*, 12(6), JUN 30 2017.
- [148] R. Stepanov and F. Plunian. Kinematic dynamo in a tetrahedron composed of helical Fourier modes. In *WINTER SCHOOL ON CONTINUOUS MEDIA MECHANICS*, volume 208 of *IOP Conference Series-Materials Science and Engineering*, 2017. 20th Winter School on Continuous Media Mechanics, Russian Acad Sci, Ural Branch, Inst Continuous Media Mech, Perm, RUSSIA, FEB 13-16, 2017.
- [147] Celine Guervilly and Philippe Cardin. Subcritical convection of liquid metals in a rotating sphere using a quasi-geostrophic model. *JOURNAL OF FLUID MECHANICS*, 808:61–89, DEC 2016.
- [146] C. Bouligand, N. Gillet, D. Jault, N. Schaeffer, A. Fournier, and J. Aubert. Frequency spectrum of the geomagnetic field harmonic coefficients from dynamo simulations. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 207(2):1142–1157, NOV 2016.
- [145] M. Kessar, G. Balarac, and F. Plunian. The effect of subgrid-scale models on grid-scale/subgrid-scale energy transfers in large-eddy simulation of incompressible magnetohydrodynamic turbulence. *PHYSICS OF PLASMAS*, 23(10), OCT 2016.
- [144] Christopher C. Finlay, Nils Olsen, Stavros Kotsiaros, Nicolas Gillet, and Lars Toffner-Clausen. Recent geomagnetic secular variation from Swarm and ground observatories as estimated in the CHAOS-6 geomagnetic field model. *EARTH PLANETS AND SPACE*, 68, JUL 11 2016.
- [143] Claire Bouligand, Olivier Coutant, and Jonathan M. G. Glen. Subsurface structure of La Soufrière of Guadeloupe lava dome deduced from a ground-based magnetic survey. *JOURNAL OF VOLCANOLOGY AND GEOTHERMAL RESEARCH*, 321:171–181, JUL 15 2016.
- [142] Nathanael Schaeffer and Dominique Jault. Electrical conductivity of the lowermost mantle explains absorption of core torsional waves at the equator. *GEOPHYSICAL RESEARCH LETTERS*, 43(10):4922–4928, MAY 28 2016.

- [141] Hiroaki Matsui, Eric Heien, Julien Aubert, Jonathan M. Aurnou, Margaret Avery, Ben Brown, Bruce A. Buffett, Friedrich Busse, Ulrich R. Christensen, Christopher J. Davies, Nicholas Featherstone, Thomas Gassine, Gary A. Glatzmaier, David Gubbins, Jean-Luc Guermond, Yoshi-Yuki Hayashi, Rainer Hollerbach, Lorraine J. Hwang, Andrew Jackson, Chris A. Jones, Weiyuan Jiang, Louise H. Kellogg, Weijia Kuang, Maylis Landeau, Philippe Marti, Peter Olson, Adolfo Ribeiro, Youhei Sasaki, Nathanael Schaeffer, Radostin D. Simitev, Andrey Sheyko, Luis Silva, Sabine Stanley, Futoshi Takahashi, Shin-ichi Takehiro, Johannes Wicht, and Ashley P. Willis. Performance benchmarks for a next generation numerical dynamo model. *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*, 17(5):1586–1607, MAY 2016.
- [140] Anne Barnoud, Olivier Coutant, Claire Bouligand, Hendra Gunawan, and Sébastien Deroussi. 3-D linear inversion of gravity data: method and application to Basse-Terre volcanic island, Guadeloupe, Lesser Antilles. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 205(1):562–574, APR 2016.
- [139] N. Schaeffer, E. Lora Silva, and M. A. Pais. Can core flows inferred from geomagnetic field models explain the Earth’s dynamo? *GEOPHYSICAL JOURNAL INTERNATIONAL*, 204(2):868–877, FEB 2016.
- [138] A. Lincot, Ph. Cardin, R. Deguen, and S. Merkel. Multiscale model of global inner-core anisotropy induced by hcp alloy plasticity. *GEOPHYSICAL RESEARCH LETTERS*, 43(3):1084–1091, FEB 16 2016.
- [137] Christopher C. Finlay, Julien Aubert, and Nicolas Gillet. Gyre-driven decay of the Earth’s magnetic dipole. *NATURE COMMUNICATIONS*, 7, JAN 2016.
- [136] J. Bouvier and D. Cebron. Protostellar spin-down: a planetary lift? *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*, 453(4):3720–3728, NOV 11 2015.
- [135] F. Labbe, D. Jault, and N. Gillet. On magnetostrophic inertia-less waves in quasi-geostrophic models of planetary cores. *GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS*, 109(6):587–610, NOV 2 2015.
- [134] J. Vidal and N. Schaeffer. Quasi-geostrophic modes in the Earth’s fluid core with an outer stably stratified layer. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 202(3):2182–2193, SEP 2015.
- [133] Mouloud Kessar, Franck Plunian, Rodion Stepanov, and Guillaume Balarac. Non-Kolmogorov cascade of helicity-driven turbulence. *PHYSICAL REVIEW E*, 92(3), SEP 28 2015.
- [132] Zacharias Stelzer, Sophie Miralles, David Cebron, Jerome Noir, Stijn Vantieghem, and Andrew Jackson. Experimental and numerical study

of electrically driven magnetohydrodynamic flow in a modified cylindrical annulus. 11. Instabilities. *PHYSICS OF FLUIDS*, 27(8), AUG 2015.

- [131] Zacharias Stelzer, David Cebron, Sophie Miralles, Stijn Vantieghem, Jerome Noir, Peter Scarfe, and Andrew Jackson. Experimental and numerical study of electrically driven magnetohydrodynamic flow in a modified cylindrical annulus. I. Base flow. *PHYSICS OF FLUIDS*, 27(7), JUL 2015.
- [130] Dominique Jault. Illuminating the electrical conductivity of the lowermost mantle from below. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 202(1):482–496, JUL 2015.
- [129] M. Lasbleis, R. Deguen, P. Cardin, and S. Labrosse. Earth’s inner core dynamics induced by the Lorentz force. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 202(1):548–563, JUL 2015.
- [128] N. Gillet, D. Jault, and C. C. Finlay. Planetary gyre, time-dependent eddies, torsional waves, and equatorial jets at the Earth’s core surface. *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*, 120(6):3991–4013, JUN 2015.
- [127] Nicolas Gillet, Olivier Barrois, and Christopher C. Finlay. Stochastic forecasting of the geomagnetic field from the COV-OBS.x1 geomagnetic field model, and candidate models for IGRF-12. *EARTH PLANETS AND SPACE*, 67:1–14, MAY 14 2015.
- [126] S. Vantieghem, D. Cebron, and J. Noir. Latitudinal libration driven flows in triaxial ellipsoids. *JOURNAL OF FLUID MECHANICS*, 771, MAY 2015.
- [125] Erwan Thebault, Christopher C. Finlay, Ciaran D. Beggan, Patrick Alken, Julien Aubert, Olivier Barrois, Francois Bertrand, Tatiana Bondar, Axel Boness, Laura Brocco, Elisabeth Canet, Aude Chambodut, Arnaud Chuliat, Pierdavide Coisson, Francois Civet, Aimin Du, Alexandre Fournier, Isabelle Fratter, Nicolas Gillet, Brian Hamilton, Mohamed Hamoudi, Gauthier Hulot, Thomas Jager, Monika Korte, Weijia Kuang, Xavier Lalanne, Benoit Langlais, Jean-Michel Leger, Vincent Lesur, Frank J. Lowes, Susan Macmillan, Mioara Mandea, Chandrasekharan Manoj, Stefan Maus, Nils Olsen, Valeriy Petrov, Victoria Ridley, Martin Rother, Terence J. Sabaka, Diana Saturnino, Reyko Schachtschneider, Olivier Sirol, Andrew Tangborn, Alan Thomson, Lars Toffner-Clausen, Pierre Vigneron, Ingo Wardinski, and Tatiana Zvereva. International Geomagnetic Reference Field: the 12th generation. *EARTH PLANETS AND SPACE*, 67, MAY 27 2015.
- [124] D. Cebron. Bistable flows in precessing spheroids. *FLUID DYNAMICS RESEARCH*, 47(2), APR 2015.

- [123] A. Lincot, S. Merkel, and P. Cardin. Is inner core seismic anisotropy a marker for plastic flow of cubic iron? *GEOPHYSICAL RESEARCH LETTERS*, 42(5):1326–1333, MAR 16 2015.
- [122] Michael Le Bars, David Cebron, and Patrice Le Gal. Flows Driven by Libration, Precession, and Tides. In Davis, SH and Moin, P, editor, *ANNUAL REVIEW OF FLUID MECHANICS, VOL 47*, volume 47 of *Annual Review of Fluid Mechanics*, pages 163–193. Annual Reviews, 2015.
- [121] M. A. Pais, A. L. Morozova, and N. Schaeffer. Variability modes in core flows inverted from geomagnetic field models. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 200(1):402–420, JAN 2015.
- [120] Jiaming Ou, Nicolas Gillet, and Aimin Du. Geomagnetic observatory monthly series, 1930 to 2010: empirical analysis and unmodeled signal estimation. *EARTH PLANETS AND SPACE*, 67, JAN 30 2015.
- [119] Alban Sauret, Francois Boulogne, David Cebron, Emilie Dressaire, and Howard A. Stone. Wetting morphologies on an array of fibers of different radii. *SOFT MATTER*, 11(20):4034–4040, 2015.
- [118] Philippe Cardin and Peter Olson. *Experiments on core dynamics*, volume 8, Core Dynamics, chapter 8.13, pages 317–339. Elsevier, Oxford, 2nd edition edition, 2015.
- [117] Dominique Jault and Christopher Finlay. *Waves in the core and mechanical core-mantle interactions*, volume 8, Core Dynamics, chapter 8.09, pages 225–244. Elsevier, Oxford, 2nd edition edition, 2015.
- [116] Henri-Claude Nataf and Nathanael Schaeffer. *Turbulence in the core*, volume 8, Core Dynamics, chapter 8.06, pages 161–181. Elsevier, Oxford, 2nd edition edition, 2015.
- [115] A. M. Grannan, M. Le Bars, D. Cebron, and J. M. Aurnou. Experimental study of global-scale turbulence in a librating ellipsoid. *PHYSICS OF FLUIDS*, 26(12), DEC 2014.
- [114] G. Hellio, N. Gillet, C. Bouligand, and D. Jault. Stochastic modelling of regional archaeomagnetic series. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 199(2):931–943, NOV 2014.
- [113] Rodion Stepanov, Franck Plunian, Mouloud Kessar, and Guillaume Balarac. Systematic bias in the calculation of spectral density from a three-dimensional spatial grid. *PHYSICAL REVIEW E*, 90(5), NOV 21 2014.
- [112] Simon Cabanes, Nathanael Schaeffer, and Henri-Claude Nataf. Magnetic induction and diffusion mechanisms in a liquid sodium spherical Couette experiment. *PHYSICAL REVIEW E*, 90(4), OCT 24 2014.

- [111] Simon Cabanes, Nathanael Schaeffer, and Henri-Claude Nataf. Turbulence Reduces Magnetic Diffusivity in a Liquid Sodium Experiment. *PHYSICAL REVIEW LETTERS*, 113(18), OCT 28 2014.
- [110] Santiago Andres Triana, Daniel S. Zimmerman, Henri-Claude Nataf, Aurelien Thorette, Vedran Lekic, and Daniel P. Lathrop. Helioseismology in a bottle: modal acoustic velocimetry. *NEW JOURNAL OF PHYSICS*, 16, OCT 31 2014.
- [109] D. Cebron and R. Hollerbach. TIDALLY DRIVEN DYNAMOS IN A ROTATING SPHERE. *ASTROPHYSICAL JOURNAL LETTERS*, 789(1), JUL 1 2014.
- [108] Daniel S. Zimmerman, Santiago Andres Triana, Henri-Claude Nataf, and Daniel P. Lathrop. A turbulent, highmagnetic Reynolds number experimental model of Earth's core. *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*, 119(6):4538–4557, JUN 2014.
- [107] Philippe Cardin and Sebastien Merkel. Earth's inner core. *COMPTE RENDUS GEOSCIENCE*, 346(5-6):99, MAY-JUN 2014.
- [106] Ainhoa Lincot, Renaud Deguen, Sebastien Merkel, and Philippe Cardin. Seismic response and anisotropy of a model hcp iron inner core. *COMPTE RENDUS GEOSCIENCE*, 346(5-6):148–157, MAY-JUN 2014.
- [105] P. Marti, N. Schaeffer, R. Hollerbach, D. Cebron, C. Nore, F. Luddens, J. L. Guermond, J. Aubert, S. Takehiro, Y. Sasaki, Y. Y. Hayashi, R. Simitev, F. Busse, S. Vantieghem, and A. Jackson. Full sphere hydrodynamic and dynamo benchmarks. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 197(1):119–134, APR 2014.
- [104] Claire Bouligand, Jonathan M. G. Glen, and Richard J. Blakely. Distribution of buried hydrothermal alteration deduced from high-resolution magnetic surveys in Yellowstone National Park. *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*, 119(4):2595–2630, APR 2014.
- [103] Renaud Deguen, Thierry Alboussiere, and Philippe Cardin. Thermal convection in Earth's inner core with phase change at its boundary. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 194(3):1310–1334, SEP 2013.
- [102] N. Gillet, D. Jault, C. C. Finlay, and N. Olsen. Stochastic modeling of the Earth's magnetic field: Inversion for covariances over the observatory era. *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*, 14(4):766–786, APR 2013.
- [101] Nathanael Schaeffer. Efficient spherical harmonic transforms aimed at pseudospectral numerical simulations. *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*, 14(3):751–758, MAR 2013.

- [100] A. Figueroa, N. Schaeffer, H. C. Nataf, and D. Schmitt. Modes and instabilities in magnetized spherical Couette flow. *JOURNAL OF FLUID MECHANICS*, 716:445–469, FEB 2013.
- [99] Franck Plunian, Rodion Stepanov, and Peter Frick. Shell models of magnetohydrodynamic turbulence. *PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS*, 523(1):1–60, FEB 2013.
- [98] Henri-Claude Nataf. Magnetic induction maps in a magnetized spherical Couette flow experiment. *COMPTES RENDUS PHYSIQUE*, 14(2-3):248–267, FEB-MAR 2013.
- [97] D. Schmitt, P. Cardin, P. La Rizza, and H. C. Nataf. Magneto-Coriolis waves in a spherical Couette flow experiment. *EUROPEAN JOURNAL OF MECHANICS B-FLUIDS*, 37:10–22, JAN-FEB 2013.
- [96] Nathanael Schaeffer, Dominique Jault, Philippe Cardin, and Marie Drouard. On the reflection of Alfvén waves and its implication for Earth’s core modelling. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 191(2):508–516, NOV 2012.
- [95] Julien Monteux, Nathanael Schaeffer, Hagay Amit, and Philippe Cardin. Can a sinking metallic diapir generate a dynamo? *JOURNAL OF GEOPHYSICAL RESEARCH-PLANETS*, 117, OCT 10 2012.
- [94] Nicolas Gillet, Nathanael Schaeffer, and Dominique Jault. Rationale and geophysical evidence for quasi-geostrophic rapid dynamics within the Earth’s outer core (vol 187, pg 380, 2011). *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 202:7, AUG 2012.
- [93] Nicolas Gillet, Nathanael Schaeffer, and Dominique Jault. Rationale and geophysical evidence for quasi-geostrophic rapid dynamics within the Earth’s outer core. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 202:78–88, AUG 2012.
- [92] C. C. Finlay, A. Jackson, N. Gillet, and N. Olsen. Core surface magnetic field evolution 2000-2010. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 189(2):761–781, MAY 2012.
- [91] Celine Guervilly, Philippe Cardin, and Nathanael Schaeffer. A dynamo driven by zonal jets at the upper surface: Applications to giant planets. *ICARUS*, 218(1):100–114, MAR 2012.
- [90] Renaud Deguen and Philippe Cardin. Thermochemical convection in Earth’s inner core. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 187(3):1101–1118, DEC 2011.
- [89] Dominique Jault. PLANETARY SCIENCE Ancient lunar dynamo. *NATURE*, 479(7372):183–184, NOV 10 2011.

- [88] Renaud Deguen, Philippe Cardin, Sebastien Merkel, and Ricardo A. Lebensohn. Texturing in Earth's inner core due to preferential growth in its equatorial belt. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 188(3-4, SI):173–184, OCT 2011. 12th Symposium of Study of the Earths Deep Interior (SEDI), CA, JUL 19-23, 2010.
- [87] Renaud Deguen, Peter Olson, and Philippe Cardin. Experiments on turbulent metal-silicate mixing in a magma ocean. *EARTH AND PLANETARY SCIENCE LETTERS*, 310(3-4):303–313, OCT 15 2011.
- [86] Thierry Alboussiere, Philippe Cardin, Francois Debray, Patrick La Rizza, Jean-Paul Masson, Franck Plunian, Adolfo Ribeiro, and Denys Schmitt. Experimental evidence of Alfvén wave propagation in a Gallium alloy. *PHYSICS OF FLUIDS*, 23(9), SEP 2011.
- [85] Nicolas Gillet, Nathanael Schaeffer, and Dominique Jault. Rationale and geophysical evidence for quasi-geostrophic rapid dynamics within the Earth's outer core. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 187(3-4, SI):380–390, AUG 2011.
- [84] D. Brito, T. Alboussiere, P. Cardin, N. Gagniere, D. Jault, P. La Rizza, J. P. Masson, H. C. Nataf, and D. Schmitt. Zonal shear and super-rotation in a magnetized spherical Couette-flow experiment. *PHYSICAL REVIEW E*, 83(6, 2), JUN 15 2011.
- [83] N. Schaeffer and M. A. Pais. On symmetry and anisotropy of Earth-core flows. *GEOPHYSICAL RESEARCH LETTERS*, 38, MAY 26 2011.
- [82] Y. Ponty and F. Plunian. Transition from Large-Scale to Small-Scale Dynamo. *PHYSICAL REVIEW LETTERS*, 106(15), APR 15 2011.
- [81] T. Lessinnes, F. Plunian, R. Stepanov, and D. Carati. Dissipation scales of kinetic helicities in turbulence. *PHYSICS OF FLUIDS*, 23(3), MAR 2011.
- [80] F. Plunian, T. Lessinnes, D. Carati, and R. Stepanov. Helicity scalings. In *13TH EUROPEAN TURBULENCE CONFERENCE (ETC13): STATISTICAL ASPECTS, MODELLING AND SIMULATIONS OF TURBULENCE*, volume 318 of *Journal of Physics Conference Series*, 2011. 13th European Turbulence Conference (ETC), Univ Warsaw, Warsaw, POLAND, SEP 12-15, 2011.
- [79] Franck Plunian and Rodion Stepanov. Cascades and dissipation ratio in rotating magnetohydrodynamic turbulence at low magnetic Prandtl number. *PHYSICAL REVIEW E*, 82(4, 2), OCT 22 2010.
- [78] Thierry Alboussiere, Renaud Deguen, and Mickael Melzani. Melting-induced stratification above the Earth's inner core due to convective translation. *NATURE*, 466(7307):744–U9, AUG 5 2010.

- [77] N. Gillet, V. Lesur, and N. Olsen. Geomagnetic Core Field Secular Variation Models. *SPACE SCIENCE REVIEWS*, 155(1-4):129–145, AUG 2010.
- [76] Alexandre Fournier, Gauthier Hulot, Dominique Jault, Weijia Kuang, Andrew Tangborn, Nicolas Gillet, Elisabeth Canet, Julien Aubert, and Florian Lhuillier. An Introduction to Data Assimilation and Predictability in Geomagnetism. *SPACE SCIENCE REVIEWS*, 155(1-4):247–291, AUG 2010.
- [75] Nicolas Gillet, Dominique Jault, Elisabeth Canet, and Alexandre Fournier. Fast torsional waves and strong magnetic field within the Earth’s core. *NATURE*, 465(7294):74–77, MAY 6 2010.
- [74] Nathanael Schaeffer and Stephane Le Dizes. Nonlinear dynamics of the elliptic instability. *JOURNAL OF FLUID MECHANICS*, 646:471–480, MAR 10 2010.
- [73] Janis Priede, Raul Avalos-Zuniga, and Franck Plunian. Homopolar oscillating-disc dynamo driven by parametric resonance. *PHYSICS LETTERS A*, 374(4):584–587, JAN 11 2010.
- [72] C. Guervilly and P. Cardin. Numerical simulations of dynamos generated in spherical Couette flows. *GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS*, 104(2-3):221–248, 2010.
- [71] A. Giesecke, C. Nore, F. Plunian, R. Laguerre, A. Ribeiro, F. Stefani, G. Gerbeth, J. Leorat, and J. L. Guermond. Generation of axisymmetric modes in cylindrical kinematic mean-field dynamos of VKS type. *GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS*, 104(2-3):249–271, 2010.
- [70] Elisabeth Canet, Alexandre Fournier, and Dominique Jault. Forward and adjoint quasi-geostrophic models of the geomagnetic secular variation. *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*, 114, NOV 6 2009.
- [69] F. Plunian, G. R. Sarson, and R. Stepanov. Deciphering solar turbulence from sunspots records. *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*, 400(1):L47–L51, NOV 21 2009.
- [68] Ridha Touihri, Azzeddine Soulaimani, and Franck Plunian. Stabilized finite element formulation applied to the kinematic Ponomarenko dynamo problem. *THEORETICAL AND COMPUTATIONAL FLUID DYNAMICS*, 23(6):431–437, NOV 2009.
- [67] T. Lessinnes, F. Plunian, and D. Carati. Helical shell models for MHD. *THEORETICAL AND COMPUTATIONAL FLUID DYNAMICS*, 23(6):439–450, NOV 2009.

- [66] R. Avalos-Zuniga, F. Plunian, and K. H. Raedler. Rossby waves and alpha-effect. *GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS*, 103(5):375–396, OCT 2009.
- [65] Renaud Deguen and Philippe Cardin. Tectonic history of the Earth’s inner core preserved in its seismic structure. *NATURE GEOSCIENCE*, 2(6):418–421, JUN 2009.
- [64] N. Gillet, M. A. Pais, and D. Jault. Ensemble inversion of time-dependent core flow models. *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*, 10, JUN 10 2009.
- [63] Thierry Alboussiere. Bound of dissipation on a plane Couette dynamo. *PHYSICAL REVIEW E*, 79(6), JUN 2009.
- [62] U. R. Christensen, J. Aubert, P. Cardin, E. Dormy, S. Gibbons, G. A. Glatzmaier, E. Grote, Y. Honkura, C. Jones, M. Kono, M. Matsushima, A. Sakuraba, F. Takahashi, A. Tilgner, J. Wicht, and K. Zhang. A numerical dynamo benchmark (vol 128, pg 25, 2001). *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 172(3-4):356, FEB 2009.
- [61] T. Lessinnes, D. Carati, M. K. Verma, and F. Plunian. Shell models of MHD turbulence. In Eckhardt, B, editor, *ADVANCES IN TURBULENCE XII - PROCEEDINGS OF THE 12TH EUROMECH EUROPEAN TURBULENCE CONFERENCE*, volume 132 of *Springer Proceedings in Physics*, pages 813–816, 2009. 12th EUROMECH European Turbulence Conference, Marburg, GERMANY, SEP 07-10, 2009.
- [60] Marine Peyrot, Andrew Gilbert, and Franck Plunian. Oscillating Ponomarenko dynamo in the highly conducting limit. *PHYSICS OF PLASMAS*, 15(12), DEC 2008.
- [59] R. Laguerre, C. Nore, A. Ribeiro, J. Leorat, J. L. Guermond, and F. Plunian. Impact of impellers on the axisymmetric magnetic mode in the VKS2 dynamo experiment. *PHYSICAL REVIEW LETTERS*, 101(10), SEP 5 2008.
- [58] Henri-Claude Nataf and Nadege Gagniere. On the peculiar nature of turbulence in planetary dynamos. *COMPTES RENDUS PHYSIQUE*, 9(7):702–710, SEP 2008.
- [57] H. C. Nataf, T. Alboussiere, D. Brito, P. Cardin, N. Gagniere, D. Jault, and D. Schmitt. Rapidly rotating spherical Couette flow in a dipolar magnetic field: An experimental study of the mean axisymmetric flow. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 170(1-2):60–72, SEP 2008.
- [56] Rodion Stepanov and Franck Plunian. Phenomenology of turbulent dynamo growth and saturation. *ASTROPHYSICAL JOURNAL*, 680(1):809–815, JUN 10 2008.

- [55] Denys Schmitt, T. Alboussiere, D. Brito, P. Cardin, N. Gagniere, D. Jault, and H. C. Nataf. Rotating spherical Couette flow in a dipolar magnetic field: experimental study of magneto-inertial waves. *JOURNAL OF FLUID MECHANICS*, 604:175–197, JUN 10 2008.
- [54] M. A. Pais and D. Jault. Quasi-geostrophic flows responsible for the secular variation of the Earth’s magnetic field. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 173(2):421–443, MAY 2008.
- [53] Dominique Jault. Axial invariance of rapidly varying diffusionless motions in the Earth’s core interior. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 166(1-2):67–76, JAN 2008.
- [52] Philippe Cardin and L. Cugliandolo, editors. *Dynamos: Lecture Notes of the Les Houches Summer School 2007*. Les Houches. Elsevier Science, 2008.
- [51] Rainer Hollerbach, Elisabeth Canet, and Alexandre Fournier. Spherical Couette flow in a dipolar magnetic field. *EUROPEAN JOURNAL OF MECHANICS B-FLUIDS*, 26(6):729–737, NOV-DEC 2007.
- [50] M. Gellert, G. Ruediger, and A. Fournier. Energy distribution in nonaxisymmetric magnetic Taylor-Couette flow. *ASTRONOMISCHE NACHRICHTEN*, 328(10):1162–1165, OCT 2007. 5th Potsdam Thinkshop on Meridional Flow, Differential Rotation, Solar and Stellar Activity, Potsdam, GERMANY, JUN 24-29, 2007.
- [49] R. Avalos-Zuniga, M. Xu, F. Stefani, G. Gerbeth, and F. Plunian. Cylindrical anisotropic alpha(2) dynamos. *GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS*, 101(5-6):389–404, OCT-DEC 2007. 10th Symposium on the Study of the Earths Deep Interior (SEDI), Prague, CZECH REPUBLIC, JUL 09-14, 2006.
- [48] R. Deguen, T. Alboussiere, and D. Brito. On the existence and structure of a mush at the inner core boundary of the Earth. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 164(1-2):36–49, SEP 14 2007.
- [47] F. Plunian and R. Stepanov. A non-local shell model of hydrodynamic and magnetohydrodynamic turbulence. *NEW JOURNAL OF PHYSICS*, 9, AUG 31 2007.
- [46] N. Gillet, D. Brito, D. Jault, and H.-C. Nataf. Experimental and numerical studies of convection in a rapidly rotating spherical shell. *JOURNAL OF FLUID MECHANICS*, 580:83–121, JUN 10 2007.
- [45] N. Gillet, D. Brito, D. Jault, and H.-C. Nataf. Experimental and numerical studies of magnetoconvection in a rapidly rotating spherical shell. *JOURNAL OF FLUID MECHANICS*, 580:123–143, JUN 10 2007.

- [44] Marine Peyrot, Franck Plunian, and Christiane Normand. Parametric instability of the helical dynamo. *PHYSICS OF FLUIDS*, 19(5), MAY 2007.
- [43] A. Fournier, C. Eymin, and T. Alboussiere. A case for variational geomagnetic data assimilation: insights from a one-dimensional, nonlinear, and sparsely observed MHD system. *NONLINEAR PROCESSES IN GEOPHYSICS*, 14(2):163–180, 2007.
- [42] Thierry Alboussiere. Geostrophic versus MHD models. In Molokov, S and Moreau, R and Moffatt, HK, editor, *Magnetohydrodynamics: Historical Evolution and Trends*, volume 80 of *FLUID MECHANICS AND ITS APPLICATIONS*, pages 195–209, 2007. International Workshop on the History of Magnetohydrodynamics, Coventry Univ, Coventry, ENGLAND, MAY 26-28, 2004.
- [41] M. Peyrot, C. Fargant, F. Plunian, C. Normand, and A. Courvoisier. Influence of large scale flow fluctuations on the dynamo threshold. In Palma, JMLM and Lopes, AS, editor, *ADVANCES IN TURBULENCE XI*, volume 117 of *Springer Proceedings in Physics*, pages 118+, 2007. 11th EUROMECH European Turbulence Conference, Univ Porto, Fac Engenharia, Oporto, PORTUGAL, JUN 25-28, 2007.
- [40] Philippe Cardin and Peter Olson. *Experiments on core dynamics*, volume 8, Core Dynamics, chapter 8.13, pages 319–345. Elsevier, Oxford, 2007.
- [39] Philippe Cardin. *Precession and core dynamics*, volume Encyclopaedia of Geomagnetism and Paleomagnetism of *Encyclopaedia of Earth Science Series*, pages 842–843. Springer, 2007.
- [38] Philippe Cardin and Daniel Brito. *Surveys of experimental dynamos*, volume Mathematical Aspects of Natural Dynamos, pages 361–407. CRS Press, 2007.
- [37] Dominique Jault. *Core-mantle coupling*, volume Encyclopaedia of Geomagnetism and Paleomagnetism of *Encyclopaedia of Earth Science Series*, pages 135–136. Springer, 2007.
- [36] Alban Potherat and Thierry Alboussiere. Bounds on the attractor dimension for low-R<sub>m</sub> wall-bound magnetohydrodynamic turbulence. *PHYSICS OF FLUIDS*, 18(12), DEC 2006.
- [35] Berangere Deleplace and Philippe Cardin. Viscomagnetic torque at the core mantle boundary. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 167(2):557–566, NOV 2006.
- [34] Xu Wen-Yao, Henri-Claud Nataf, Wei Zi-Gang, and Du Ai-Min. Thirty-year period in secular variation rate of the main geomagnetic field. *CHINESE JOURNAL OF GEOPHYSICS-CHINESE EDITION*, 49(5):1329–1338, SEP 2006.

- [33] H. C. Nataf, T. Alboussiere, D. Brito, P. Cardin, N. Gagniere, D. Jault, J. P. Masson, and D. Schmitt. Experimental study of super-rotation in a magnetostrophic spherical Couette flow. *GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS*, 100(4-5):281–298, AUG-OCT 2006. Symposium on Gedynamo -Theory, Models, Observation and Experiments, Toulouse, FRANCE, JUL 18-20, 2005.
- [32] N Gillet and CA Jones. The quasi-geostrophic model for rapidly rotating spherical convection outside the tangent cylinder. *JOURNAL OF FLUID MECHANICS*, 554:343–369, MAY 10 2006.
- [31] N Schaeffer and P Cardin. Quasi-geostrophic kinematic dynamos at low magnetic Prandtl number. *EARTH AND PLANETARY SCIENCE LETTERS*, 245(3-4):595–604, MAY 30 2006.
- [30] N Schaeffer and P Cardin. Quasigeostrophic model of the instabilities of the Stewartson layer in flat and depth-varying containers. *PHYSICS OF FLUIDS*, 17(10), OCT 2005.
- [29] A Fournier, HP Bunge, R Hollerbach, and JP Villette. A Fourier-spectral element algorithm for thermal convection in rotating axisymmetric containers. *JOURNAL OF COMPUTATIONAL PHYSICS*, 204(2):462–489, APR 10 2005.
- [28] D Jault and G Legaut. Alfvén waves within the Earth’s core. In Soward, AM and Jones, CA and Hughes, DW and Weiss, NO, editor, *FLUID DYNAMICS AND DYNAMOS IN ASTROPHYSICS AND GEOPHYSICS*, volume 12 of *FLUID MECHANICS OF ASTROPHYSICS AND GEOPHYSICS*, pages 277–293, 2005. LMS Durham Symposium on Astrophysical Fluid Mechanics, Univ Durham, Dept Math Sci, Durham, ENGLAND, JUL 29-AUG 08, 2002.
- [27] N Schaeffer and P Cardin. Rossby-wave turbulence in a rapidly rotating sphere. *NONLINEAR PROCESSES IN GEOPHYSICS*, 12(6):947–953, 2005.
- [26] T Alboussiere. A geostrophic-like model for large-Hartmann-number flows. *JOURNAL OF FLUID MECHANICS*, 521:125–154, DEC 25 2004.
- [25] D Schmitt and D Jault. Numerical study of a rotating fluid in a spheroidal container. *JOURNAL OF COMPUTATIONAL PHYSICS*, 197(2):671–685, JUL 1 2004.
- [24] P Moresco and T Alboussiere. Experimental study of the instability of the Hartmann layer. *JOURNAL OF FLUID MECHANICS*, 504:167–181, APR 10 2004.
- [23] E Dormy, AM Soward, CA Jones, D Jault, and P Cardin. The onset of thermal convection in rotating spherical shells. *JOURNAL OF FLUID MECHANICS*, 501:43–70, FEB 25 2004.

- [22] D Brito, J Aurnou, and P Cardin. Turbulent viscosity measurements relevant to planetary core-mantle dynamics. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 141(1):3–8, JAN 15 2004.
- [21] J Noir, P Cardin, D Jault, and JP Masson. Experimental evidence of non-linear resonance effects between retrograde precession and the tilt-over mode within a spheroid. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 154(2):407–416, AUG 2003.
- [20] J Aubert, N Gillet, and P Cardin. Quasigeostrophic models of convection in rotating spherical shells. *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*, 4, JUL 3 2003.
- [19] D Jault. Electromagnetic and topographic coupling, and LOD variations. In Jones, CA and Soward, AM and Zhang, K, editor, *EARTH'S CORE AND LOWER MANTLE*, volume 11 of *FLUID MECHANICS OF ASTROPHYSICS AND GEOPHYSICS*, pages 56–76, 2003. 7th Symposium on the Study of the Earths Deep Interior (SEDI 2000), EXETER, ENGLAND, JUL 30-AUG 04, 2000.
- [18] HC Nataf. Dynamo and convection experiments. In Jones, CA and Soward, AM and Zhang, K, editor, *EARTH'S CORE AND LOWER MANTLE*, volume 11 of *FLUID MECHANICS OF ASTROPHYSICS AND GEOPHYSICS*, pages 153–179, 2003. 7th Symposium on the Study of the Earths Deep Interior (SEDI 2000), EXETER, ENGLAND, JUL 30-AUG 04, 2000.
- [17] S. Ponsar, Véronique Dehant, Richard Holme, Dominique Jault, Maria Alexandra Pais, and T. Van Hoolst. *The Core and Fluctuations in the Earth's Rotation*, volume Earth's core Dynamics, Structure, Rotation of Geodynamics Series, pages 251–261. AGU, Washington, 2003.
- [16] E Dormy, D Jault, and AM Soward. A super-rotating shear layer in magnetohydrodynamic spherical Couette flow. *JOURNAL OF FLUID MECHANICS*, 452:263–291, FEB 10 2002.
- [15] D Brito, D Elbert, and P Olson. Experimental crystallization of gallium: ultrasonic measurements of elastic anisotropy and implications for the inner core. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 129(3-4):325–346, FEB 25 2002.
- [14] P. Cardin, D. Brito, D. Jault, H.-C. Nataf, and J. P. Masson. Towards a rapidly rotating liquid sodium dynamo experiment. *Magnitnaya Gidrodinamika*, 38:177–189, 2002.
- [13] UR Christensen, J Aubert, P Cardin, E Dormy, S Gibbons, GA Glatzmaier, E Grote, Y Honkura, C Jones, M Kono, M Matsushima, A Sakuraba, F Takahashi, A Tilgner, J Wicht, and K Zhang. A numerical dynamo benchmark. *PHYSICS OF THE EARTH AND PLANETARY*

*INTERIORS*, 128(1-4):25–34, DEC 10 2001. 7th Symposium on the Study of the Earths Deep Interior (SEDI 2000), EXETER, ENGLAND, JUL 30-AUG 04, 2000.

- [12] J Aubert, D Brito, HC Nataf, P Cardin, and JP Masson. A systematic experimental study of rapidly rotating spherical convection in water and liquid gallium. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 128(1-4):51–74, DEC 10 2001. 7th Symposium on the Study of the Earths Deep Interior (SEDI 2000), EXETER, ENGLAND, JUL 30-AUG 04, 2000.
- [11] Daniel Brito, Henri-Claude Nataf, Philippe Cardin, Julien Aubert, and Jean-Paul Masson. Ultrasonic Doppler velocimetry in liquid gallium. *EXPERIMENTS IN FLUIDS*, 31(6):653–663, DEC 2001.
- [10] R Noir, D Brito, K Aldridge, and P Cardin. Experimental evidence of inertial waves in a precessing spheroidal cavity. *GEOPHYSICAL RESEARCH LETTERS*, 28(19):3785–3788, OCT 1 2001.
- [9] J Noir, D Jault, and P Cardin. Numerical study of the motions within a slowly precessing sphere at low Ekman number. *JOURNAL OF FLUID MECHANICS*, 437:283–299, JUN 25 2001.
- [8] HC Nataf. Seismology - Inner core takes another turn. *NATURE*, 405(6785):411–412, MAY 25 2000.
- [7] P Cardin and G Hulot. SEDI98 “Voyage au centre de la terre” - The Sixth Symposium of Study of the Earth’s Deep Interior (SEDI), July 5-10, 1998, Tours, France - Foreword. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 117(1-4):1–2, JAN 2000.
- [6] HC Nataf. Seismic imaging of mantle plumes. *ANNUAL REVIEW OF EARTH AND PLANETARY SCIENCES*, 28:391–417, 2000.
- [5] V Emery, V Maupin, and HC Nataf. Scattering of S waves diffracted at the core-mantle boundary: forward modelling. *GEOPHYSICAL JOURNAL INTERNATIONAL*, 139(2):325–344, NOV 1999.
- [4] D Jault and JL Le Mouel. Comment on ‘On the dynamics of topographical core-mantle coupling’ by Weijia Kuang and Jeremy Bloxham. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 114(3-4):211–215, JUL 27 1999.
- [3] D Brito, J Aurnou, and P Olson. Can heterogeneous core-mantle electromagnetic coupling control geomagnetic reversals? *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 112(3-4):159–170, APR 16 1999.

- [2] D Jault and P Cardin. On dynamic geodynamo models with imposed velocity as energy source. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 111(1-2):75–81, FEB 25 1999. 8th Scientific Assembly of the International-Association-of-Geomagnetism-and-Aeronomy, UPPSALA, SWEDEN, AUG 04-15, 1997.
- [1] J Wicht and D Jault. Constraining electromagnetic core-mantle coupling. *PHYSICS OF THE EARTH AND PLANETARY INTERIORS*, 111(1-2):161–177, FEB 25 1999. 8th Scientific Assembly of the International-Association-of-Geomagnetism-and-Aeronomy, UPPSALA, SWEDEN, AUG 04-15, 1997.