Pencil Code papers of 2023

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Dey et al. (2022); Chatterjee and Dey (2022); Becerra et al. (2022a); Tschernitz and Bourdin (2022); Li et al. (2022); Carenza et al. (2022); Käpylä and Singh (2022); Ortiz-Rodríguez et al. (2022); Hyder et al. (2022); Zhou et al. (2022); Masada and Sano (2022); Lipatnikov and Sabelnikov (2022); Käpylä et al. (2022); Yang and Zhu (2022); Roper Pol (2022); Sharma and Brandenburg (2022); Brandenburg and Ntormousi (2022); Navarrete et al. (2022); AlbertoRoper (2022); Baehr et al. (2022); Stejko et al. (2022a,b); Currie et al. (2022a); Roper Pol et al. (2022b); Mtchedlidze et al. (2022); Currie et al. (2022b); Bhatnagar et al. (2022); Haugen et al. (2022); Becerra et al. (2022b); Maiti et al. (2022); Schober et al. (2022a,b); Käpylä (2022); Kirchschlager et al. (2022); Bhat (2022); Roper Pol et al. (2022a); Mattsson and Hedvall (2022); Karchniwy et al. (2022)

References

AlbertoRoper, AlbertoRoper/GW_turbulence: v1.0.0, Zenodo 2022.

- Baehr, H., Zhu, Z. and Yang, C.C., Direct Formation of Planetary Embryos in Self-gravitating Disks. *Astrophys. J.*, 2022, **933**, 100.
- Becerra, L., Reisenegger, A., Valdivia, J.A. and Gusakov, M., Stability of axially symmetric magnetic fields in stars. *Month. Not. Roy. Astron. Soc.*, 2022a, **517**, 560–568.
- Becerra, L., Reisenegger, A., Valdivia, J.A. and Gusakov, M.E., Evolution of random initial magnetic fields in stably stratified and barotropic stars. *Month. Not. Roy. Astron. Soc.*, 2022b, **511**, 732–745.
- Bhat, P., Saturation of large-scale dynamo in anisotropically forced turbulence. *Month. Not. Roy. Astron. Soc.*, 2022, **509**, 2249–2257.
- Bhatnagar, A., Pandey, V., Perlekar, P. and Mitra, D., Rate of formation of caustics in heavy particles advected by turbulence. *Phil. Trans. Roy. Soc. Lond. Ser. A*, 2022, **380**, 20210086.

- Brandenburg, A. and Ntormousi, E., Dynamo effect in unstirred self-gravitating turbulence. *Month. Not. Roy. Astron. Soc.*, 2022, **513**, 2136–2151.
- Carenza, P., Sharma, R., Marsh, M.C.D., Brandenburg, A. and Müller, E., Magnetohydrodynamics predicts heavy-tailed distributions of axion-photon conversion. *arXiv e-prints*, 2022, arXiv:2208.04333.
- Chatterjee, P. and Dey, S., Configuration files for simulations of the solar spicule forest, Zenodo 2022.
- Currie, T., Lawson, K., Schneider, G., Lyra, W., Wisniewski, J., Grady, C., Guyon, O., Tamura, M., Kotani, T., Kawahara, H., Brandt, T., Uyama, T., Muto, T., Dong, R., Kudo, T., Hashimoto, J., Fukagawa, M., Wagner, K., Lozi, J., Chilcote, J., Tobin, T., Groff, T., Ward-Duong, K., Januszewski, W., Norris, B., Tuthill, P., van der Marel, N., Sitko, M., Deo, V., Vievard, S., Jovanovic, N., Martinache, F. and Skaf, N., Images of embedded Jovian planet formation at a wide separation around AB Aurigae. Nat. Astron., 2022a.
- Currie, T., Lawson, K., Schneider, G., Lyra, W., Wisniewski, J., Grady, C., Guyon, O., Tamura, M., Kotani, T., Kawahara, H., Brandt, T., Uyama, T., Muto, T., Dong, R., Kudo, T., Hashimoto, J., Fukagawa, M., Wagner, K., Lozi, J., Chilcote, J., Tobin, T., Groff, T., Ward-Duong, K., Januszewski, W., Norris, B., Tuthill, P., van der Marel, N., Sitko, M., Deo, V., Vievard, S., Jovanovic, N., Martinache, F. and Skaf, N., Images of Embedded Jovian Planet Formation At A Wide Separation Around AB Aurigae. arXiv e-prints, 2022b, arXiv:2204.00633.
- Dey, S., Chatterjee, P., O. V. S. N., M., Korsós, M.B., Liu, J., Nelson, C.J. and Erdélyi, R., Polymeric jets throw light on the origin and nature of the forest of solar spicules. *Nature Physics*, 2022, **18**, 595–600.
- Haugen, N.E.L., Brandenburg, A., Sandin, C. and Mattsson, L., Spectral characterisation of inertial particle clustering in turbulence. *J. Fluid Mech.*, 2022, **934**, A37.
- Hyder, A., Lyra, W., Chanover, N., Morales-Juberías, R. and Jackiewicz, J., Exploring Jupiter's Polar Deformation Lengths with High-resolution Shallow Water Modeling. *Planet. Sci. J.*, 2022, 3, 166.
- Käpylä, M.J., Rheinhardt, M. and Brandenburg, A., Compressible Test-field Method and Its Application to Shear Dynamos. *Astrophys. J.*, 2022, **932**, 8.
- Käpylä, P.J., Solar-like Dynamos and Rotational Scaling of Cycles from Star-in-a-box Simulations. *Astrophys. J. Lett.*, 2022, **931**, L17.
- Käpylä, P.J. and Singh, N.K., Turbulent Prandtl number from isotropically forced turbulence. *J. Fluid Mech.*, 2022, **952**, R1.
- Karchniwy, E., Haugen, N.E.L. and Klimanek, A., A numerical study on the combustion of a resolved carbon particle. *Comb. Flame*, 2022, **238**, 111880.

- Kirchschlager, F., Mattsson, L. and Gent, F.A., Supernova induced processing of interstellar dust: impact of interstellar medium gas density and gas turbulence. *Month. Not. Roy. Astron. Soc.*, 2022, **509**, 3218–3234.
- Li, X.Y., Mehlig, B., Svensson, G., Brandenburg, A. and Haugen, N.E.L., Collision Fluctuations of Lucky Droplets with Superdroplets. *J. Atmosph. Scie.*, 2022, **79**, 1821–1835.
- Lipatnikov, A.N. and Sabelnikov, V.A., Flame folding and conditioned concentration profiles in moderately intense turbulence. *Phys. Fluids*, 2022, **34**, 065119.
- Maiti, S., Makwana, K., Zhang, H. and Yan, H., Cosmic-ray Transport in Magnetohydrodynamic Turbulence. *Astrophys. J.*, 2022, **926**, 94.
- Masada, Y. and Sano, T., Rotational Dependence of Large-scale Dynamo in Strongly-stratified Convection: What Causes It?. Astrophys. J., submitted, 2022, arXiv:2206.06566.
- Mattsson, L. and Hedvall, R., Acceleration and clustering of cosmic dust in a gravoturbulent gas I. Numerical simulation of the nearly Jeans-unstable case. *Month. Not. Roy. Astron. Soc.*, 2022, **509**, 3660–3676.
- Mtchedlidze, S., Domínguez-Fernández, P., Du, X., Brandenburg, A., Kahniashvili, T., O'Sullivan, S., Schmidt, W. and Brüggen, M., Evolution of Primordial Magnetic Fields during Large-scale Structure Formation. *Astrophys. J.*, 2022, **929**, 127.
- Navarrete, F.H., Käpylä, P.J., Schleicher, D.R.G., Ortiz, C.A. and Banerjee, R., Origin of eclipsing time variations: Contributions of different modes of the dynamo-generated magnetic field. *Astron. Astrophys.*, 2022, **663**, A90.
- Ortiz-Rodríguez, C.A., Schleicher, D.R.G., Käpylä, P.J. and Navarrete, F.H., Simulations of fully convective M dwarfs: dynamo action with varying magnetic Prandtl numbers. *Boletin de la Asociacion Argentina de Astronomia La Plata Argentina*, 2022, **63**, 62–64.
- Roper Pol, A., Gravitational waves from MHD turbulence at the QCD phase transition as a source for Pulsar Timing Arrays. arXiv e-prints, 2022, arXiv:2205.09261.
- Roper Pol, A., Caprini, C., Neronov, A. and Semikoz, D., The gravitational wave signal from primordial magnetic fields in the Pulsar Timing Array frequency band. *arXiv e-prints*, 2022a, arXiv:2201.05630.
- Roper Pol, A., Mandal, S., Brandenburg, A. and Kahniashvili, T., Polarization of gravitational waves from helical MHD turbulent sources. *J. Cosmol. Astropart. Phys.*, 2022b, **2022**, 019.
- Schober, J., Rogachevskii, I. and Brandenburg, A., Dynamo instabilities in plasmas with inhomogeneous chiral chemical potential. *Phys. Rev. D*, 2022a, **105**, 043507.
- Schober, J., Rogachevskii, I. and Brandenburg, A., Production of a Chiral Magnetic Anomaly with Emerging Turbulence and Mean-Field Dynamo Action. *Phys. Rev. Lett.*, 2022b, **128**, 065002.

- Sharma, R. and Brandenburg, A., Low frequency tail of gravitational wave spectra from hydromagnetic turbulence. *Phys. Rev. D*, 2022, **106**, 103536.
- Stejko, A., Kosovichev, A.G., Featherstone, N.A., Guerrero, G., Hindman, B., Matilsky, L. and Warnecke, J., Using Time-Distance Helioseismology to Constrain Simulations of Meridional Circulation on the Suna; in *AGU Fall Meeting Abstracts*, Vol. 2022, Dec., 2022a, pp. SH14B–03.
- Stejko, A.M., Kosovichev, A.G., Featherstone, N.A., Guerrero, G., Hindman, B.W., Matilsky, L.I. and Warnecke, J., Constraining Global Solar Models through Helioseismic Analysis. *Astrophys. J.*, 2022b, **934**, 161.
- Tschernitz, J. and Bourdin, P.A., Influence of the kinematic viscosity on solar convection simulations; in 44th COSPAR Scientific Assembly. Held 16-24 July, Vol. 44, Jul., 2022, p. 2553.
- Yang, Y. and Zhu, J.Z., Turbulence compressibility reduction with helicity. *Phys. Fluids*, 2022, **34**, 045113.
- Zhou, H., Sharma, R. and Brandenburg, A., Scaling of the Hosking integral in decaying magnetically dominated turbulence. *J. Plasma Phys.*, 2022, **88**, 905880602.