

# Evan H. Anders

CIERA  
Northwestern University  
Evanston, IL 60201

email: [evan.anders@northwestern.edu](mailto:evan.anders@northwestern.edu)  
website: [evanhanders.bitbucket.io](http://evanhanders.bitbucket.io)  
Google Scholar: [pOxWQ5sAAAAJ](https://scholar.google.com/citations?user=pOxWQ5sAAAAJ)  
arXiv: [anders\\_e\\_1](https://arxiv.org/a/anders_e_1)  
  [evanhanders](https://github.com/evanhanders)

## Publications List

- † - I was a co-first-author on this paper  
\* - This paper was led by someone I mentor

### Peer-reviewed Journal Articles

- 2022 \*20. Powers, W.T.; **Anders, E.H.**; Brown, B.P.; and Oishi, J.S. In prep (PRFluids).  
*Fundamental studies of internally heated fully compressible convection*
- \*19. Cresswell, I.G.; **Anders, E.H.**; Brown, B.P.; Oishi, J.S.; and Vasil, G.M.  
Submitted to PRFluids.  
*Force Balances in Strong-Field Magnetconvection Simulations*
- \*18. Kaufman, E.; Lecoanet, D.; **Anders, E.H.**; Brown, B.P.; Vasil, G.M.; Oishi, J.S.;  
and Burns, K.J. Accepted for publication in MNRAS ([ArXiv](#)).  
*The Stability of Prendergast Magnetic Fields*
- \*17. Fuentes, J.R.; Cumming, A.; **Anders, E.H.**. Submitted to PRF. ([ArXiv](#)).  
*Layer formation in a stably-stratified fluid cooled from above. Towards an analog for Jupiter and other gas giants.*
- †16. Fraser, A.E.; Joyce, M.; **Anders, E.H.**; Tayar, J.; Cantiello, M. Accepted for  
publication in ApJ. ([ArXiv](#)).  
*Characterizing Observed Extra Mixing Trends in Red Giants using the Reduced Density Ratio from Thermohaline Models.*
15. Jermyn, A.S.; **Anders, E.H.**; Lecoanet, D.; and Cantiello, M. [ApJS 262, 19](#).  
*An Atlas of Convection in Main Sequence Stars.*
14. Jermyn, A.S.; **Anders, E.H.**; Lecoanet, D.; and Cantiello, M. [ApJ 929, 182](#).  
*Convective Penetration in Early-Type Stars*
13. **Anders, E.H.**; Jermyn, A.S.; Lecoanet, D.; Fraser, A.E.; Cresswell, I.G.; Joyce, M.;  
and Fuentes, J.R. [ApJL 928, L10](#).  
*Schwarzschild and Ledoux are equivalent on evolutionary timescales*

12. Jermyn, A.S.; **Anders, E.H.**; and Cantiello, M. [ApJ 926, 221](#).  
*A Transparent Window into Early-Type Stellar Variability*
11. **Anders, E.H.**; Jermyn, A.S.; Lecoanet, D.; and Brown, B.P., [ApJ 926, 169](#).  
*Stellar convective penetration: parameterized theory and dynamical simulations*
- 2021 \*10. O'Connor, L.; Lecoanet, D.; and **Anders, E.H.**, [Physical Review Fluids 6, 093501](#).  
*Marginally-Stable Thermal Equilibria of Rayleigh-Bénard Convection*
9. Lecoanet, D.; Cantiello, M.; **Anders, E.H.**; Quataert, E.; Couston, L.; Bouffard, M.; Favier, B.; and Le Bars, M., [MNRAS 508, 1, 132-143](#).  
*Surface Manifestation of Stochastically Excited Internal Gravity Waves*
8. Van Kooten, S.J.; **Anders, E.H.**; and Cranmer, S.R, [ApJ 913, 69](#)  
*A Refined Model of Convectively-Driven Flicker in Kepler Light Curves*
7. Oishi, J.S.; Burns, K.J.; Clark, S.E.; **Anders, E.H.**; Brown, B.P.; Vasil, G.M.; and Lecoanet, D, [JOSS 6\(62\), 3079](#).  
*eigentools: A Python package for studying eigenvalue problems with an emphasis on stability*
- 2020 6. **Anders, E.H.**; Vasil, G.M.; Brown, B.P.; and Korre, Lydia, [Physical Review Fluids 5, 083501](#).  
*Convective dynamics with mixed temperature boundary conditions: why thermal relaxation matters and how to accelerate it*
- 2019 5. **Anders, E.H.**; Lecoanet, D.; and Brown, B.P., [ApJ 884, 65](#).  
*Entropy Rain: Dilution and Compression of Thermals in Stratified Domains*
4. **Anders, E.H.**; Manduca, C.M.; Brown, B.P.; Oishi, J.S.; Vasil, G.M., [ApJ 872, 2](#).  
*Predicting the Rossby Number in Convective Experiments*
- 2018 3. **Anders, E.H.**; Brown, B.P; and Oishi, J. S., [Physical Review Fluids 3, 083502](#).  
*Accelerated evolution of convective simulations*
- 2017 2. **Anders, E.H.** and Brown, B.P., [Physical Review Fluids 2, 083501](#).  
*Convective heat transport in stratified atmospheres at low and high Mach number*
- 2016 1. Karki, S.; Tuyenbayev, D.; Kandhasamy, S.; Abbott, B.P.; Abbott, T.D.; **Anders, E.H.**; Berliner, J.; Betzwieser, J.; Cahillane, C.; Canete, L.; Conley, C.; Daveloza, H.P.; De Lillo, N.; Gleason, J.R.; Goetz, E.; Izumi, K.; Kissel, J.S.; Mendell, G.; Quetschke, V; Rodruck, M.; Sachdev, S.; Sadecki, T.; Schwinberg, P.B.; Sottile, A.; Wade, M.; Weinstein, A.J., West, M.; and Savage, R.L., [Review of Scientific Instruments 87, 114503](#).  
*The Advanced LIGO photon calibrators*

## Other Publications

- 2022 4. Featherstone, N. et. al. incl. **Anders, E.H.** Decadal Review Whitepaper.  
*The Puzzling Structure of Solar Convection: Window into the Dynamo*

3. **Anders, E.H.**; Bauer, E.B.; Jermyn, A.S.; Van Kooten, S.J.; Brown, B.P.; Hester, E.W.; Wilkinson, M.; Goldberg, J.A.; Varesano, T.; Lecoanet, D. [ArXiv; April fool's paper](#).  
*Moosinesq Convection in the Cores of Moosive Stars*
2. **Anders, E.H.**; Jermyn, A.S.; Lecoanet, D.; Fuentes, J.R.; Korre, L.; Brown, B.P.; Oishi, J.S.; [RNAAS 6, 41](#).  
*Convective Boundary Mixing Processes*
1. Jermyn, A.S.; **Anders, E.H.**; Lecoanet, D.; Cantiello, M.; and Goldberg, J.A.; [RNAAS 6, 29](#).  
*Measures of Convective Efficiency*