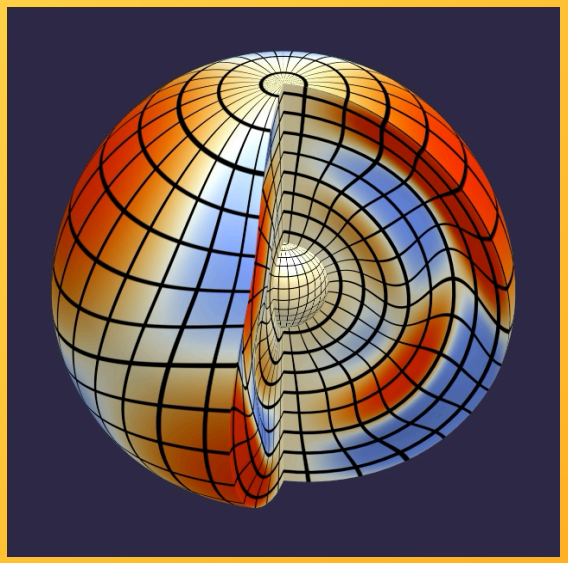
Rich Townsend — Brief Bio

- BA Physics, Oxford University (1994)
- PhD Astronomy, University College London (1997)
- 1-year hiatus after PhD, to explore other options (incl. teaching HS physics in Ghana)
- Postdoctoral researcher @ UCL and U. Delaware (1998—2008)
- Associate/Assistant/Full Professor @ UW (2008—present)
- Currently chair of UW Department of Astronomy

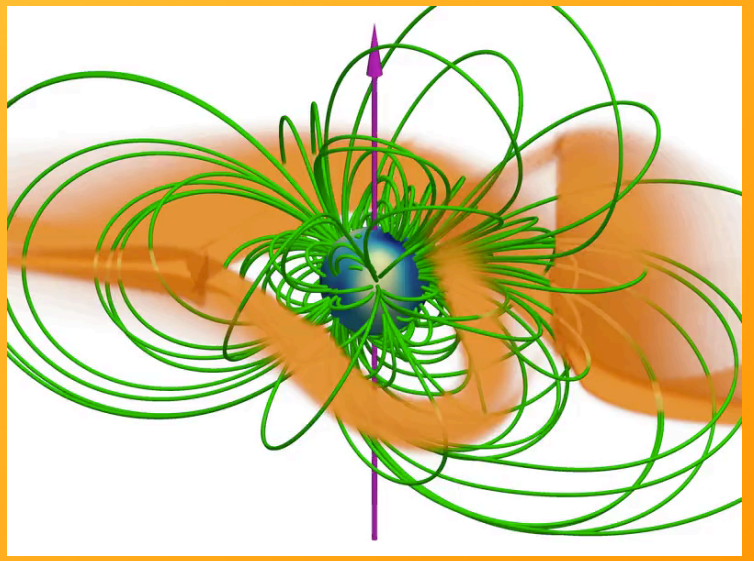
Rich Townsend — Research Interests

- Theory & Computation
  - Stellar structure & evolution
  - Stellar magnetism
  - Asteroseismology
  - Binary evolution



Simulation of waves inside star

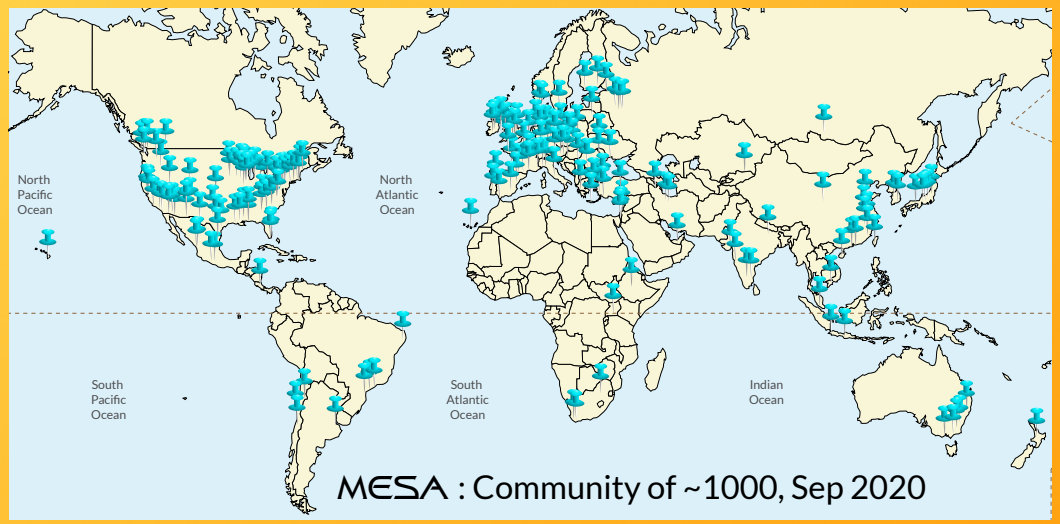
- Research group
  - 1 undergrad student
  - 1 graduate student
  - 2 postdoctoral researchers



Simulation of stellar magnetosphere

MESA

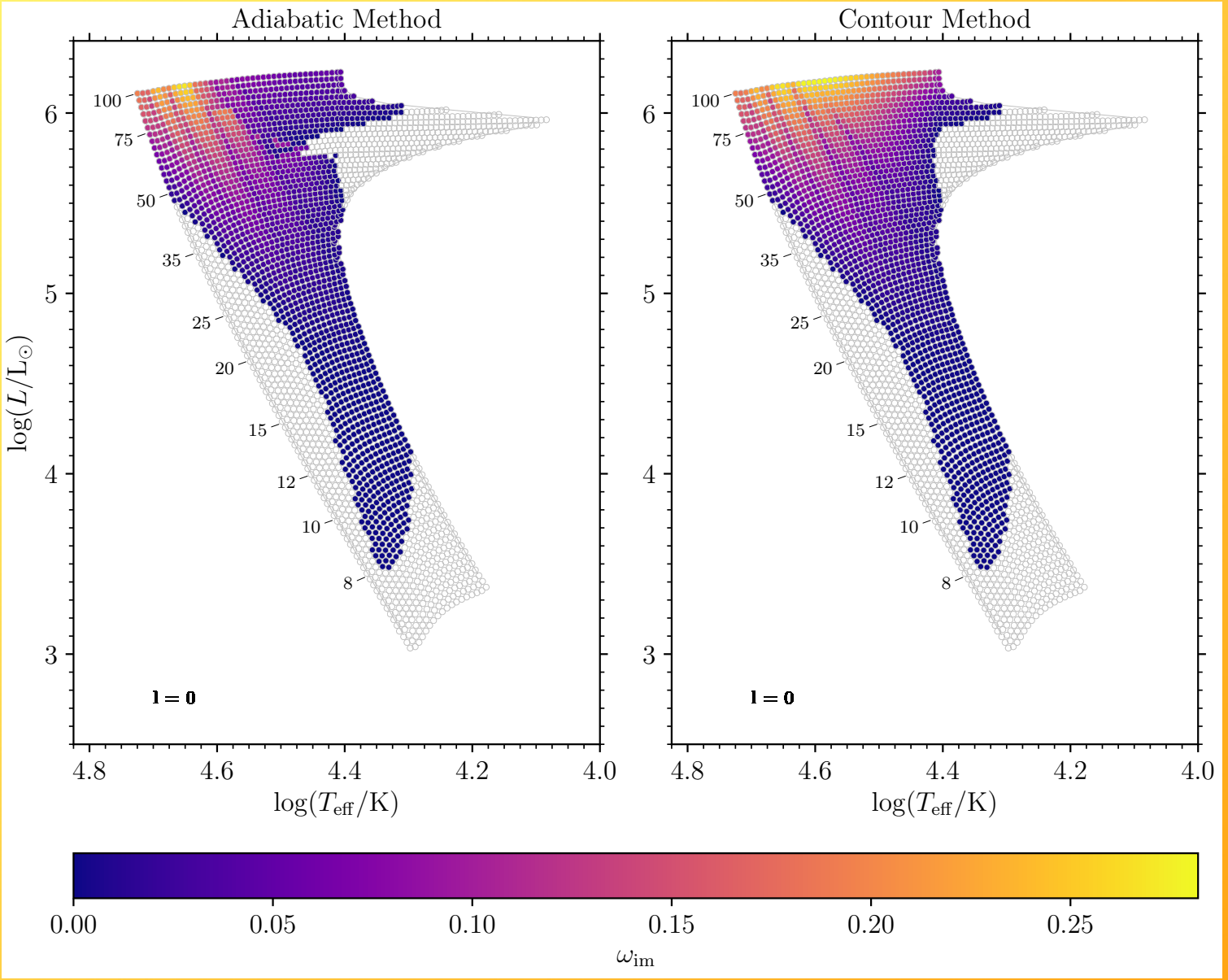
- Modules for Experiments in Stellar Astrophysics
- A suite of modules (numerics, microphysics, macrophysics) *and* a quasi 1-D stellar evolution code, *MESAstar*
- Developed & maintained by team of institutions (UCSB, ASU, UW-Madison) & scientists



GYRE

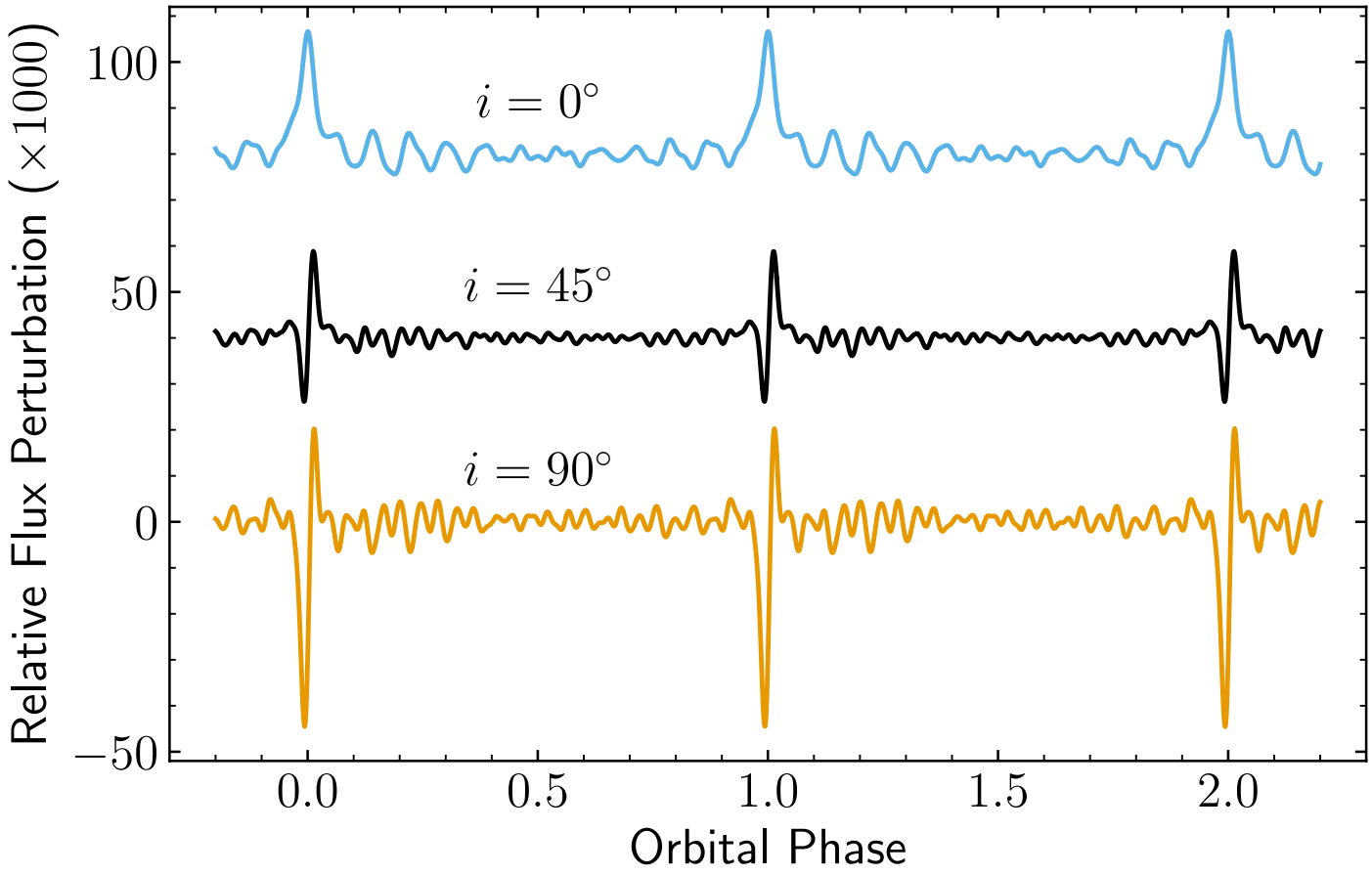
- A stellar oscillation/asteroseismology code
- Given a stellar model (e.g., from MESA), calculate the spectrum of normal modes (eigenfrequencies & eigenfunctions)
- Developed exclusively at UW-Madison, but used by a growing community (100+) world-wide to analyze & interpret data from *Kepler* & *TESS*

Massive-Star Instability Strips



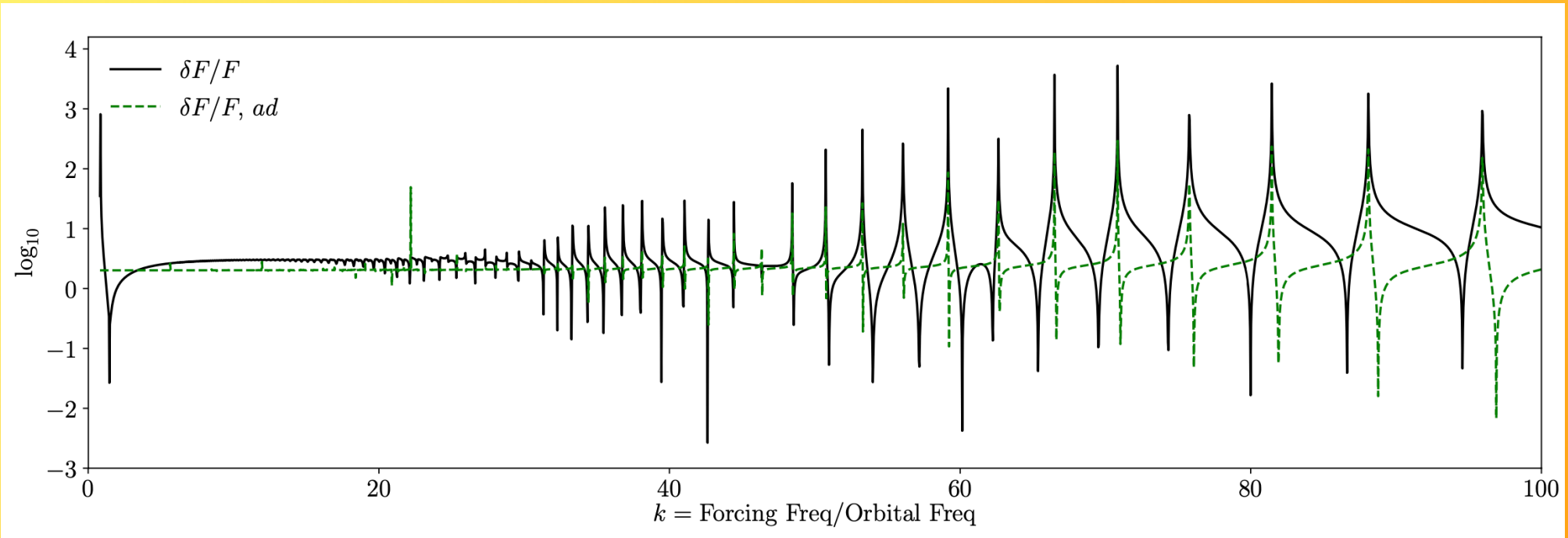
Jacqueline Goldstein (postdoc, former grad student)

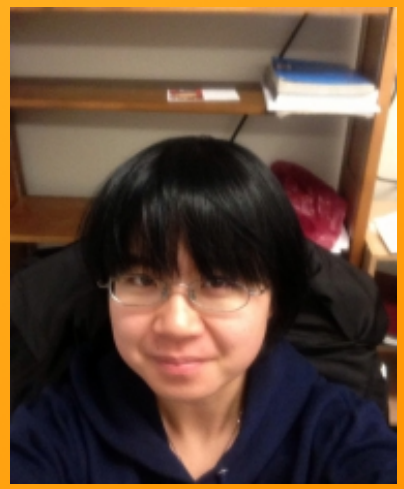
Heartbeat Stars



Aaron Lopez (grad student)

Tidal Interactions





Meng Sun (postdoc)

Rich Townsend — Outside Interests

Gardening

Cooking

Drone Building & Piloting

Video Gaming