Francis Xavier Timmes 01Jan2024

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Web: https://cococubed.com YouTube: https://www.youtube.com/@AAStronomy

Research Interests

Stellar Astrophysics, especially the Modules for Experiments for Stellar Astrophysics (MESA) project. Explosions - emphasis on their progenitor evolution, nucleosynthesis, and multi-messenger signals. Seismology, especially of observed variable white dwarfs.

Thermodynamics, Opacities, and Nuclear Physics - stars are gravitationally confined nuclear reactors.

Chemical evolution, growth of every isotope, atom, and molecule at every point in spacetime.

Astrobiology, production and delivery of bioessential elements to habitable systems.

Gamma-ray astronomy, particularly energetic photons from the decay of radionuclides.

Neutrino astronomy, in general and especially from pre-supernova massive stars.

Recent Appointments

- 2022 Associate Editor-in-Chief, American Astronomical Society Journals
- 2019 Senior Lead Editor, American Astronomical Society Journals
- 2016 Lead Editor, American Astronomical Society Journals
- 2009 Scientific Editor, American Astronomical Society Journals
- 2008 Professor, SESE, ASU

Recent Honors

- 2015 Simons Fellow in Theoretical Physics
- 2014 Fellow, American Physical Society

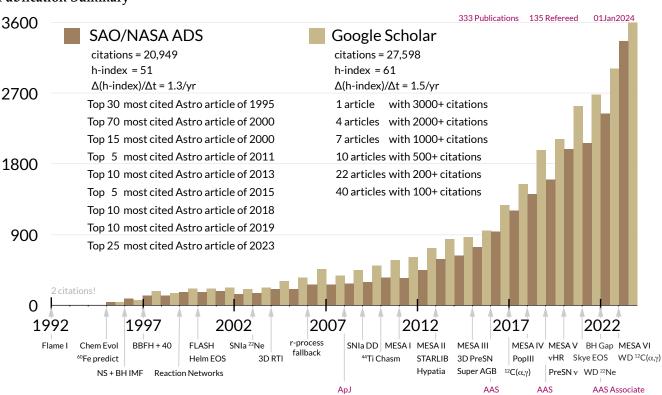
Select Recent Research Funding

Since 2008: \$	626.5M,	\$7.3M to	ASU
2022 - 2025	NSF	PΙ	\$422K, Neutrino Emission From Stars
2022 - 2025	NASA	PI	\$476K, Probing The Interior Composition Of White Dwarfs
2019 - 2024	NSF	Co-PI	\$2M, AccelNet-WOU: International Research Network
2017 - 2022	NSF	PΙ	\$2.3M, Modules for Experiments (MESA)
2014 - 2022	NSF	Co-PI	\$11.2M, Physics Frontiers Center, JINA-CEE

Recent Education and Outreach Activities

- 2019 Principal Content Provider, American Astronomical Society YouTube Channel
- 2011 2022 Director & Lecturer, MESA Summer School, UC Santa Barbara
- 2015 2018 Largest college-credit eligible astronomy course in the world, ~10,000 students/yr

Publication Summary



Scientific Editor

Lead Editor

YouTube

Editor-in-Chief