

2019-08-26 Info for prospective grad students:

Hello – thanks for your interest in our program. **Due to life circumstances, I will no longer be able to accept new grad students.** However, you should inspect the webpages of my colleagues, who may be of interest:

--Dr. Jennifer Hoffman, supernova polarimetry and theory

--Dr. Toshiya Ueta, planetary nebulae observations and theory.

If you are energetic and have interests in observation joined with theory, opportunities may exist for you at Denver, especially if you have prior experience and publications along any/all of these lines. Include a statement of your current interests and relevant publications when you apply at site: <https://www.du.edu/nsm/departments/physicsandastronomy/admissionsandfinancialaid/graduateprogram.html>

For the record, my research has included these recent papers:

\*\*After lengthy studies of the interacting binary epsilon Aurigae, my interest has moved to generic questions about circumstellar disks. This has resulted in a series of papers, including:

\*MESA models of the evolutionary state of the interacting binary epsilon Aurigae [ <http://adsabs.harvard.edu/abs/2018MNRAS.476.5026G> ];

\*Structure in the Disk of epsilon Aurigae: Analysis of the ARCES and TripleSpec data obtained during the 2010 eclipse” – <http://adsabs.harvard.edu/abs/2016arXiv161205287G> ] - note that follow-up CHARA VEGA data were obtained during binary quadrature in mid-Aug 2019;

\*Interferometric studies of disk-eclipsed binary star systems – [ <http://adsabs.harvard.edu/abs/2016SPIE.9907E..17S> ]

\*Transient Carbon Monoxide (CO) Absorption and Persistent Brackett Alpha (Br $\alpha$ ) Emission in the Spectrum of  $\epsilon$  Aurigae [ <http://adsabs.harvard.edu/abs/2015AJ....149..109S> ]

Next steps could involve creating observational experiments to advance the discovery – using JWST, ALMA, Gemini or other world-class facilities.

\*\*Also, I've worked with students to develop next generation instruments – including Tristan Wolfe's new type of polarimeter: Developing a Single-shot Polarimeter for Astronomy with Stressed-engineered Optics –<http://adsabs.harvard.edu/abs/2017AAS...22915518W> .

Other instruments have involved Colby Jurgenson's SIRTf high res infrared spectrometer [ <http://adsabs.harvard.edu/abs/2005ASPC..343..280J> ]; a mid-IR camera/polarimeter called TNTCAM [ <http://adsabs.harvard.edu/abs/2003ApJ...582L..35J> ] and others.

\*\*Additionally, I've pursued redevelopment of Denver observatories old and new – our 1984 vintage large refractor at Chamberlin Observatory [ <http://mysite.du.edu/~rstencil/Chamberlin/> ] and our high altitude Mount Evans Observatory [ 14,148 ft elev. <http://adsabs.harvard.edu/abs/2017AAS...22915501S> ]. However, local levels of light pollution threaten the continued existence of these facilities, so I'm embarking on research into light pollution solutions.

...and have worked with the following ground- and space-based telescopes: IUE, IRAS, ROSAT, XMM, ISO, Spitzer, Gemini, CHARA and others.

\*\*What's in it for you?

The future of astronomy: a big subject, of course, and highly dependent on the smarts of those involved and the funding prospects. Hiring has long been cyclical – dominated by federal funding variations over the past several decades. For more about that, you might want to read Neil Tyson's recent book: *“Accessory to War: The Unspoken Alliance Between Astrophysics and the Military.”* As political fashions change, those students who acquire some degree of instrumentation skills often have a better than average chance of finding those first post-graduate job opportunities. Meanwhile, if you consider Denver for grad work in astrophysics, my colleagues and I will be happy to talk with you – if you've done your homework. --Dr. Bob Stencil

Best wishes!