

Jeffrey K. J. Fogel

Department of Astronomy
University of Michigan
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EDUCATION

UNIVERSITY OF MICHIGAN, ANN ARBOR, MI April 2011
Ph.D. in Astronomy & Astrophysics

HARVARD UNIVERSITY, CAMBRIDGE, MA June 2004
B.A. in Physics and Astronomy & Astrophysics, *magna cum laude*

THESIS

Topic: Chemistry of Protoplanetary Disks with Dust Settling and Ly α Radiation

Advisor: Prof. Edwin A. Bergin

Developed complex chemical kinetics model in Fortran to determine chemical abundances of ~ 600 species in a protoplanetary disk. Looked at the effects that changing the disk physics would have on the chemical composition of the disk. Produced models to explain observations taken with the Herschel Space Observatory and to predict what would be observed during programs with the Submillimeter Array and future observations with Herschel.

EXPERIENCE

UNIVERSITY OF MICHIGAN, ANN ARBOR, MI

Graduate Student Research Assistant

May 2006 - present

- Collaborate with teams of 8 to 10 on thesis work and multi-institutional projects.
- Provide chemical modeling expertise for DISCS project, consisting of scientists from Harvard, the University of Michigan and Johns Hopkins University.
- Calculate chemical models for range of physical disks to match with observations of TW Hya for international team.

Mentor to Astrophysics Graduate Student

Fall 2009 - present

- Supervise graduate student during Professor's sabbatical.
- Meet weekly to provide guidance on the development of thesis.
- Support work on a variety of activities including department presentations and code troubleshooting.

Computer Committee Member

Fall 2007 - Fall 2010

- Developed and implemented computer policy for the Astrophysics Department as the only graduate student member of a five person committee.

Graduate Student Instructor (GSI) Mentor

Fall 2007

- Recruited sole graduate student advisor for incoming GSIs.
- Provided initial training and continuing guidance throughout the semester.

Lecturer: "Naked Eye Astronomy", seminar

Winter 2006

- Designed course curriculum and developed all lesson plans for a 50 student seminar on naked-eye observations and introductory astronomy.
- Lectured two sections of 25 students twice weekly.
- Met informally with students weekly during office hours.

Graduate Student Instructor

Developed laboratory section lesson plans, led weekly sections and provided guidance throughout the week on coursework.

- "Introduction to Astrophysics", for majors Fall 2007
- "The Solar System", introductory class Fall 2006
- "Stars, Galaxies, and the Universe", introductory class Fall 2005
- "The Solar System", introductory class Winter 2005

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HARVARD UNIVERSITY, CAMBRIDGE, MA

User Assistant Supervisor

Sept 2003 - June 2004

Computer User Assistant (UA)

Sept 2002 - June 2004

- Supervised, trained and mentored six user assistants and provided second level support for the entire 50 person UA program.
- Staffed computer helpdesk and computer clinic for undergraduate and graduate students.
- Maintained computer labs.
- Helped develop FAS IT policy.

COMPUTER SKILLS

Windows, Mac OS X and Linux platforms. Advanced skills in numerical methods and algorithms, computer modeling and statistics. Expertise with a number of languages and scripts including C, Python, Fortran, UNIX shell scripting, HTML and CSS.

PUBLICATIONS

Kehrig, C., Oey, M. S., Crowther, P.A., **Fogel, J.K.J.**, Pellegrini, E., Schnurr, O., Massey, P., Roth, K. "He II Nebulae in M33", 2010, submitted to *ApJ*.

Fogel, J. K. J., Bethell, T. J., Bergin, E. A., Calvet, N., Semenov, D. "Chemistry of a Protoplanetary Disk with Grain Settling and Lyman α Radiation", 2010, submitted to *ApJ*.

Bergin, E., Hogerheijde, M. R., Brinch, C., **Fogel, J.K.J.**, et al. "Sensitive Limits on the Abundance of Cold Water Vapor in the DM Tau Protoplanetary Disk", 2010, *A&A*, 521L, 33.

Oberg, K. I., Qi, C., **Fogel, J. K. J.**, Bergin, E. A., Andrews, S. M., Espaillat, C., van Kempen, T. A., Wilner, D. J., Pascucci, I., The Disk Imaging Survey of Chemistry with SMA. I. Taurus Protoplanetary Disk Data, 2010, *ApJ*, 720, 480.

Ingleby, L., Calvet, N., Bergin, E., Yerasi, A., Espaillat, C., Herczeg, G., Roueff, E., Abgrail, H., Hernandez, J., Briceno, C., Pascucci, I., Miller, J., **Fogel, J.K.J.**, Hartmann, L., Meyer, M., Carpenter, J., Crockett, N., McClure, M. "Far-Ultraviolet H₂ Emission from Circumstellar Disks", 2009, *ApJ*, 703, L137.

Massarotti, A., Latham, D., Stefanik, R., **Fogel, J.K.J.** "Rotational and Radial Velocities for a Sample of 761 HIPPARCOS Giants and the Role of Binarity", 2008, *AJ*, 135, 209.

Gaensler, B., **Fogel, J.K.J.**, Slane, P., Miller, J., Wijnands, R., Eikenberry, S., Lewin, W. "Untwisting the Tornado: X-Ray Imaging and Spectroscopy of G357.7-0.1", 2003, *ApJ*, 594, L35.

CONFERENCES

Poster, *Herschel and the Formation of Stars and Planetary Systems* Sept. 2010
Gothenburg, Sweden

Poster, *From Circumstellar Disks to Planetary Systems* Nov. 2009
Garching, Germany

Poster, *IUPAC 42: Chemistry Solutions* Aug. 2009
Glasgow, Scotland

Talk, *Midwest Astrochemistry Meeting 2008* Nov. 2008
Champaign, IL

INTERESTS

Baseball - Sabermetrics; Classical Music - Opera, Symphonic Works, Chamber Music; Culinary Arts - Bread Baking; Game Theory; Platform Tennis - board member and webmaster of Ann Arbor Platform Tennis Association; Scientific Education; Volleyball - coached local teen club team and high school freshman team, played on community teams for 6+ years.