

PROMOTION RECOMMENDATION
The University of Michigan
College of Literature, Science, and the Arts

John D. Monnier, associate professor of astronomy, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of astronomy, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	1999	University of California, Berkeley
M.S.	1996	University of California, Berkeley
B.S.	1993	Purdue University

Professional Record:

2008 – present	Associate Professor, Department of Astronomy, University of Michigan
2002 – 2008	Assistant Professor, Department of Astronomy, University of Michigan
1999 – 2002	Center Post-doctoral Fellow, Smithsonian Center for Astrophysics, Harvard University

Summary of Evaluation:

Teaching – Professor Monnier is an excellent instructor who is deeply committed to education and to improving introductory and advanced courses. He has put a great deal of effort into the introductory courses for non-majors, where he modernized or completely reworked existing classes. As a result students have given him tremendously positive feedback. Professor Monnier has mentored many students in research and has clearly given much thought to their educational and professional development. He engages undergraduates in research directly and in concert with his graduate students. He regularly has undergraduates of all levels doing research with him on material that are often included in research papers that are published in leading professional journals. These students have been very successful and the majority have gone on to graduate studies at excellent institutions. His graduate students have consistently obtained good quality post-doctoral positions and many remain active in the field.

Research – Professor Monnier is a pioneer in the development of astronomical instrumentation for visible and infrared interferometry. In addition to being an internationally recognized leader in this area, his scientific contributions using both visible and infrared interferometry have been landmarks in the field. He is a world expert on the development of advanced instrumental components as well as in obtaining observations that have resolved long-standing problems and opened new doors in the emerging field of star formation. Through his skill and inventiveness, the CHARA optical-infrared interferometer has become the leading instrument of its kind in the world, besting better-funded competing projects. Professor Monnier has a robust publication record, which includes scientific review articles of high impact. Included in his large portfolio are about 80 publications on instrumentation and a number of review chapters. He also has an outstanding record of obtaining research funding.

Recent and Significant Publications:

“Resolving Vega and the inclination controversy with CHARA/MIRC,” with X. Che, et al., *The Astrophysical Journal*, 761, 2012, L3.

“Colder and hotter: Interferometric imaging of β Cassiopeiae and α Leonis,” with X. Che, et al., *The Astrophysical Journal*, 732, 2011, 68.

“The inner regions of protoplanetary disks,” with C. P. Dullemond, *Annual Review of Astronomy and Astrophysics*, 48, 2010, 205.

“Infrared images of the transiting disk in the ϵ Aurigae system,” with B. Kloppenborg, et al., *Nature*, 464, 2010, 870.

Service – Professor Monnier is a trusted member of his department and is regularly called upon to serve on the most important committees, including those involved in faculty hiring, tenure cases, and advancement to candidacy examinations, and he has served as chair of the Computer Committee. He developed and executed a Department-wide strategy to get graduate students into research in their first year and to shepherd them along to finish in a timely fashion, which significantly reduced the time to degree. Professor Monnier has also served on many national and international committees, most prominently as a member of the national Decadal Review for the entire field of Astrophysics, which led to the highly influential “New Worlds, New Horizons in Astronomy and Astrophysics.”

External Reviewers:

Reviewer (A)

“Monnier has established himself as a leader in the field and he is well-known both nationally and internationally... He is a major contributor to the field. He didn't start the field...but he came in at the right time and had the right skills to make a difference.”

Reviewer (B)

“...he possesses superb technical skills, a deep knowledge of physics, superior creativity, and a talent for addressing interesting scientific problems. ... Dr. Monnier has a keen eye for identifying the science that can be done right now, the science that can be done with sensible upgrades to current facilit[i]es, and the science that will be possible with future instruments.”

Reviewer (C)

“He has a gift for identifying observational opportunities to apply these techniques, and he has made seminal contributions to our understanding of stellar rotation, pulsation and magnetic activity, binary stars, and disks around young stars. He has an admirable record of consistently strong funding for his research work, and he has successfully directed the work of a talented group of students and postdoctoral associates.”

Reviewer (D)

“His publication record is truly remarkable – primary author or co-author on 99 papers since 2003, the first full year of his UM appointment.”

Reviewer (E)

"...[his graduate students] are certainly outstanding people, and it is clear that John has given them a combination of responsibilities and mentorship that allowed them to develop... As a result of his frequent and important contributions, John has been recognized as a leader in astronomical imaging since very early in his career."

Reviewer (F)

"...considering Prof. Monnier's highly visible contributions to the advancement of interferometric techniques and their application to important astronomical problems, his sustained scholarly development, and his international reputation as a creative researcher and intellectual leader, I believe that Prof. Monnier fully deserves to be promoted to Full Professor."

Reviewer (G)

"The construction of the MIRC beam combiner for CHARA in Dr. Monnier's lab is a world-class accomplishment and is one of the main reasons why this field is becoming increasingly interesting in terms of scientific results."

Reviewer (H)

"John's co-authorship with J-P. Berger on a review in *Astronomy and Astrophysics Reviews* (2012) indicates his stature among his international colleagues and competitors – the author list reads like a 'Who's Who' of his peers."

Summary of Recommendation:

Professor Monnier is one of the world leaders in the development and use of optical-infrared interferometry in astronomy, providing new and fundamental insights into the properties and structure of both forming and mature stars. His efforts at the university have benefitted undergraduate and graduate students as well as fellow faculty. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor John D. Monnier be promoted to the rank of professor of astronomy, with tenure, College of Literature, Science, and the Arts.



Susan A. Gelman

Heinz Werner Distinguished University Professor,
Professor of Psychology and Interim Dean
College of Literature, Science, and the Arts

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