

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

Approved by the Regents

May 17, 2007

Christopher J. Poulsen, assistant professor of geological sciences, College of Literature, Science, and the Arts, and assistant professor of atmospheric, oceanic and space sciences, College of Engineering, is recommended for promotion to associate professor of geological sciences, with tenure, College of Literature, Science, and the Arts and associate professor of atmospheric, oceanic and space sciences, without tenure, College of Engineering.

Academic Degrees:

Ph.D.	1999	Pennsylvania State University
B.A.	1994	Carleton College

Professional Record:

2005 – present	Assistant Professor, Department of Atmospheric, Oceanic, and Space Sciences, University of Michigan
2003 – present	Assistant Professor, Department of Geological Sciences, University of Michigan
2000 – 2003	Assistant Professor, Department of Earth Sciences, University of Southern California, Los Angeles
1999 – 2000	Research Associate, Department of Geophysics, University of Chicago

Summary of Evaluation:

Teaching – Professor Poulsen is a successful and engaging instructor. He has taught at every level in Geological Sciences and has clear goals for each level of instruction. He is a very good teacher at Camp Davis where he plays a major role in teaching Introductory Geology in the Field and students give him high ratings. He is also the primary instructor for Earth Systems Modeling, a course that is cross-listed with the Department of Atmospheric, Oceanic, and Space Sciences in the College of Engineering and leads to collaborative research projects involving their faculty and graduate students. Geology is pleased to have this type of interdisciplinary link with other science and engineering departments.

Research – Professor Poulsen’s work is centered on understanding and modeling climate change, a research topic with high impact on issues related to global warming. His focus is on modeling past climates and using the geologic record to validate and refine the climate models. These refined models can then be used for projecting future climate scenarios. Professor Poulsen is not only a user of climate model codes, but he also designs and implements them. This is a step beyond what is typical in this field. He currently has 23 papers in peer-reviewed, international journals of the highest quality, including *Nature*, *Science*, *Earth and Planetary Science Letters*, *Geology*, *Geophysical Research Letters*, and the *Journal of Geophysical Research*. He has a solid record of funding, mainly from the National Science Foundation, which is very competitive in his field. He has a cadre of four Ph.D. students and is very attentive to their needs.

Recent and Significant Publications:

“Sea-ice control on Plio-Pleistocene evolution of the tropical Pacific climate,” with S.-Y. Lee, *Earth and Planetary Science Letters*, 248, 2006, pp. 253-262.

“Rising atmospheric CO₂ as a possible trigger for the end-Triassic mass extinction,” with T. T. Huynh, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 217, 2005, pp. 223-242.
“A balmy Arctic,” *Nature*, 432, 2004, pp. 814-815.
“Did the rifting of the Atlantic Ocean cause the Cretaceous thermal maximum?” with A. S. Gendaszek and R. L. Jacob, *Geology*, 31, 2003, pp. 115-118.
“Super ENSO and global climate oscillations at millennial time scales,” with L. Stott, et al., *Science*, 297, 2002, pp. 222-226.

Service – Professor Poulsen’s service has been of the highest quality. He currently serves on a faculty search committee and was on the Graduate Admissions Committee and chair of the Turner Awards Committee. As chair, he revised the process and raised the standards for these awards. His proposals and their approval required extended discussion by the faculty, and he handled the entire process with a grace and patience that is rare in a junior faculty member.

External Reviews:

Reviewer (A)

“There are only a few geologists [of his generation] who have been brave enough to work at the intersection of climate modeling and geology. ... I would rank his success in terms of publications and externally funded research program as exceptional. This productivity is even more impressive considering the number of courses he has also developed and taught.”

Reviewer (B)

“I would rate Dr. Poulsen’s standing in this area as ‘prominent.’ He is a leader in this field, and is successful at forging the necessary interdisciplinary interactions that are needed for high quality work in paleoclimate research. His publications are certainly among the most recent significant publications in this area.”

Reviewer (C)

“He has an excellent publication record, which is noteworthy in its breadth... His work has gone well beyond his dissertation. ...I believe that Chris is the strongest at this stage in his career of all of these individuals as well as any others in the field.”

Reviewer (D)

“Poulsen’s successful work with FOAM [Fast Ocean Atmospheric Model] indicates to me that he is technically adept and self-sufficient. This is also indicated by his successful employment of his own computer cluster... I believe he would be a strong candidate for promotion to tenure [at my university], and I support his promotion at the University of Michigan.”

Reviewer (E)

“All of his work is informed by good design and analysis of simulations, and even more importantly by an outstanding understanding of the geological record. ...Chris has gone farther than most others in exploring the coupled atmosphere-ocean system in warm climates. ... He also shows great promise for continued growth in his interests and accomplishments. ... Your department was fortunate to attract him, and will no doubt benefit further from having him around in the future.”

Reviewer (F)

“I’m not aware of many paleoclimate scientists [of his generation] with Poulsen’s level of expertise in both observations and models. ... I judge Poulsen’s work to be important and at the cutting edge... ...I am completely satisfied that Poulsen’s scientific work is innovative, insightful, and interdisciplinary, and that he has met the criterion of having achieved national and international recognition and has every prospect of continuing to develop as a leading and productive scientist.”

Reviewer (G)

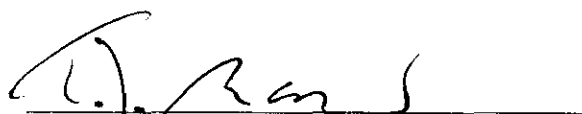
“All of his papers have considerable strength, and all show he has a deep and profound understanding of the Earth system and the mechanisms of change. ...Chris is a strong candidate for tenure. ... His main strength is his profound understanding of the subject (resulting in some excellent papers), and his ability to extend and develop existing climate models.”

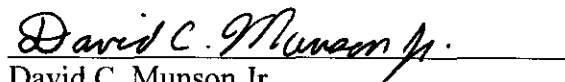
Reviewer (H)

“He has chosen to work on very important problems, in several cases going ‘against the flow’. He knows the critical paleo data that his model simulations need to address. He gives an unbiased overview of the range of factors that could explain a particular paleo observation, zeroes in on the most plausible answer, and addresses the limitations of his findings. ... I think Chris will do very well indeed for as long as anyone can possibly project.”

Summary of Recommendation:

Professor Poulsen’s research and teaching are excellent. His service has proven him to be an invaluable citizen. The Executive Committees of the College of Literature, Science, and the Arts, and the College of Engineering, and we recommend that Assistant Professor Christopher J. Poulsen be promoted to the rank of associate professor of geological sciences, with tenure, in the College of Literature, Science, and the Arts and associate professor of atmospheric, oceanic and space sciences, without tenure, in the College of Engineering.


Terrence J. McDonald
Arthur F. Thurnau Professor,
Professor of History, and Dean
College of Literature, Science, and the Arts


David C. Munson Jr.
Robert J. Vlasic Dean of Engineering
College of Engineering

May 2007