Approved by the Regents
May 15, 2008

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

David W. Gerdes, associate professor of physics, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of physics, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	1992	University of Chicago
M.A.	1987	University of Cambridge
B.A.	1986	Carleton College

Professional Experience:

2007 – present	Arthur F. Thurnau Professor, University of Michigan
2002 – present	Associate Professor, Department of Physics, University of Michigan
2004	Guest Scientist, Lawrence Berkeley National Laboratory, University of California, Berkeley
2004	Visiting Scientist, Laboratoire d'Astrophysique de Marseille
1998 – 2002	Assistant Professor, Department of Physics, University of Michigan
1998 – 1999	Visiting Assistant Professor, Department of Physics and Astronomy, Johns Hopkins University
1996 – 1998	Assistant Professor, Department of Physics and Astronomy, Johns Hopkins University
1994	Lecturer in Physics, University of Michigan
1992 – 1995	Research Fellow, Department of Physics, University of Michigan

Summary of Evaluation:

Teaching – Professor Gerdes is an excellent teacher who has had an enormous impact on the educational mission of the Department. Since his promotion to associate professor, he has been involved in revamping the introductory physics laboratories. One of his goals was to introduce more interactivity in the laboratory setting. Various before and after metrics, such as teaching evaluations, show a marked improvement in the quality of the laboratories from both the students' and the lab graduate student instructors' points of view. May of his contributions to teaching have been recognized through an appointment as an Arthur F. Thurnau Professor.

Research – Professor Gerdes' research path is remarkable in its broad command and in its achievement. His work in particle physics has been instrumental in the discovery and study of the most massive fundamental particle, the top quark. In cosmology, he is a leader in new efforts to understand the mysterious dark energy which fills all space, and a leader in making the University of Michigan an important center for this work. In both these fields, where experiments are done by teams of hundreds, his achievements show that scientific progress still turns on the creativity, agility, and energy of individual scholarship.

Recent and Significant Publications:

"Measurement of the top quark mass using missing-ET plus jets events with secondary vertex b-tagging at CDF II," with T. Aaltonen, et al., *Physical Review D*, 75, 2007, p. 111103.

"Precision measurement of the top quark mass from dilepton events at CDF II," A. Abulencia et al., *Physical Review D*, 75, 2007, p. 031105.

"Top quark mass measurement from dilepton events at CDF II with the matrix-element method," A. Abulencia et al., *Physical Review D*, 74, 2006, p. 032009.

"Measurement of the helicity of W bosons in top-quark decays," A. Abulencia et al., *Physical Review D*, 73, 2006, p. 111103.

Service – Professor Gerdes has served on the Department's Executive Committee for the last two years, and previously chaired the Computing Committee. He has been the driving force for many improvements in the Department.

External Reviews:

Reviewer (A)

"David has always shown good taste in physics by choosing fundamentally important topics to work on. ...he has moved towards one of the deepest questions of all in particle astrophysics and cosmology... I once again was impressed with his original approach and clever analysis..."

Reviewer (B)

"...he has made important contributions to the traditionally great top quark expertise at U-M. He is an acknowledged expert on many aspects of this subject ... Dave has been very much a complete physicist throughout his career. ... He's clearly made the decision to attack some Very Big Issues. ... an obviously gifted teacher. ... Clearly, Professor Gerdes would be promoted in any physics department at or before this stage of his career..."

Reviewer (C)

"Perhaps the most impressive recent achievement in Gerdes is the measurement of the top quark mass. ... This is a tour de force analysis using sophisticated statistical techniques... The range of topics that Gerdes has undertaken...indicate very good breadth of interest and sound judgment on where to make a maximum impact. ... I would rank Gerdes in the upper echelon of physicists in his age group, comparable to many who have recently been promoted to full professor..."

Reviewer (D)

"... he made important contributions to the measurement of the W mass and the top mass (including its discovery). ... If David were at [my institution] he would easily meet the qualifications for the rank equivalent to Professor."

Reviewer (E)

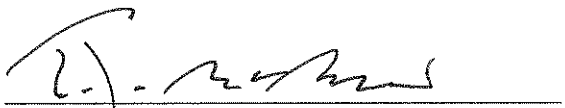
"Gerdes' filed of expertise is experimental particle physics and experimental cosmology. ...these corrections are a key expertise of Gerdes, and this expertise is crucial for DES to be a success. ...with SNAP, understanding and correcting the data is key to extracting the science, Gerdes again has a crucial role. ... I do take a particular interest in the extra-dimension results from CDF and DO and I know Gerdes had a crucial analysis role in this paper. ... I further believe that if he were a tenured associate professor here, he would be promoted to full professor with tenure."

Reviewer (F)
"Professor Gerdes is a very talented scientist who is very well known in the particle physics community for his work on the top quark. He would definitely receive promotion to Full Professor at my institution. … He has performed some of the most important measurements in the field, he has been involved in instrument building that enables these measurements, and he has demonstrated leadership within a very large experimental particle physics collaboration."

Reviewer (G)
"I am very impressed with the work he has done on CDF and is now doing on dark energy experiments. … Dave Gerdes is smart, deep, and has many scientific achievements. … I definitely recommend that he be promoted."

Reviewer (H)
"Dave has broad expertise in collider physics, and has been a leader in the specific area of top quark physics. … More recently he has done some very nice work…on searches for evidence of large extra spatial dimensions. …Dave was one of the first to recognize the appeal of these theories and to put their predictions to the test. …Dave is quite deserving of this promotion…"

Summary of Recommendation:
Professor Gerdes has shown high intellectual quality, productivity, and leadership in creating and disseminating knowledge in physics. His is an outstanding teacher and an active member of the Department. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor David W. Gerdes be promoted to the rank of professor of physics, with tenure, in the College of Literature, Science and the Arts.



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

May 2008