



THE VISION

From construction in 1888 of the West Physics Building, the first of its type in the nation, to the recent construction of a new, state-of-the-art laboratory, Michigan has a proud history of world-leading physics education and research. Over the past decade, physics has undergone spectacular development, with major discoveries across its various sub-fields. Some of these discoveries have enabled technological progress, propelling the revolution in telecommunications and inspiring entirely new industries in medical diagnostics. Other discoveries are more fundamental, offering deeper insights into the workings of nature and opening new physical vistas for exploration and application.

Currently ranked 13th in the United States, we're striving to become the nation's premier department of physics. In order to achieve this goal, we must establish a secure base of funding that allows us to excel in the areas of physics we practice, to provide an incisive and enriching education for our students by recruiting the best faculty and students to our programs, and to ensure a nurturing environment for the professional advancement of our faculty and staff.

THE VALUE

Physics is one of the broadest and most active fields of science: Its goal is to understand the most basic principles of the physical world. Physicists venture toward nature's secrets. They want to know the properties of matter – what governs its motion, what it is composed of, and how its components interact. They seek to understand electricity, magnetism, radiation, heat, and gravitation, and the relationships between them. They are interested in order and in chaos. The range of ideas that excites their curiosity, from the glory of the cosmos to the most fundamental of particles, is broader than any list could possibly convey.

As we enter deeper into this new century, the field stands intellectually vital. Our students are in demand and can choose from a wide spectrum of employment opportunities. Graduates obtain successful careers in industry, medicine, business, public service, private consulting, and teaching. Physics is an integral scientific component of the liberal arts environment, and as a department, our mission is to enhance the goals and ideals of the University by making lasting contributions at the forefront of human understanding and by communicating the excitement of scientific discovery to our fellow citizens.

THE DIFFERENCE

Michigan Center for Theoretical Physics

\$10 million endowed

\$10,000 - \$100,000 expendable

The Michigan Center for Theoretical Physics (MCTP) at the University of Michigan is uniquely positioned to take a leadership role in the search for answers to the large questions in physics, questions whose outcomes contribute significantly to everyday life. The answers to these questions have not only deepened our understanding of the physical universe but have also provided breakthroughs in the areas of biology, chemistry, medicine, and technology. While a great deal has already been achieved, much more remains to be done. Outside funding is essential if the MCTP

is to grow and evolve. Endowed support is especially important, since these permanently invested philanthropic gifts enable the Center to support discovery and innovation in a wide range of forms. MCTP can be endowed and named for \$10 million. Those who wish to be part of this exciting endeavor have a number of other options available to them as well. Expendable support is needed for the following initiatives:

- ▶ Month-long workshops convened by experts from around the world (\$30,000 to \$50,000)
- ▶ Post-doctoral fellowships, 2-3 needed (\$100,000 each)
- ▶ Scholarships & graduate student support, 2-3 needed (\$12,000 each)
- ▶ Undergraduate summer research programs, 6 needed (\$2,000 each)
- ▶ National and international conferences (\$100,000)
- ▶ Visiting faculty (\$10,000 per visitor)
- ▶ Outreach (10,000)

Named Endowed Professorship **\$2 million**

Endowed professorships have long been recognized as both a hallmark of academic quality and a means by which a university honors its most esteemed scholars and teachers. Professorships are reserved for scholars of international stature with highly distinguished records of teaching, research, and publication. They constitute a time-honored way to recruit or retain scholars with exceptional records of achievement.

Graduate and Post-doctoral Fellowships **\$750,000 - \$1 million**

Proceeds from this endowment would provide a full stipend and tuition for a Physics graduate student or a stipend and research start-up assistance to support a post-doctoral fellow. Because so many graduate students are recruited according to the Department's broad research strengths, this endowment will enable the Department to recruit talented young scientists to pursue research work in specific, targeted areas of physics. The endowment will provide flexibility for the student and strengthen the Department's ability to recruit and retain top-notch scientists.

Saturday Morning Physics - Spring Season **\$500,000 endowed** **\$25,000 annually**

Each Saturday, this popular program draws over three hundred children and adults from southeastern Michigan to learn about the mysteries and wonders of physics. UM professors from several departments present topics ranging from black holes to astrophysics, from MRI technology to human genetics. Multimedia demonstrations, hands-on experiments, and audience participation make the mornings a lively give-and-take between professor and audience. The 6-8 week spring season builds on the success of the program run each fall. An endowment of \$500,000 would allow the spring season to continue in perpetuity. It costs the Department \$25,000 annually to produce the spring season, which includes professional videotaping of the sessions for distribution on public television.

Undergraduate Scholarships **\$100,000 endowed** **\$5,000 annually**

Scholarships are essential if Physics is going to recruit the best students to Michigan and continue to enhance the quality of its program. Funding for tuition support for both in-state and non-resident students is especially critical to ensure excellence and a diverse community of students. Although an endowment ensures a scholarship in perpetuity, an expendable gift to cover these tuition or living costs on a yearly basis is also of great value. An endowed gift of \$100,000 will provide \$5,000 annually toward tuition for a student.

LSA | DEPARTMENT OF PHYSICS

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Department Strategic Fund

\$100,000

Expendable, undesignated gifts are extraordinarily important to the continuing success and growth of the Department. Contributions to the Strategic Fund make it possible to meet unexpected needs and challenges such as:

- ▶ Seed funding for new faculty research
- ▶ Curriculum development
- ▶ Purchase or repair of major instruments for the research and teaching labs (\$50,000 per year)
- ▶ Summer research opportunities for undergraduates
- ▶ Conferences highlighting the Department's scholarship (\$25,000 per conference)
- ▶ Student activities and clubs.

All donors will be eligible for Presidential Society Recognition opportunities, including the President's Club (\$15,000), the Tappan Society (\$50,000) and the Hutchins Society (\$100,000).