AAPT PHYSICS EDUCATION American Association of Physics Teachers

FOR IMMEDIATE RELEASE

Patricia M. Heller Awarded 2010 Millikan Medal

College Park, Maryland, United States, April 27, 2010—The American Association of Physics Teachers (AAPT) announced today that Dr. Patricia M. Heller is the 2010 recipient of the Robert A. Millikan Medal. This award recognizes educators who have made notable and creative contributions to the teaching of physics. It will be presented during the AAPT Summer Meeting at the University of Portland, Oregon.

Heller is Associate Professor of Curriculum and Instruction at the University of Minnesota and a founding member of the Physics Education Research (PER) Group. She has been at the forefront of PER for most of her career, taking on problems and issues that later bloom into entire research areas. One example of this is her work with instructor beliefs. She recognized that no instructional change will happen unless the individual instructor believes in the value of the change. This means we need to know what instructors believe and how those beliefs can change. Her initial work on instructor beliefs in the late 1990s has led to other researchers taking on this important area of study. Her work on cooperative group problem solving has also been of great importance and has not only established a firm research base on the topic in university level physics education, but she and her research group have created (and freely disseminated) materials that are widely used and have influenced many instructors to bring more group problem solving into their classrooms.

Heller has a B.S. and M.S. in Physics from the University of Washington and earned her Ph.D. in Science Education at the University of Michigan. She has a long and distinguished career in physics education research and her research program has produced a number of students who are now leaders in the physics education and physics education research communities. The work of Heller, her students, and collaborators has been seminal in the community of researchers and is one of the most effective research-based approaches to teaching introductory physics that has been developed. The University of Minnesota Physics Education Research and Development web site developed by her research group in physics education is a primary resource for physics teachers and contains first rate materials that have been highly influential for many physics instructors, both in college and high school. [http://groups.physics.umn.edu/physed/]

She was a leader on two large NSF-funded projects since 1995: The Constructing Physics Understanding (CPU) project and the Interactions in Physical Science project. The former (1995-2000) developed workshop materials for elementary teachers (to learn physics themselves) and curriculum modules for high school teachers to use in their classrooms. The latter project (1998-2007) developed student and teacher materials for a yearlong middle school physical science course.

Heller's direct contributions to physics education are no less impressive. She has tirelessly worked to improve physics education at all levels. From a background that includes K-12 and university teaching, she took her experiences and her understanding of the education system to create curricula for elementary-school teachers, middle school students, college students, teaching assistants, and even college professors. She knows that change is slow and must come in steps, and has pushed the system to step slowly but surely towards improvement. She has also helped with K-12 reform by being a part of the group that created the science teaching licensure standards for Minnesota's Board of Teaching. In addition, Heller was a consultant to the American Association for the Advancement of Science national science standards, Benchmarks for Science Literacy (1985-1995), and a committee member for the College Board Science standards for College Success™ (2007-2008).

About the Award
The Robert A Millikan Medal, established in 1962, recognizes teachers who have made notable and creative contributions to the teaching of physics. The recipient is asked to make a presentation at the Ceremonial Session of an AAPT Summer Meeting. A monetary award, The Millikan Medal, an Award Certificate, and travel expenses to the meeting are presented to the recipient.

Previous Awardees
2009, Arthur Eisenkraft, University of Massachusetts, Boston, MA

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2008, Eric Mazur, Harvard University, Cambridge, MA
2007, David R. Sokoloff, University of Oregon, Eugene, OR
2006, Art Hobson, University of Arkansas, Fayetteville
2005, John S. Rigden, Washington University in St. Louis, MO
2004, Kenneth S. Krane, Oregon State University, Corvallis
http://www.aapt.org/Programs/awards/millikan.cfm

About AAPT

AAPT is an international organization for physics educators, physicists, and industrial scientists—with more than 10,000 members worldwide. Dedicated to enhancing the understanding and appreciation of physics through teaching, AAPT provides awards, publications, and programs that encourage teaching practical application of physics principles, support continuing professional development, and reward excellence in physics education. AAPT was founded in 1930 and is headquartered in the American Center for Physics in College Park, Maryland.

For more information: Contact Marilyn Gardner, Director of Communications, mgardner@aapt.org, (301) 209-3306, (301) 209-0845 (Fax), www.aapt.org.