

Ceremonial Session

Monday, Jan 26, 2004 9:00 - 11:00 AM

Five distinguished service citations were presented to Lila Adair, Piedmont College; Jennifer Hickman, Wellington Management Co.; Ruth Howes, Marquette Univ.; James Watson, Ball State Univ.; Nancy Watson, Ball State Univ.

Two high school innovative teaching grants were presented.

One Society of Physics Students advisor award was presented to Jerome Long, Virginia Tech.

The Melba Newell Phillips award for exceptional service to AAPT was awarded to Robert Beck Clark, Brigham Young Univ.

The Richtmeyer Award for the physicist most likely to win a future Nobel Prize was presented to Dr. Lene Hau of Harvard University for her work in slowing down light to bicycling speed using a Bose-Einstein condensate. A short summary can be found at <http://www.physicscentral.com/people/people-02-2.html>. Other articles may be found in National Geographic (Oct 2001), Nature (Oct 1999) and Scientific American Special Edition "The Edge of Physics". Dr. Hau presented a very lucid explanation of her work in creating the condensate and then slowing down light.

The Oersted Medal Citation for notable contributions to the teaching of physics was presented to Dr. Lawrence M. Krauss of Case Western Reserve Univ., well known for his book The Physics of Star Trek. Dr. Krauss presented a State of the Universe Address. Below are a few notes I made during the address. I have left out the political jokes and allusions. Any errors or misconceptions contained in the notes are my own.

-the total energy of the universe may be obtained from the simple equation

$$E_T = \frac{1}{2}mv^2 - \frac{GMm}{r}$$

-the universe is expanding, and the rate of expansion is accelerating-

-objects beyond some distance D are travelling faster than light and cannot be seen-

-D is decreasing, hence the universe is disappearing-

-the universe will disappear entirely in about 150 GY-

-life cannot exist forever in such a universe-

Note: Either Dr. Hau or Dr. Krauss would be an excellent speaker to invite to an OAPT conference.