

American Physical Society
HIGH SCHOOL PHYSICS TEACHERS' DAY

Monday, April 28, 2008, LIGO Science Education Center, Livingston, LA

AGENDA

- 8:30-9:00** **Breakfast** -- An opportunity to meet the American Physical Society (APS) Education & Outreach staff, LIGO SEC staff, and to make connections with other physics teachers in the area.
- 9:00-10:00** **"Einstein's Messengers"** -- Viewing a video about the LIGO Livingston gravitational wave observatory. Participants will have Q &A with a LIGO physicist.
- 10:00-10:15** **Break**
- 10:15-11:45** **Concurrent Hands-on Workshops**
- Electric Circuits**, *Larry Blanchard, AAPT Physics Teacher Resource Agent (PTRA)*
AAPT/PTRA introduction to CASTLE workshop is for teachers who want to engage students' interest through hands-on investigation, overcome misconceptions that inhibit learning and reasoning, and foster development of effective explanatory models. The CASTLE curriculum is free and provides a complete introductory module that can replace the sections on electricity in textbooks. It assumes no prior knowledge of electricity and is appropriate for all students of high school age—in standard, honors, and AP physics, as well as in physical science, electronics and technology education.
- Designing a Roller Coaster**, *Shelly Hynes, AAPT Physics Teacher Resource Agent (PTRA)*
During this AAPT/PTRA workshop, participants will investigate energy principles for a model roller coaster. By investigating the motion of the coaster with force meters and photogates, participants will determine the relationship between the potential energy change and speed.
- DC Motor**, *Ed Lee, APS*
Participants will disassemble a small dc motor, mount the rotor, power it with a battery and bulb in series, and make it spin by bringing up a magnet. The operation of this model motor produces many observations. Then, through further investigation, participants will explain these observations. Each participant will receive a motor and related materials.
- 11:45-12:45** **Lunch**

(over, please)

12:45–1:00 **Announcements**

1:00-2:30 **Activities** (in two consecutive 45 minute sessions--participants will be split into two groups, and after 45 minutes each group will switch to the other activity.)

Hands-on Exhibits— Participants will "mess around" with 40 professionally designed hands-on exhibits. A guide to the exhibits will be provided, along with suggestions for related small-scale classroom activities.

Tour of the LIGO Laboratory Control Room

When the last afternoon workshop activity is finished, please fill out the rest of the Evaluation Form and leave it on the registration desk, along with your plastic badgeholder.

***NOTE:** At 3:00 pm, the LA Section of the AAPT will meet in the LIGO auditorium for their annual business meeting. APS workshop attendees are encouraged to join LA AAPT and remain for this brief but important meeting that will kick off the rebirth of the LA section. Refreshments will be available at 2:45 for those attending the LA AAPT meeting.*