

AMERICAN ASSOCIATION
OF
PHYSICS TEACHERS

Spring 1996 Meeting
of the
Southern California Section

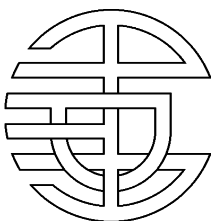
Saturday April 27, 1996
De Vry Institute of Technology
3880 Kilroy Airport Way, Long Beach

Local Host:
Iraj Borbor (909) 622-8866 x 205

Mary Mogge, Editor
So. Cal. Section AAPT
Physics Department
Cal Poly Pomona
Pomona, CA 91768

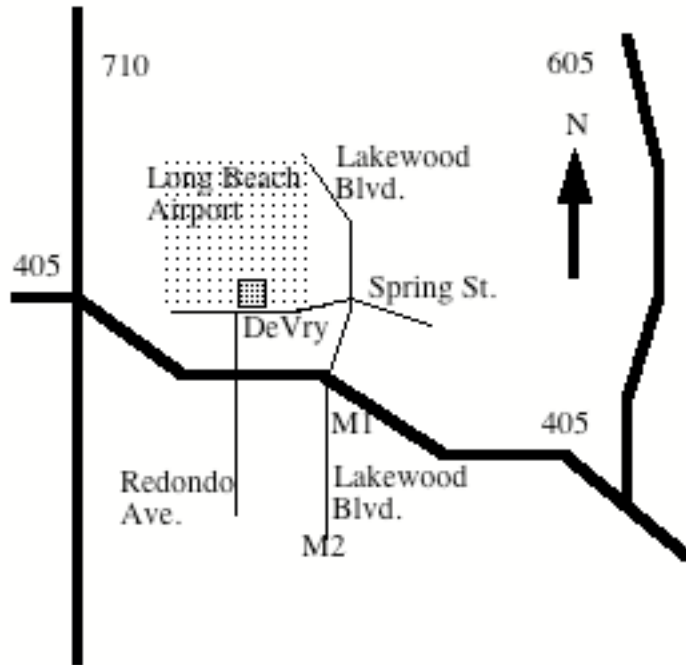
ADDRESSES CORRECTIONS REQUESTED

Nonprofit Organization
U. S. POSTAGE PAID
Cal Poly Pomona



Freeway and Area Maps

Freeway Map to De Vry Tech



Southern California Section AAPT Officers

President

John Mallinckrodt
Physics Department
Calif. State Poly. University
Pomona, CA 91768
(909) 869-4054
ajmallinckro@csupomona.edu

Editor

Mary Mogge
Physics Department
Cal. State Poly. University
Pomona, CA 91768
(909) 869-4023
memogge@csupomona.edu

Vice President

Fred Carrington
Grant High School
13000 Oxnard Street
Van Nuys, CA 91401
(818) 886-4654
FCarrington@aol.com

Test Administrator

Andy Halle
Physical Science Department
Rio Hondo College
3600 Workman Mill Road
Whittier, CA 90601
(310) 695-8363

Vice President, High Schools

Bill Layton
Pacific Palisades High School
15777 Bowdoin
Pacific Palisades, CA 90272
(310) 456-0573

Section Representative

Secretary

Robert Alt
Physics Department
Cal State Dominguez Hills
Carson, CA 90747
(310) 516-3404
ralt@dhvx20.csudh.edu

Immediate Past President

Willa Ramsay
Madison H S
4833 Doliva Dr.
San Diego, CA 92117
(619) 698-0489
drwilla@aol.com

Treasurer

Fernando J. Lopez-Lopez
Southwestern College
900 Otay Lakes Rd.
Chula Vista, CA 91910
(619) 421-6700 x5290

Things to do

Join the national AAPT!

Are you a member of the national AAPT? If not, you are missing out on a good thing! Members receive *Physics Today* monthly and the *AAPT Announcer* quarterly, plus *The Physics Teacher*, the *American Journal of Physics*, or both. There are special low membership rates for students. The editor has application forms or you can request one by sending a postcard to AAPT Membership Dept., One Physics Ellipse, College Park, MD 20740-3845.

Extra AJP's

ATTENTION present and future retirees and other interested parties: we need your donation of past issues of the American Journal of Physics to complete our collection at Southwest College. We have complete sets for 1950, 1952, and 1959 to present. We need all other volumes. Complete years would be desirable. You may bring them to the Spring Meeting, and give them to the Treasurer, or any of the Officers. Your donation will be much appreciated and acknowledged in writing if so desired. Thank you.

Fernando J. Lopez-Lopez, Treasurer

Extra textbooks?

Is your office bulging with books you don't want or need? Duplicate or older desk copies? Please bring unwanted books to the meeting, where they will be made available to high school teachers.

Pay your dues

The date on your mailing label indicates when your membership expires. Dues are \$10/year or \$25 for three years. Mail checks to Fernando Lopez-Lopez, Southwestern College—Department of Physics, 900 Otay Lakes Road, Chula Vista, CA 91910. Please include your name, address, city, state, school, home and/or office phone #, and status (faculty, staff, student, or other.) Thanks!

Attend the National AAPT Meeting

The 1996 Summer Meeting will be held at Univ. of Maryland, College Park – Aug. 5-10. See *The Announcer* for details.

Directions

From the San Diego Freeway (405), exit on Lakewood Blvd. North. Take Lakewood to Spring St. and turn left on Spring to Kilroy Airport Way. The second building on the left is DeVry, 3880 Kilroy Airport Way. Park in the DeVry parking lot. No stickers are required on Saturday.

Motels

Holiday Inn Long Beach Airport (M1 on map)
(310) 597-4401
2640 Lakewood Blvd., Long Beach 90815
DeVry has arranged a special group rate of \$55 per night. To obtain this rate mention "AAPT."

Super 8 Motel – Long Beach Traffic Circle (M2 on map)
(310) 597-7701
4201 E Pacific Coast Highway, Long Beach 90804
\$49-\$59

Lunch

DeVry Institute is treating all meeting attendees to lunch, but **we need to know** that you are really coming **by April 22 to reserve your food!** If you haven't already done so, please contact John Mallinckrodt by phone (909) 869-4054 or e-mail ajmallinckro@csupomona.edu. Thank you DeVry.

Meeting

modern technology will be presented in hopes of stimulating further discussion.

INVITED TALKS

“ASUSat1 – A Student Designed and Tested Satellite”

Dr. Helen Reed
Director, Aerospace Research Center
Arizona State University

ASUSat 1 is a 10-pound-class student designed, fabricated, tested, and tracked satellite, the first of its weight to be launched to perform meaningful science in space. The satellite will be placed in a sun-synchronous, polar orbit for low-cost Earth imagery and environmental studies, measurements of ballistic coefficient using GPS (global positioning system), experimental verification of composite material models, technology demonstration of inexpensive student designed boards and sensors, and provision of an audio transponder for amateur radio operators. This project was begun in October 1993 and is planned for launch by an Orbital Sciences Corporation (OSC) Pegasus XL rocket in March 1997. Over 150 students from high school through Ph.D. have comprised the Satellite team.

“Using Modern Technology to Open up The Process of Discovery”

Dr. Fred Shair
Manager of Educational Affairs, JPL

Advances in communications and computation have the potential of opening up a new era of collaboration between education and science. Although there is a great deal of hype concerning the use of modern technology in education, a few activities will be discussed that actually seem to be enhancing the learning experience for students and teachers. Following an overview of NASA/JPL activities, some controversial aspects of

Announcements

Election of officers

Nominations (self or otherwise) are solicited for candidates for all offices of the Southern California Section. Please notify Mary Mogge by phone (909) 869-4023 or e-mail memogge@csupomona.edu by April 19. An election will be held at the meeting.

California Student Awards Program

The date listed on the flyer announcing the California Student Awards program is incorrect. The Physics Bowl Exam is to be given on Wednesday, April 24, 1996. As specified in the Physics Bowl letter sent to all teachers, the answer sheets completed by the students are to be sent to: AAPT – PHYSICS BOWL, Physics Department, Cal Poly Pomona, 3801 W Temple Ave., Pomona, CA, 91768-4031.

The completed California Student Awards Program Student Application forms and the additional entry fee of \$2 per entrant should be sent to Andy Halle, California AAPT Test Administrator, c/o Physics Department, Cal Poly Pomona, 3801 W Temple Ave., Pomona, CA 91768-4031.

If you have any questions please contact Andy Halle by phone (310) 695-8363 or Mary Mogge by phone (909) 869-4023 or e-mail memogge@csupomona.edu

1997 Introductory Physics Exam

The Examination Editor of the AAPT is looking for volunteers to pretest the 1997 Introductory Physics Examination. It has both multiple choice and free

response questions and you may give all or part of it to your high school classes. Copies will be available at the meeting or contact Mary Mogge by phone (909) 869-4023 or e-mail memogge@csupomona.edu

Meeting Notes



Highlights

“SHOW AND TELL”

A constant attraction of our meetings is the “Show and Tell” session. There is still time to get a favorite demo together and share it with others at the meeting.

“WORKSHOPS”

Spaces are still available in the workshops (see next page for description). Call Fred Carrington (818) 886-4654 to sign up.

THANK YOU EXHIBITORS!

Many thanks to our exhibitors and door prize contributors including (as of press time) Addison Wesley (donating the Feynmann Lectures), Laserpoint (donating “Hewitt DrewIt”), PASCO (donating a fan cart), Texas Instruments, and Vernier Software (donating a gift certificate).

DOOR PRIZES!!

As always door prizes, see above, will be given away to those in attendance at a drawing to be held in the afternoon.

ORDER-OF-MAGNITUDE QUESTION

Suppose the polar ice caps and the oceans were put in an adiabatic container and allowed to come to thermal equilibrium. By how many Celsius degrees would the average temperature of the oceans be lowered in the process? The person whose estimate is the median of all entries received gets first pick of the prizes. The winner must be present at the awards

ceremony.

AMERICAN ASSOCIATION OF PHYSICS TEACHERS

Meeting of the Southern California Section—27 April 1996

De Vry Institute of Technology, 3880 Kilroy Airport Way, Long Beach—Host: Iraj Borbor

8:15 - 10:00 Registration, Exhibits, Coffee, and Donuts

8:30- 10:00 WORKSHOPS (Spaces are still available, call Fred Carrington (818) 886-4654 to register.)

“Using Computers/MBL in The Physics Lab”

Mike Schulkins, the Marlborough School

Participants will get hands-on experience with computer based lab equipment. Successful experiments and strategies will be presented.

“Optical Information Transfer”

A SCAMPI workshop presented by Dennis Whieldon, Corona High School

Optical fibers and magneto-optical disks are examples of current optical transfer and storage technology. This hands-on workshop will include demonstrations and activities related to information transport using light.

“Introduction to CBL”

Clarence Bakken, Gunn High School and Vernier

Participants will collect data and begin analysis.

Several hands-on applications will be demonstrated.

10:00 Welcome

John Mallinckrodt, Cal Poly Pomona

Iraj Borbor, De Vry Institute of Technology

10:15 “A Two Student Experiment for Measuring the Earth’s Radius”

Richard Kenealy, East LA College

10:25 “Now that I have a CBL and an Accelerometer, what do I do with it?”

Clarence Bakken, Gunn HS

10:50 “Calorimetry Problems, Going Through a Phase”

Roger Morehouse, Cal Poly Pomona

11:00 INVITED TALK

“Using Modern Technology to Open up The Process of Discovery”

Dr. Fred Shair, Manager of Educational Affairs, JPL

11:50 Assorted Pre-Lunch Announcements

12:00 Free Lunch - Thank you De Vry. You must make reservations by Monday, April 22. See notice on page 3.

1:15 “Show and Tell”

Greg Darakjian, David Skillman, and others

1:45 AAPT Southern California Business Meeting

2:00 INVITED TALK

“ASUSat1 – A Student Designed and Tested Satellite”

Dr. Helen Reed, Director, Aerospace Research Center, Arizona State University

2:50 “Physics and the Queen of the West”

John Mallinckrodt, Cal Poly Pomona

**3:00 Order of Magnitude Contest Winner and
Door Prizes**

3:15 Workshop

“Introduction to CBL”

Clarence Bakken, Gunn High School and Vernier
This session will cover further analysis of lab data and
modeling using the graphing functions.