

AMERICAN ASSOCIATION
OF
PHYSICS TEACHERS

Fall 1994 Meeting
of the
Southern California Section

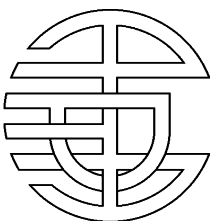
Friday October 28, 1994
Saturday October 29, 1994
University of California, Los Angeles

Local Host:
Art Huffman
(310) 825-3586

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

ADDRESS CORRECTION REQUESTED

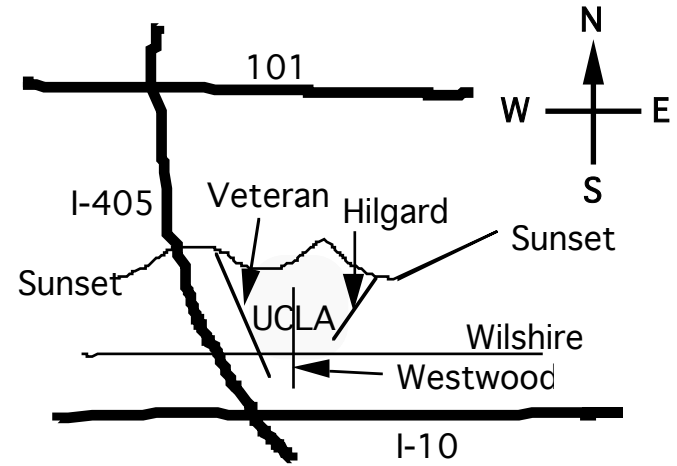
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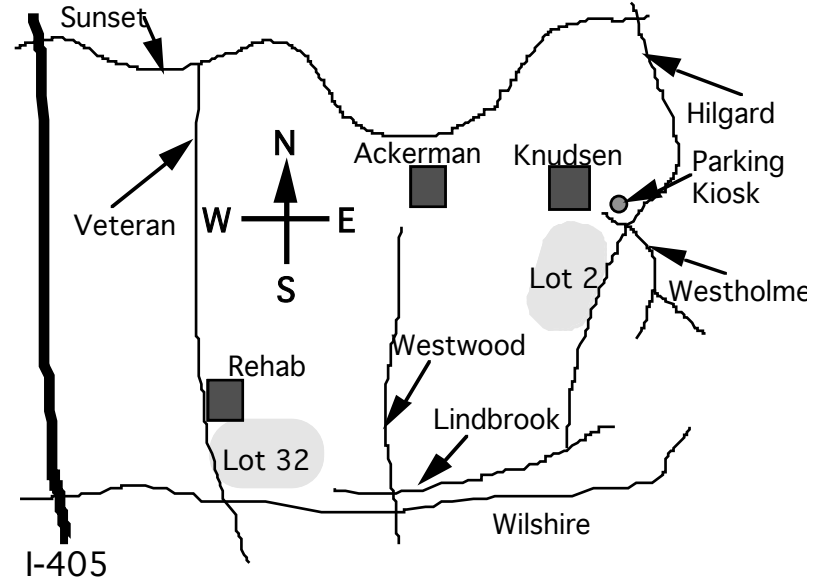


Freeway and Area Maps

Freeway Map to UCLA



Campus Map



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Meeting Notes



Directions

From the San Diego Freeway, I-405, exit east on Sunset. The road curves and goes over hills for about a mile before reaching the UCLA campus.

Friday night Plasma Lab Tour: Just before the campus begins, turn right (south) on Veteran Avenue (traffic light at the bottom of a hill). Park in lot 32. Tell the attendant you are “with AAPT”. Walk ~ 1 block north to the door of the rehab building at 1000 Veteran. Someone will be at the door to guide you.

Saturday Meeting: Continue east on Sunset, passing the entire UCLA campus on your right. Turn right (south) on Hilgard (traffic light at the top of a hill). Follow Hilgard a few blocks and turn right at Westholme (traffic light) entering the campus. The parking kiosk is immediately on the right. Tell the attendant you are attending the AAPT meeting. The physics building, Knudsen, is close to and visible from the parking structure, but you have to thread your way through construction. If necessary, ask for directions to the “inverted fountain” It’s at the SE corner of the building. The lecture hall, Knudsen 1220, is the middle hall on the south side of the building and can be entered from outside.

Motels

Clairemont 310-208-5957
1044 Tiverton Ave Single \$39.50 + tax
They have no parking, but you can find parking on the street at night or pay about \$5/day across the street. They are two blocks from the university, so you could do without a car.

Royal Palace Westwood(Ramada Limited) 310-208-6677
1052 Tiverton \$60 single includes parking
They are also just two blocks from the university.

Holiday Inn 310-476-6411
Sunset and I-405 \$74 single or double
They are about a mile from the University. If you reserve 10 or more rooms, you can get a group rate of about \$68. They also have a shuttle to UCLA and a UCLA representative who seems eager to please.

Meeting

INVITED TALKS

“Studying Plasma Processes That Occur in Space in A Laboratory”

Walter Gekelman

Physics Department, UCLA

The earth is surrounded by a highly ionized plasma. Most near earth plasma comes from the solar wind with ionization of the upper atmosphere a secondary cause. This plasma is host to a large variety of “storms”, electric and magnetic instabilities, causing the Aurora, disrupting earthly communications, and destroying satellites. A machine at UCLA has been built to model many of these processes in detail. We will discuss how the machine and the experiments were designed. Several experiments will be briefly presented. Finally we will discuss the critical role that students (both undergraduate and graduate) play in this experimental program, what students entering the program know, and what they have gained by the time they leave.

“Demo Show for Physics”

Art Huffman

Physics Department, UCLA

The show will consist of a potpourri of physics demos ranging from the showy to the instructive to the esoteric.

TOUR OF PLASMA PHYSICS LAB

Walter Gekelman

Physics Department, UCLA

FRIDAY EVENING: View a running plasma physics experiment. The plasma (which is visible) is 10 m long and 0.5

m in diameter. Diagnostics and high end computers are used for data acquisition and graphics.

High School Teachers

Opportunities for your physics students

INTERNATIONAL PHYSICS OLYMPIAD

High school physics students from the USA compete with students from other countries in the Physic Olympiad. The deadline for applying for the 1995 US Physics Team is **Friday, January 20, 1995**. The initial screening exam will be held shortly thereafter. After competing in a second exam, twenty students will attend a training camp in late May or early June. Five students will be selected from this group to compete in the international contest held July 5-12 in Australia.

LOCAL SCHOLARSHIP PROGRAM

The Southern California Section AAPT is again sponsoring a local scholarship program for high school students utilizing the Physics Bowl test. For more information contact Jim Outwater (see page 11 for address and phone number).

PHYSICS BOWL

The 1995 AAPT/Metrologic Physics Bowl Contest will be held **Thursday, April 27**. Entry forms must be received at the national office by **March 27, 1995**. Specialized math and science schools compete in a separate region. First and second year physics students compete in separate divisions, regardless of AP status. A school's score in a division is the sum of the four highest student scores. The 30 first place schools receive a laser donated by Metrologic. First and second-place teams receive T-shirts. All students and teachers who enter receive a certificate of participation. The contest exam consists of 40 multiple choice questions from all areas of physics. It is challenging, with an average score about 50%.

Ads for both these exams will appear in *The Physics Teacher* and *The Announcer* or write the AAPT, One Physics Ellipse, College Park, MD 20740-3845.

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. You can request an application form by sending a postcard to AAPT Membership Dept., One Physics Ellipse, College Park, MD 20740-3845.

Serve on a National AAPT Committee

Serve on the national AAPT committee on Physics in the High Schools, Physics in the Two-Year Colleges, Women in Physics, or Science Education for the Public. Positions are available on *all* AAPT committees. Contact John Mallinckrodt or Mary Mogge for a nominating petition.

Extra textbooks?

Is your office bulging with books you don't want or need? Duplicate or older desk copies? Are you a generous person who would like to share your excess reading material with others? Please bring unwanted books to the meeting, where they will be made available to high school teachers.

Pay your dues

Support the Southern California Section AAPT. 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 Spring Meeting

The 1995 Spring Meeting will be held April 29, 1995 at Ayala High School in Chino Hills. Local Host: Joe Miller (w) (909) 627-3584 x 2122.

Attend the National AAPT Meeting

The 1995 Winter Meeting will be held in Orlando, Florida Jan. 14-19. See *The Announcer* for details.

Highlights

“WORKSHOPS”

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

“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.

THANK YOU EXHIBITORS!

Many thanks to our exhibitors and door prize contributors including (as of press time) PASCO Scientific (donating physics equipment), LaserPoint (donating a copy of *Hewitt DrewIt*), Penn Co. (donating two books of physics demonstrations), Texas Instruments (donating a TI-85 graphing calculator), Wiley (donating the H&R CD ROM and books), International Thompson - Brooks/Cole (donating a book), and Educational Technology Systems.

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

How much would it be worth to eliminate traffic jams in southern California? Please express your answer in dollars/year. 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.

LUNCH

The “Cooperage” area of Ackerman Student Union is open Saturday and has an excellent salad bar, pizza, Mexican food, hamburgers, etc. Other cafeterias in the building are also open. Westwood, south of the campus, has eating places of all levels and prices.

AMERICAN ASSOCIATION OF PHYSICS TEACHERS

Meeting of the Southern California Section—28 & 29 October 1994

University of California, Los Angeles—Host: Art Huffman

Primary Meeting Place: Knudsen Hall

FRIDAY EVENING TOUR

Location: Rehab building (see page 3)

7:00 Refreshments

7:30 Tour of Plasma Physics Lab

Walter Gekelman, UCLA

SATURDAY

7:30 10:00 Registration, Exhibits, Coffee, and Donuts

8:00 - 9:50 WORKSHOPS (Spaces are still available, call Fred Carrington (818) 886-4654 to register.)

“The Physics of Global Warming” - Knudsen A 174

Ron Smith and Wayne VanGaasbeck (SCAMPI)

Participants will use a number of atmospheric models to calculate the equilibrium temperature of the earth.

“The Mac65 Computer Interface for Macintosh”

Kevin Mather (PASCO) - Knudsen 6-107

Will look at applications of the Mac65 for data collection and analysis. Examples range from the intro. lab to the more obscure and obtuse.

10:10 Welcome - Knudsen 1220B

Professor F. V. Coroniti, Chair

Department of Physics, UCLA

10:20 “Studying Plasma Processes that Occur in Space in a Laboratory”

Walter Gekelman, UCLA

11:20 “If it’s not DARK it doesn’t MATTER: Searching for MACHO’s in the Galactic Halo”

J.K. van der Veen, C.H. Stubbs, and P.M. Lubin, UC

Santa Barbara

11:35 “Show and Tell”

Greg Darakjian, Richard Kenealy, and others?

12:00 Lunch

SESSION PA1 - Knudsen 6-107

1:20 “Spreadsheet Physics”

Sergio Monteiro, Moorpark College

1:35 “Circuit Analysis with Pspice”

Sergio Monteiro, Moorpark College

1:50 “Science in Seattle”

Richard Kenealy, East Los Angeles College (retired)

2:05 “Image Processing in the Physics Classroom”

Kathy Crandall, La Canada High School

SESSION PA2 - Knudsen 1220B

1:20 “The Somnolent Scholar”

Walter Ogier, Pomona College (Emeritus)

1:35 “The Angle on Saxon: A Look at a New Approach to AP Physics”

John Ball, The Webb Schools

1:50 “Diffraction Gratings and Polarizing Films: What Do They Really Look Like?”

Konstantine Papadakis, South Pasadena High School

2:05 “Foster Teachers and the Kuiper Flying Observatory”

R. Coutts and A. Altshiller, Van Nuys High School

SESSION PB - Knudsen 1240B

2:40 “Modeling Instruction in Physics”

Larry Dukerich, Arizona State University

3:00 “Physics Demo Show”

Art Huffman, UCLA

4:00 Order of Magnitude Contest Winner and Door Prizes

4:15 Meeting Adjourns