

AMERICAN ASSOCIATION  
OF  
PHYSICS TEACHERS

Fall 1992 Meeting  
of the  
Southern California Section

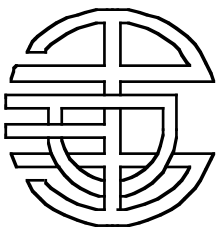
Saturday, 14 November 1992  
California State University, Northridge

Local Host:  
Giovan Natale  
(818) 885-2775

John Mallinckrodt, Editor  
So. Cal. Section AAAPT  
Physics Department  
Cal Poly Pomona  
Pomona, CA 91768

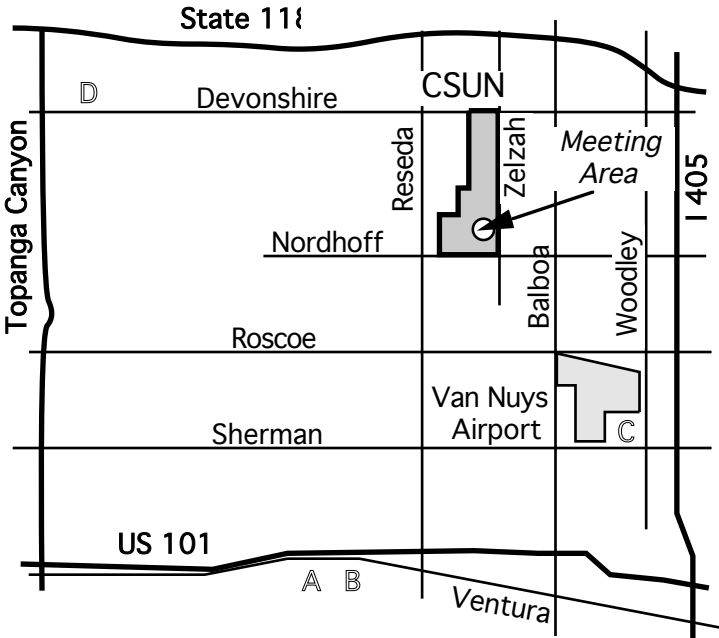
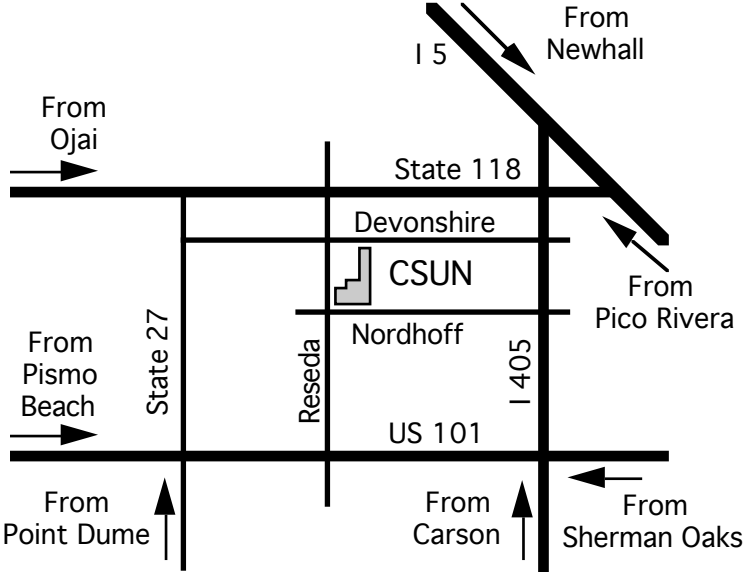
ADDRESS CORRECTION REQUESTED

PRESORTED  
FIRST CLASS  
Nonprofit Organization  
U. S. POSTAGE PAID  
Permit No. 1  
Pomona, California





# Freeway and Area Maps



## Southern California Section AAPT Officers

## Meeting Notes



### President

Harvey Leff  
Physics Department  
Calif. State Poly. University  
Pomona, CA 91768  
(714) 869-4013

### Historian & Test

**Administrator**  
Walter Ogier  
8555 San Gabriel Road  
Atascadero, CA 93442  
(805) 466-1328

### Vice President

Willa Ramsay  
Lincoln Preparatory H S  
150 So. 49th Street  
San Diego, CA 92113  
(619) 286-0489

### Section Representative

Lester Hirsch  
Physics Department  
California State University  
Los Angeles, CA 90032  
(310) 274-2795

### Vice President, High Schools

Fred Carrington  
Grant High School  
13000 Oxnard Street  
Van Nuys, CA 91401  
(818) 886-4654

### Immediate Past President

Roger Ludin  
Physics Department  
Calif. Poly. State University  
San Luis Obispo, CA 93407  
(805) 772-1723

### Secretary

Robert Alt  
Physics Department  
Cal State Dominguez Hills  
Carson, CA 90747  
(310) 516-3404

### Editor

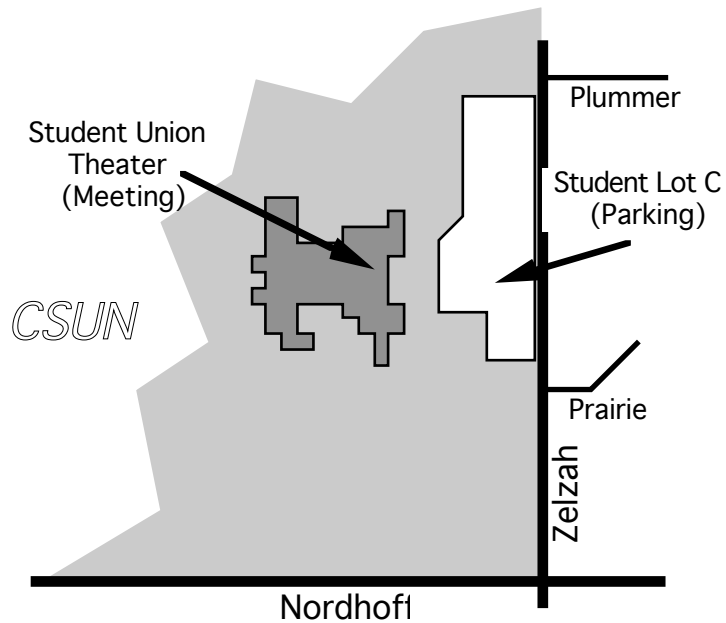
John Mallinckrodt  
Physics Department  
Calif. State Poly. University  
Pomona, CA 91768  
(714) 869-4054

### Treasurer

Fernando J. Lopez-Lopez  
Southwestern College  
900 Otay Lakes Rd.  
Chula Vista, CA 91910  
(619) 421-9791



## Campus Map



## Motels

- A. *St. George Motor Inn*, 19454 Ventura Blvd., Tarzana, 91356  
(818) 345-6911    \$40 single + tax (comp. cont. brk.)
- B. *Chalet Lodge*, 19170 Ventura Blvd., Tarzana, 91356  
(818) 345-9410    \$40 any room + tax (comp. cont. brk.)  
(Contact Sam)

## Hotels

- C. *Airtel Plaza*, 7277 Valjean Ave., Van Nuys, 91406  
(818) 997-7676    \$59 single + tax
- D. *7-Star Suites*, 21603 Devonshire St., Chatsworth, 91311  
(818) 998-8888    \$49 single + tax

## Error!Meeting

---

---

### INVITED TALKS

#### **“What Goes Down When the Sun is Up?: Solar Research at the San Fernando Observatory”**

Stephen Walton, CSUN

The San Fernando Observatory (SFO) is one of a handful of research observatories which is wholly controlled by a single university. The CSUN faculty who work at SFO have chosen to focus on understanding the Sun’s 11-year sunspot cycle with particular emphasis on the terrestrial effects of that cycle. We now know that the Sun’s energy output varies slightly with the sunspot cycle, and strongly suspect that changes in the sunspot cycle are sometimes reflected in the Earth’s climate. Dr. Walton will describe the current state of research on these topics and explain how the work at SFO fits into the larger problem.

#### **“Gaussian Optics of Gaussian Beams”**

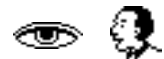
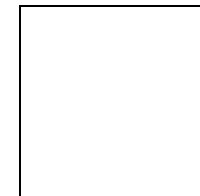
Fernando Lopez-Lopez, Southwestern College

Gaussian beams, encountered in both laser light and particle beams, behave differently from ordinary incoherent beams. The differences will be illustrated and ways of dealing with them will be explained.

---

---

### “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.

---

---

## PLANETARIUM TOUR

Those interested will have an opportunity to take a tour of the CSUN planetarium facility led by Adrian Herzog. The tour will take place directly after lunch.

---

### 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.

### You've got to pay your *dues* if you want to get the *news*.

Please take this opportunity to support the Southern California Section AAPT. (If you are a member of the National AAPT please remember that the So. Cal. Section gets exactly *zero* percent of your annual national dues!)

Dues are \$10/year. 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!

### Announcements?

If you have a *brief* announcement of interest to the physics teaching community in Southern California, call John Mallinckrodt, (714) 869-4054 for space in the program notes.

## 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 either *The Physics Teacher* or 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., 5112 Berwyn Road, College Park, MD 20740.

### **Give a talk!**

Our meetings are informal and offer excellent forums for sharing new ideas on teaching and learning. Get those creative juices flowing and tell us all what you've been up to!

### **Host a meeting!**

The executive board is always looking for people who would like to host a meeting. Having the meetings move to new locations gives members a chance to see different campuses. If you would like to showcase your campus, let someone on the executive board know.

### **Serve as an officer!**

We are always interested in knowing of people who would make good officers for our section. If you have a

desire to serve or know of someone who would do an excellent job, let us know.

# Highlights

in the event of an even number of entries the Editor's estimate will be withdrawn.)

---

---

**Error!**

---

---

## LUNCH

We will be going off campus for lunch. Our host will provide a list of local restaurants at the meeting.

---

---

## THANK YOU EXHIBITORS!

Many thanks to our exhibitors and/or door prize contributors including (as of press time) PASCO Scientific, Laserpoint, McGraw-Hill, Wiley & Sons, and Addison-Wesley. Exhibitors will display their wares in the Sepulveda Room of the Student Union.

---

---

## DOOR PRIZES!!

As always door prizes, generously donated by our exhibitors and other vendors, will be given away to those in attendance at a drawing to be held in the afternoon.

---

---

## ORDER-OF-MAGNITUDE QUESTION

Estimate the combined area of *all* the paper (in *all* forms) *ever* produced in the *history* of the human race (and *by* the human race!) (Hint: The answer is greater than  $1 \text{ m}^2$  and less than  $10^{50} \text{ m}^2$ .) Write your estimate on your meeting registration form; *please* use SI units! A prize goes to the person (attending the door prize ceremony) whose estimate is the median of all entries received. (In the event the would-be winner is not present, that person's estimate will be withdrawn;

# AMERICAN ASSOCIATION OF PHYSICS TEACHERS

Meeting of the Southern California Section—14 November 1992

California State University, Northridge—Host: Giovan Natale

Meeting Place: University Student Union Theater

## MORNING SESSION

**8:00 Registration, Exhibits, Coffee, and Doughnuts**

**9:00 Welcome**  
Paul Klinedinst, Acting Dean,  
School of Science and Math, CSUN

**9:10 “Gaussian Optics of Gaussian Beams”**  
Fernando-Lopez-Lopez, Southwestern College

**10:00 Coffee Break, Exhibits, Late Registration**

**10:30 “Dark Matter, the Pinch Effect, and Cosmology to Reinforce A. P. Physics Curricula”**  
Arthur Altshiller, Van Nuys High School

**10:45 “Undergraduate Physics Laboratory in China”**  
Harry Manos, Schurr High School

**11:00 “Technology and Alternative Assessment Techniques Applied to a Mechanics Lab”**  
Richard Bierregaard, Century High School

**11:15 “Show and Tell”**  
Greg Darakjian, Harry Manos, and others

**12:00 Lunch**  
On your own at a local gustatorium

## AFTERNOON SESSION

**1:15 Planetarium Tour**  
Adrian Herzog, CSUN

**2:00 “Is the Yellow Light Long Enough”**  
Robert Salow, Peter Siegel, and John Mallinckrodt, Cal Poly Pomona

**2:15 “What Goes Down When the Sun is Up?: Solar Research at the San Fernando Observatory”**  
Stephen Walton, CSUN

**3:05 “Computerized Behr Free-Fall Experiment Yields Drag Coefficient and  $g$ ”**  
Raymond Adams, CSU Fullerton

**3:20 “Polar Coordinates and the Coefficient of Friction”**  
Sergio Monteiro, Moorpark College



**3:35 Order of Magnitude Contest  
Winner and Drawing for Door  
Prizes**

**3:45 Meeting Adjourns**