

PHYSICS DEPARTMENT

NEWSLETTER 1984

THE COLLEGE OF WOOSTER



DEPARTMENT NEWS

The department has seen many changes since our last newsletter. The faculty has changed, we have added new courses, we have enhanced our laboratory offerings, and we have converted from the quarter to the semester system. We are also getting ready for a facelift as the long overdue renovation of Taylor becomes a distinct possibility.

Russell Kulas left our faculty two years ago to try the challenge industry has to offer. He provided research in biophysics coupled with a broad knowledge in physics and a rough and ready wit during three years of restructuring and renewal in the department. His contribution would be missed even more had we not been able to find such able replacements. Last year, Doug Todoroff (Ph. D. Kent State) contributed his experimental genius to several general physics labs as well as sharing his research in liquid crystals with us. This year we have a superb astrophysicist, Jerry LaSala, who describes himself later in this newsletter. It should also be noted that Don Jacobs was granted tenure and is now an Associate Professor.

We are in our fourth year of providing an intensive laboratory as the students' Junior Independent Study course. These labs integrate concepts from several courses taken the junior year and demonstrate the cohesiveness in physics research. At the end of the term, each student designs and performs a new experiment. The students thus become introduced to the type of Senior I.S. projects which they are expected to perform. Sr. I.S. is a two-term research project which the students take very seriously and perform admirably. One testament to this quality is the publications the students have had that resulted from their Sr. I.S. Other Sr. I.S. were of a publishable quality and have provided the students with a unique background as they continue their careers.

Another reason for the quality of our students' research is the equipment we have acquired for their use. We have obtained this equipment from many sources. We have received several research grants from Research Corporation, the Petroleum Research Fund and NSF. We also have a continuing grant from Shell Oil in recognition of our quality alumni. A most important source has been our alumni, for you have not only provided monetary gifts earmarked for physics, but also have arranged for your employers to donate equipment, money, and supplies. Your continued support is vital to our program. If you will send me a note as you earmark funds for physics in the development effort, I can let you know how we pool the money, what equipment is purchased and some of the labs using it.

We are utilizing microcomputers as data acquisition and analysis instruments in our general physics labs as well as our advanced labs. Budd Russell has developed some innovative demonstrations for the Apple. The College has a new computing system (a VAX 11/750) which is also being utilized in our courses.

We have been meeting with the architect designing the renovation of Taylor. He is doing a detailed set of plans which will be used for the bidding process. We will recover much of the underutilized space in the building and provide several new classrooms and labs. These will provide the versatility for our physics program for many years. Almost all the money has been gathered, but we are still \$400,000 short of the 2.4 million needed. If we can obtain the remainder by April, then we can begin renovation this summer. We are extremely grateful to our alumni for providing the gifts to make this renovation possible.

REDEYE

by GORDON BESS



CURRENT FACULTY

Donald T. Jacobs, Chair

I am continuing my research in binary fluid mixtures near their critical point. The juniors and seniors continue to be heavily involved in this research and we are pursuing three experimental techniques at Wooster: coexistence curves determining the relative solubility of the two components; heat capacity measurements to look for anomalous increases near the critical point that arise from the system becoming more ordered and hence a drop in entropy; and turbidity measurements to look at light scattering in the opalescent mixture near the critical temperature. (See the publication list for student publications and talks.)

I have just completed a Petroleum Research Fund grant and am beginning a Research Corporation grant allowing me to continue sponsoring students in the summer to work with me in my research. I have also obtained a NSF equipment grant to assist the heat capacity experiment and I have a couple of other grant proposals pending.

Students have worked with me the past four summers and I have also been blessed with a fine collection of Senior I. S. advisees who take on the demands of their research projects with a dedication and care that so characterizes Wooster. I am much indebted to them for their fine work over the years.

B. R. Russell

The various paradoxes of quantum mechanics continue to be a central interest in my studies. Recently I have concentrated mainly on the apparent violations of the uncertainty principle which are associated with measurements verifying conservation of momentum—the so-called Einstein-Podolsky-Rosen paradox. These puzzles are very intriguing. One hopes that a better understanding of quantum mechanics will emerge when they are resolved.

There are still many left-over questions in classical physics, too. A problem which I am currently studying is the magnetic field produced when a capacitor discharges internally due to the finite resistivity of the insulating medium. There is disagreement in the literature—some texts declare that there is no magnetic field whatever! So, I have been looking into alternate ways of interpreting Ampere's law to see if a clearer explanation can be found. Eventually it will be necessary to make some quantitative measurements to settle the question. One never gets very far from the laboratory!

Jerry LaSala

My family and I arrived in Wooster in August, having spent the last four years in Hanover, NH, where I received my Ph. D. in Physics from Dartmouth College in June. My previous degrees include an M. S. in Physics from Rutgers University and a B. A. in Physics and Astronomy from Yale. All these degrees involved study and research in astronomy as their primary emphasis.

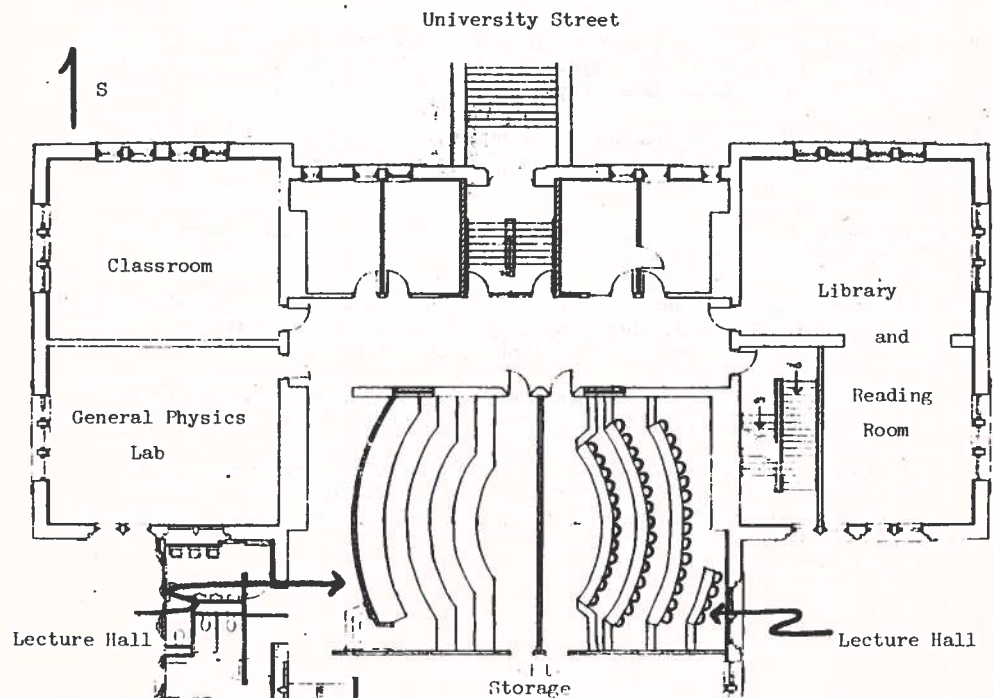
Before moving to New Hampshire, we lived in New Jersey, where I taught physics, astronomy, and chemistry in public high schools for seven years, and lectured at the Robert J. Novins Planetarium at Ocean County College. Since then I have taught both physics and astronomy at Dartmouth, at Lebanon (NH) College, and at the Phillips Exeter Academy Summer School, and have lectured on various astronomical topics to many museum and club groups.

My research has been primarily in the field of x-ray astronomy, the observation of stars which have collapsed to the point where they are capable

of producing large quantities of x-rays. Such stars are relatively rare, but they represent the final stages of a star's existence, so they are valuable in enhancing our understanding of stellar evolution. In addition, they provide "laboratories" for the study of extreme gravitational fields, high temperature plasmas, and other physical conditions not possible in earthly labs. I am now continuing this line of research, as well as beginning some studies into the structure of the Milky Way Galaxy and continuing some earlier work on computerized analysis of astronomical data.

In addition to my teaching, my wife, Sue, and I direct Douglass Hall. Sue is studying nursing at Kent State, and will add a B. S. N. to her B. A. in Art History! Our son, Cory, is two and a half and loves living in the dorm—it means he has over 100 big brothers and sisters!

In my spare time (?) I enjoy bicycling, skiing, woodworking, reading and music. (I play the guitar, mostly folk and country music, sing—mostly badly—and listen to 'most everything.')



Recent Publications and Talks By Faculty and Students

- 1) B. R. Russell (with D. Kaiser*), "Demonstration of the phase reversal effect in Fraunhofer diffraction patterns," American Journal of Physics, 48, 674 (1980).
- 2) D. T. Jacobs and S. C. Greer "Dielectric Constant Anomaly near the Critical Point in Polystyrene-Cyclohexane" Phys. Rev. A 24, 2075 (1981). (talk on preliminary work at the April 1980 APS meeting with the final results at the March 1981 ACS meeting).
- 3) S. E. Hoell*, D. T. Jacobs, and J. L. Tveekrem* "Radiation and Conduction Losses in a Vacuum" Ohio J. Sci. 81, 53 (1981). (talk)
- 4) J. L. Tveekrem*, D. T. Jacobs, and S. E. Hoell* "A Microcomputer based Data Acquisition and Control System" Ohio J. Sci. 81, 54 (1981). (talk)
- 5) D. T. Jacobs "Coexistence Curve of a Nonpolar Binary Fluid Mixture: Perfluoroheptane-Carbon Tetrachloride" J. Phys. Chem. 86, 1895 (1982); also presented talks at APS meeting (Bull. Amer. Phys. Soc. 24, 565 (1979) and OAS Meeting (Ohio J. Sci. 81, 53 (1981)).
- 6) A. C. Mowery* and D. T. Jacobs "Light Scattering in a Near-Critical Binary Fluid Mixture" Amer. J. Phys. 51, 542 (1983); talk presented at the Ohio Section of the APS in Athens, Ohio (October, 1981).
- 7) D. T. Jacobs "A Precise Real Time Clock" Digital Design 12(3), 28 (1982).
- 8) Jerry LaSala "What Makes the Sun Shine?" McDonald Observatory News, Vol. X No. 3, p. 3, March 1982.
- 9) J. L. Tveekrem* and D. T. Jacobs "Impurity Effects in a Near-Critical Binary Fluid Mixture" Phys. Rev. A 27, 2773 (1983); talk presented at APS meeting (Bull. Amer. Phys. Soc. 27, 516 (1982)).
- 10) Jerry LaSala "New Spectroscopy of Cygnus X-2 and Scorpius X-1" (with J. R. Thorstensen) (Abstract only), Bulletin of the American Astronomical Society, June, 1983.
- 11) B. R. Russell "Surface charges and leaky shields" American Journal of Physics, 51, 269 (1983).
- 12) R. H. Cohn* and D. T. Jacobs "Effect of Acetone Impurity on a Critical Consolute Point" J. Chem. Phys. 80, 856 (1984); talk presented at the Ohio Section of the APS in Columbus, Ohio (April, 1983).
- 13) B. R. Russell "Faster and smoother graphics on the Apple microcomputer" (with Neil Russell), to be published in BYTE (1984).
- 14) Jerry LaSala "Simultaneous Optical and Ultraviolet Spectroscopy of Scorpius X-1" (with D. Iams*, D. Mook, M. J. Kurtz, G. Pammerschlag-Hensberge, and E. P. J. van den Heuvel) (in preparation)

*Physics Major

Independent Study Projects

1981-82

- Arvind Ahuja "Thermal expansion of Bovine Femur as a Function of Temperature" Arvind is at the Medical College of Ohio.
- Steven Hoell "Photographic Studies of Vortex Dynamics in He II" Steven is a graduate student at the University of Arizona.
- Ann Mowery "Light Scattering in a Non-Critical Binary Fluid Mixture" Ann is a graduate student studying biomechanics at Purdue.
- Lori Pedersen "Heat Capacity of the Binary Fluid Mixture Nitroethane--3 Methylpentane Near its Critical Point" Lori is a graduate student in mathematics at Brown.
- June Tveekrem "Impurity Effects in a Near-Critical Binary Fluid Mixture" June is a graduate student in Chemical Physics at the University of Maryland.

1982-83

- Robert Cohn "Effects of Acetone Impurity in a Near-Critical Mixture of Methanol and Cyclohexane" Bob is a graduate student in Chemical Physics at the University of Maryland.
- Jeff Parker "The Design and Testing of an Apparatus for the Measurement of the Ultrasonic Properties of Liquids" Jeff is a graduate student in electrical engineering at Northwestern University.

1983-84

- Karen Anderson--Karen is in the 3-2 engineering program at Washington University at St. Louis.
- Polly Groth "Empirical Strain Modeling in California: Use of Very Long Baseline Interferometry"
- Douglas Iams "Determination of the Temperature of the Accretion Disk of Scorpius X-1"
- Polly Wardwell "Coexistence Curve of Methanol and Isooctane"

ALUMNI

Larry I. Amstutz
24 West Rosemont Avenue
Alexandria, VA 22301

I am still employed at the Belvoir Research and Development Center where I am chief of the Electric Machinery Branch. My work involves development of pulsed power sources for future directed energy weapons; signature suppressed 60Hz generator sets, electric drive (i.e. transmission) for vehicles, electro-magnetic pulse hardened generating and distribution equipment. My wife, Mardelle manages a nutrition education program for the University of Maryland Extension Service.

Class of '63

Bruce Bartlett
51941 Jenny Lane
Elkhart, Indiana 46514

This being the age of personal computers, it's natural for a physics major to use these new tools to explore physical phenomena. It's fun to write programs (using the equations we learned at Wooster) and actually watch several masses interact, or to plot functions.

I'm also a microphone development engineer (sound diffraction phenomena are very useful) and a technical writer writing a monthly article on recording techniques.

Class of '70

Ed Davila
2006 Forestdale Avenue
Cleveland, Ohio 44109

After a hectic 1982 in which I made a bid for the position of state representative of district 11, while concurrently teaching full time in the Cleveland Public School System, working 1/2 time in the Cleveland Prosecutor's Office, and finishing my final year of law school, I have settled into a more relaxed schedule this year.

In August of 1983 I received an appointment to the position of Assistant Attorney General of the state of Ohio and will be teaching part-time as a member of the adjunct faculty of Franklin University.

My New Year's resolution for 1984 is to merge my physics background and law background in one. My intention is to take the Patent Bar exam in the Spring of '84.

Class of '76

Edward C. and Betsy Douglas
13 Pleasant View Way
Flemington, N.J. 08822

The past few years have been very busy ones for the Douglas Family. After 10 years at RCA's Sarnoff Research Center as a member of the Technical Staff, Ed moved to RCA's Solid State Technology Center to become Manager of Advanced Integrated Circuit Development. The commute to the new center, a distance of 20 miles, finally got to be too much so during the past summer we moved to Flemington, N.J. where we now live on a hilltop with a beautiful view of a large chunk of northern New Jersey. Both David (age 7) and Andrew (age 5) are now in school, and the whole family is enjoying a new home and a new community.

Ed's work is still in the area of Solid State Electronics with an emphasis lately on developing fabrication methods for very large, very high speed integrated circuits. R & D management is proving to be a fascinating challenge, and presently Ed is working on the design of a new laboratory and ultra clean white room fabrication facility for developing MOS integrated circuits with geometries as small as 1/2 micron.

Class of '62

Martha Froelich England
1305 Cedar
Richland, WA 99352

No real "news" to report from this corner of the country. I am still teaching trigonometry/analytic geometry and first year geometry at a local high school. I do begin to feel a little too comfortable in my niche; perhaps it's time to request a change of assignment to physics teaching! Another thought which has occurred to me is to revamp the first year geometry course so that it incorporates the facts of geometry with rudimentary computer programming.

This is the second year I've taught part time; it gives me a little more time to practice cello and bagpipes and also rare moments to get back to other interests such as weaving and painting. I continue to play principal cello in the Mid Columbia Symphony as well as coach the youth symphony cello section. Richard and I both play in the local pipe band; he is the Pipe Sergeant and I am the "loyal opposition."

We try to do some travelling each year; hopefully we'll get back to Scotland for some highland games this August. We've been back to Ohio often to see family, but last summer was the first time we had been back to the Wooster campus. I am glad to hear that there are plans to renovate Taylor!

Class of '72



John (Jack) Fanselow
2460 Tanoble Drive
Altadena, CA 91001

Still at JPL as the manager of a research and development section of approximately 170 people. We're involved in:

- a) Geodetic measurements of relative positions on Earth's surface with accuracy of a few centimeters;
- b) Space craft tracking at 5 - 50 nanoradian accuracy;
- c) Measurement in angular momentum interchange between solid Earth, oceans, and atmosphere;
- d) 5 cm altimetry of ocean height relative to satellite orbit.
- e) Global synoptic wind velocity measurements at ocean surface from satellites;
- f) High rate (112 Mbs) cross correlators and high density (4x10¹² bits/reel) tape recording;
- g) Development of massively (1024 node) parallel computers. Should have computing power 50 - 100 Cray's;
- h) Microwave landing systems, calibration for the FAA at the 10 cm level;
- i) Phase stable ($\approx \frac{\Delta f}{f} 10^{-15}$) receivers and r.f. calibration equipment.

I am presently head of the L. A. area for the campaign for Wooster. I have two sons—one a Freshman at Wooster this year, and the other is a high school junior.

Class of '60

Donald J. Fluke
2703 Sevier Street
Durham, N.C. 27705

I have been at Duke of 26 years now, in the Zoology Department. I teach biophysical topics, mostly radiation-related. My current research is on induced repair of biological radiation damage, together with Ernest Pollard, who was my major professor for physics graduate work at Yale. Some years retired now from Penn State, Ernie is my research associate here where the climate is milder and we find a lot of interesting things to do.

For ten years or so I was chairman of Zoology here, until my colleagues came to their senses and found a more innately zoological type. I am filling in again for a while as Director of Undergraduate Studies (in Zoology) and do in fact spend a lot of time teaching and advising undergraduates at this stage of my life.

Class of '47

Clifford D. Hall
2944 Greenwood Acres Drive
DeKalb, Ill. 60115

Retirement Center living is not without its good points - no snow to shovel, no leaves to rake, and so on. Many activities available. I feel busy. And each day has its opportunity to help someone. My main volunteer work is in the 4000 volume library. Not many books on physics!

Class of '37

William A. Hatt
Box 81
Henniker, NH 03242

Am now the sole proprietor of Physics Department at New England College as result of retrenchment of my colleague. My current project is using a microprocessor to measure the R value (thermal resistivity) of experimental walls.

During summer '83 was assigned to our British campus in Arundel, Sussex. It's a campus with a lot of international students. It's the second time I have taught in England—am becoming quite an anglophile.

Have started doing some traffic reconstruction (accident) consulting for local lawyer. Yes, $\delta = v_0 t + 1/2 a t^2$ still does work!!!

Class of '63

Donald Hauelsen
Dept. of Physics & Engineering
Pacific Lutheran University
Tacoma, WA 98447

I continue as chair of the department here, but look forward to only a year or so yet of the position, to be followed by my first earned sabbatical. We have a department of seven with five physicists and two in engineering, but a growing engineering program. We are working very hard at expanding our 3-2 engineering and engineering physics to include a four-year electrical engineering program. We also will move into a new \$7.5 M facility along with the other natural sciences sometime next year. Teaching remains my preferred pursuit and most rewarding endeavor; I just don't seem to get much time for it anymore. Perhaps after my sabbatical...

Class of '67

John S. Hayward
6272 Boughton Hill Road
Victor, NY 14564

This year I completed 30 years with Eastman Kodak Company. The last 24 years have been spent in the Research Laboratories where I have been fortunate enough to work on many interesting programs involving research in liquid dye lasers, electronic imaging, and MOS technology. This year I was appointed head of the Photographic Imaging Laboratory. This assignment provides many new challenges, and of course we all appreciate recognition. However, I do miss being able to work in the lab myself. Experimental physics has always been exciting to me--sort of like a treasure hunt!

Class of '53

Steve Hoell
Department of Physics
University of Arizona
Tucson, Arizona 85721

I am currently in my second year of Graduate Studies at the University of Arizona. In addition to holding a T. A. at the University of Arizona, I taught a physics course at Pima Community College.

I am enjoying a brief flirtation with relativistic hydrodynamics; although I will resume my work in low-temperature physics soon.

My congratulations to the Wooster Critical Phenomena group on its recent publications. Hope you get a megabuck or two for new research facilities.

Class of '82

James C. Hough
25 Burnese Avenue
Mansfield, Ohio 44903

I retired from full-time duties as a minister in the United Methodist Church 5 1/2 years ago. I served 38 years, including 12 years as a missionary to Brazil, S.A.

My wife June and I have three children: 1) Mrs. Lawrence E. Jenks, missionary to Brazil, S.A. 2) Dr. Doreas M. Hough, medical doctor in North Carolina and 3) John W. Hough, sergeant in the U. S. Air Force.

We keep very busy in our "retirement" years, speaking on Brazil Mission work, Africa Mission work, as Chairperson of Missions Committee in our local church, pulpit supply pastor, visiting our extended family, painting and maintaining our home, and sundry other interesting activities.

I have fond memories of the Physics Department of The College of Wooster.

Class of '37

Klaus Kroner
P.O. Box 854
Leverett, MA 01054

Still teaching industrial engineering at University of Massachusetts/Amherst. Plan to attend 35th reunion at Wooster. I am married with two grown children.

In 1974 I founded a business, "Energy Alternatives," retailing windmills, wood stoves, solar systems, as well as educating the public about the logic of depending more on renewable resources. The business is now run by others.

Class of '49

Edward N. MacAllister
1706 S. Kirkwood
Houston, TX 77077

My current position is with Esso Eastern Inc., affiliate of Exxon Corporation, as Product Technical Advisor. Last summer I spent 42 days in Far East and Australia conducting training programs for Esso Eastern affiliates; visited asphalt customers in Indonesia, and reviewed affiliate Lubricants and Specialties sales activities. My wife, Ruth Ann Carson MacAllister, accompanied me on 30 days of the trip. I visited Japan, Hong Kong, Thailand, Singapore, Malaysia, Indonesia, Australia (Sidney & Melbourne).

Class of '49

Richard A. Morrison
Rt 2, Box 121
Talladega, AL 35160

Time passes: My oldest son studies violent storms in Oklahoma, my middle one designs microwave hardware for the Navy, and my youngest one is away at college. Here I am teaching physics, and staying up nights at home with a computer. When I have daylight time, I run in the country with my huskies. Did you know that a husky fresh from the kennel can't negotiate a barbed wire fence?

This has been a passage year for me. I realize that I love teaching more than I ever thought I would. Thanks for the newsletter effort.

Class of '62

William E. Mott
13200 Foxden Drive
Rockville, MD 20850

Having not been on the campus for many years, I just assumed that Taylor Hall had long ago been renovated. To all involved, I hope that the work once begun will proceed smoothly.

My training as a physicist (nuclear) has allowed me throughout my career to work in many diverse areas and on a broad range of problems and projects including heat sources for the Apollo astronauts to leave on the moon, and nuclear powered artificial hearts. For a number of years now, I have been associated with energy-related environmental control and safety issues in the Department of Energy. My current position is Director of DOE's Public Safety Division.

Class of '49

Craig L. Peebles
3194 Shady Avenue Ext.
Pittsburgh, PA 15217

I'm currently on the faculty at the University of Pittsburgh in the Department of Biological Sciences. This year I started my first grant from the National Institutes of Health, "Mechanisms of RNA Splicing." I have also been kept busy this year learning how to be a good "Daddy" to our little girl, Meredith Irene. Karen and I have learned a lot of applied physics in the form of repairing a neglected old house and installing new appliances. Most of all, I would appreciate anyone who could direct an outstanding person to be a graduate student in my research group. I would love to return the favor, of course.

Class of '72

Dave Perout
1388 Gordon Road
Lyndhurst, Ohio 44124

I'm still teaching at Riverside High School and have increased the Physics enrollment from a reluctant 20 (1 class) to a maximum of 60 (3 classes) in the past five years. Hope all is well in Woo!

Class of '78

John S. Redfield
3108 - D Lemon Street
Metairie, LA 70002

After completing my M.S. (physics) degree at Akron University at night, I changed my occupation from an Engineer at Firestone to a Geophysicist. I currently work for Shell Offshore Inc. and have been involved with acquisition, processing an interpretation since hiring on in March 1982. Shell has an excellent training program which has filled in the holes in my formal education. Carolyn, my wife of years, and I like living in New Orleans and don't miss the Northern Winters one bit.

After having left Firestone, patents were applied for naming myself as co-inventor. A paper was presented at an SAE (Automotive Engineers) Convention naming myself as a co-author. They honored me more after I left than when I was there, no need to give raises that way.

Class '77

Greg Seaman
40 Arthur Road
N. Branford, CT 06471

I have been a project manager at Canberra Industries for the past four years, dealing with the very large orders that occur on occasion. In the past two years two projects have been emergency planning systems at three major utilities at their nuclear plants. The system involves dual computers, read-in of meteorological data and radiation monitors, and dose projection calculations so that evacuations can be planned.

I do some systems design, some programming, and a lot of planning, scheduling and documenting. On occasion I do training.

I find the large variety of activities very interesting, and enjoy moving projects along to completion.

Class '59

Paul Stauffer
673 Bamboo Terrace
San Rafael, CA 94903

1983 has brought a lot of change for me. My wife, Debby, delivered our second child (Ryan 3, Alison 7 months). We are building a nice home on a hillside in San Rafael in Marin County.

I decided to take a new position, Assistant Adjunct Professor of Radiation Oncology and Neurosurgery departments. Although it is a research position, it is state supported for the foreseeable future. It's quite a challenge, but I have written and received first grant already. (University of California at San Francisco.) By summer my address will be 327 Ellen Drive, San Rafael, CA. 94903.

Class of '75

Tom Strickler
114 Van Winkle Grove
Berea, KY 40403

Still teaching at Berea College. We also are involved in raising money to renovate the Science Building. Hopefully, we will start this coming May. Parts of the old building date from the '20s and '30s and are in very bad shape.

Spent the 1981-82 year in the Philippines as a Fulbright Lecturer at de la Salle University in Manila. It was a great experience and I was able to get back to some of the old areas I traversed during the 2nd World War. I was occupied mostly with teaching and building electronic equipment and demonstration equipment for the physics department there.

We now have five grandchildren (belonging to three of our four children) and all are located in Tennessee - at Oak Ridge, and at Monteagle - so we can see all of them easily during one short trip. We do that quite often!

Have been spending the summers in the Washington, DC area working in various Navy Laboratories. The past two summers have been at the Naval Academy in Annapolis, where we have been doing neutron dosimetry work using the NE-213 neutron spectrometry systems.

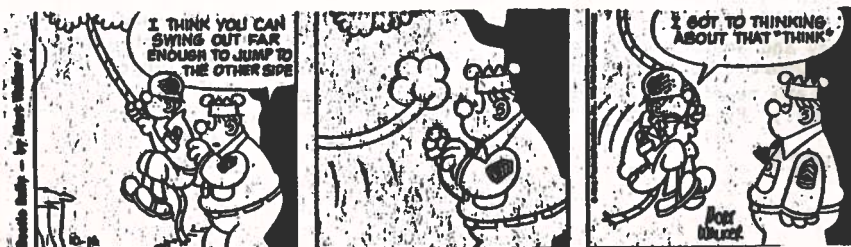
Its been a long time since I visited Wooster. Maybe at the 40th reunion in '87.

Class of '47

Brent Warner
Department of Physics
OSU 174 W. 18th Avenue
Columbus, Ohio 43210

I am continuing to study random metal-insulator composites. We are interested in finding the dependence of the conductivity on the percentage by volume of metal. We will be using pressure to tune the metal content of our samples. This is possible since the metals we use have different compressibilities than the insulators we mix them with. Preliminary data look promising. We hope to make rapid enough progress that I can finish the project (and with it my graduate studies here at OSU) this June.

Class of '75



Al Wasson
3713 Stoney Castle Street
Olney, MD 20832

This is my 10th year as a member of the Neutron Measurements and Research Group at the National Bureau of Standards near Washington D. C. Our group measures neutron standard reaction cross sections and develops new neutron detectors using the neutron sources at NBS (electron linac, positive ion Van de Graaff, and Nuclear Reactor). After Wooster I obtained a Ph. D. in nuclear physics from Yale University, spent 8 years doing experiments on the Reactor at Brookhaven National Laboratory, and enjoyed a 1-year tour at the Electron Linac at Oak Ridge National Laboratory.

Class of '57



"Wake up, Dr. Erskine—you're being transferred to low energy physics."



IT'S NOT WORTH WORRYING ABOUT. THERE'S NOTHING YOU CAN DO ABOUT IT. NO TWO QUARKS IN A SMALL REGION CAN OCCUPY THE SAME QUANTUM-MECHANICAL STATE.

PLACE

J. Harris