Once again greetings from the Department of Physics and Astronomy of the University of Nebraska, Lincoln. This nearly annual, it slips a little each year, edition of the newsletter features Astronomy, High Energy Physics, Track Physics and others. We continue to measure the success of this Newsletter by your responses. Last year's responses are included later and a postcard is included for you to share your news. As our list of names is now reasonably up to date, we are including it so that you can reminisce and perhaps help us with further updating as you locate incorrect addresses or information.

Professors C. Edward Jones and Donald Taylor were awarded the Teaching award bringing to nine the number of faculty in the department who have received this award.

Sartori Wins Election

Professor Leo Sartori recently was elected to the position of Chairman Elect of the American Physical Society's Forum on Physics and Society. He will become Chairman next year and is spending considerable time working on arms control matters in the Forum. Leo wrote an article entitled "Effects of Nuclear Weapons," published in Physics Today in March, 1983. Also he has been a major resource person for the state of Nebraska on the effects of nuclear war and arms control.

Major Gift for Laboratory Equipment

We are pleased to announce that Mr. and Mrs. James C. Coe of Phoenix, Arizona have arranged for this department to receive annually funds in the amount of about \$24,000. These funds result from the income on a large gift to the University which is invested for the benefit of several departments and colleges at UNL. The purpose of the funds for our department is to purchase major items of scientific equipment to be used in instruction and research by undergraduate and graduate students.

Mr. Coe received a B.S. degree from NU in 1923 and an S.M. degree from MIT in 1929. His career was devoted to work on communications and related matters for several agencies of the Department of Defense. His major aim in providing equipment funds is to upgrade the "hands-on" laboratory experiences of students in scientific and technical fields, so their education will not be overly restricted to theoretical discussions. This gift will certainly help to keep our teaching and research at the forefront by providing state-of-the-art equipment for the department.

The benefits from this gift will flow to physics and astronomy students for a very long time. We are most grateful to Mr. and Mrs. Coe for their thoughtfulness and concern for generations of students at Nebraska.

Dear Alumni and Friends:

As you know, the University and, in turn, our department must channel all the state funding we receive into providing instruction to our students and service to the community and state. There are many budgetary needs which each year go unmet because there simply are not enough resources. These needs often are related to bringing excellence to some aspect of our teaching and research programs, or to the quality of the environment in which we work.

One of our major needs is for a Departmental Conference Room. When there are visiting committees or outside groups of alumni or friends, we either have to meet in a classroom which is not conducive to informal discussions, or to meet in another department's conference room. We therefore would like to appeal to our Alumni for contributions which we will use to remodel a room in Brace Lab. An estimate for the project is about \$5,000 which will permit us to paint, lay a carpet, repair the ceiling, and buy some comfortable chairs and tables. This "Alumni Conference Room'" will enhance our surroundings and our interactions with visitors.

We hope that a number of you will be willing to contribute to this project, and will send your tax deductible contributions to me. Thanks, in advance, for your help.

David J. Sellmyer Professor & Chairman

Physics Alum Wins Buckley Award

We are happy to report that one of our B.S. graduates, Professor Alan Heeger of the University of California, Santa Barbara, recently won the prestigious 1983 Oliver E. Buckley Condensed Matter Physics Prize. The prize is awarded by the American Physical Society and endowed by Bell Laboratories. It was awarded at the March Meeting of the APS in Los Angeles. The citation reads, "For his studies of conducting polymers and organic solids, and in particular for his leadership in our understanding of the properties of quasi-one-dimensional conductors."

Professor Heeger received his B.S. degree in physics from NU in 1953 and his Ph.D. from California, Berkeley, in 1961. He was Professor of Physics and Director of the Laboratory for Research on the Structure of Matter at the University of Pennsylvania, before moving recently to Santa Barbara.

Our congratulations to Alan Heeger!

UNL Physicists Survey Physics

Two UNL physicists, Joseph Macek and David Sellmyer, have been named to groups which will make the first comprehensive survey of Physics in 11 years. Professor Macek was appointed to the Panel on Atomic and Molecular Physics and Optics and Professor Sellmyer to the Committee on Magnetism. The survey, chaired by William Brinkman of Bell Labs, will conduct a \$700,000 study for the National Academy of Science's Committee on Physical Sciences, Mathematics and Resources. Current plans call for a report to be ready by February 1984.

Commenting on the need for the survey, Brinkman said, "The physics climate has gone through enormous changes in the past ten years. The previous report was written when relevance was the biggest issue; this is no longer true." Brinkman said that while the survey will emphasize the question of where physics as a science is going, it will also consider such issues as the role of big science in national facilities, increasing competition with the European and Japanese scientific communities, changes in the subfields of physics and how future opportunities within them will be influenced by both funding and research trends.

In addition to examining each of the subfields of physics, the survey will address manpower and funding in physics research.

Scholarship Awards

This year we made the first award of the new Icarus Scholarship to Rebecca Rae Richards, a junior physics major. The donor, who is an alumnus who wishes to remain anonymous, has indicated his intention of continuing this yearly gift indefinitely.

The department now has a sizeable number of scholarships available and makes awards annually. Besides Miss Richards, the following people were awarded scholarships this year:

U.S. Harkson Foundation Scholarship

Thomas Hall Charles Judge Lance Purdy Otto Bruegman

John E. Almy Scholarship

Bruce Steele David Fox David Dunning Paul Orduna

Henry H. Marvin Memorial Scholarship

Robert Bass

Joel Stebbins Fund Award
Claudia Greene
Joseph Steele
Randall Schmidt

Walter W. Heinze Award

David James

Some of these scholarship funds represent substantial endowments, the interest from which is used for scholarships while others are yearly or one-time gifts. Awards to individual students range from \$300 to \$1200 and are applied toward their year's tuition.

Just in case any of you are interested in setting up a scholarship fund for our physics students, it would be most helpful if you would first contact either the physics department chairman (David Sellmyer) or the scholarships chairman (Eugene Rudd). We can advise you where the need is greatest. For example, right now most of our scholarships stipulate that the student be a junior or senior and this leaves us with very little chance to offer scholarship money to attract promising high school students. Also, it would be most helpful to us if the gift specified that the award is to be made by the Department of Physics and Astronomy. Otherwise the choice of awardee is taken out of our hands and made by the Office of Scholarships and Financial Aids, usually on the basis of grades on a computer printout without any personal knowledge of the student.

We want to take this opportunity to thank those of you alumni who are supporting our department in this way. To remain a strong and viable department we must have a continuous flow of bright, young students and one way to attract them is through scholarships.

ASTRONOMY

From Professor Kam-ching Leung

Kam-Ching Leung has been invited by the Chinese Academy of Sciences to carry out joint research in Astronomy for the past few years. The program is supported by National Science Foundation and the Academia Sinica. He was invited to deliver a review paper on Close Binary Systems at the International Astronomical Union Regional Meeting in Bandung, Indonesia, June, 1983. He was invited to deliver a colloquium at the University of Florida and Louisiana State University. Leung continues to serve on the proposal review panel for the International Ultraviolet Explorer, NASA, and as a chairman for the Binary Star subcommittee. He was elected a member of The Scientific Organizing Committee of Commission 42 (Close Binary Stars) of the International Astronomical Union.

From Professor Edward Schmidt

Schmidt has been working on a variety of research projects using the facilities of Behlen Observatory and the national observatories. He has finished the observations for a redetermination of the luminosity calibration of the Cepheid variable stars and is in the process of analyzing the data. This work is important because these stars are the basis for the distances of the galaxies in the Local Group and therefore form a basic part of the determination of the Hubble Constant and the age of the universe. He is also finishing work on the chromospheres of the Cepheids using data obtained with the International Ultraviolet Explorer, an orbiting observatory. The chromospheres are thin upper layers in the atmospheres of these stars. Because they are thin, they can only be studied in the ultraviolet where the surface of the star is faint. There is evidence in our data for shock waves in the chromospheres which provide good diagnostics for the mechanics of the variability of the star.

Schmidt and Taylor have begun a project to upgrade the equipment at Behlen Observatory. The first step will be to place the telescope under direct computer control and move the observer from the telescope room to a control room. This will allow much more efficient observing with the present computer controlled instrumentation. Additionally, it is the first step in a project aimed at obtaining solid state array detectors for the telescope.

From Professor Edward Schmidt (continued)

Schmidt and Simon have started a project to study the Cepheid variable stars in other galaxies. With new detectors it will be possible to obtain observations of high accuracy of these very faint stars. This will enable us to study the stellar contents of other galaxies and learn about the history of galaxies other than the Milky Way. The observations were started at Kitt Peak National Observatory in November 1982 and will be continued over the next three years.

From Professor Donald Taylor

Taylor has made scanner observations of Saturn when the ring of Saturn was edge-on to the earth in order to obtain albedos (reflectivity versus wavelength) for the planet without the error of an uncertain ring contribution. They are being compared to similar observations made in 1967 and to Jupiter's albedo. Preliminary results indicate Saturn's albedo to be essentially constant over the 15 year interval and remarkably similar to Jupiter's albedo except in the ultraviolet.

STRATEGIC STUDIES

From Professor Leo Sartori

Professor Sartori returned to UN-L in July 1981 following a three-year leave spent at the US Arms Control and Disarmament Agency in Washington and Geneva. During 1979 he served as a senior advisor to the US SALT delegation.

Since his return, Professor Sartori has devoted a major portion of his time to problems of defense policy and arms control. He has taught a course on "The Physics and Politics of Nuclear Weapons" and in Spring 1984 will teach a sequel entitled "Arms Racing and Arms Control." He has published several articles on weapons effects and strategic problems, and has made numerous public appearances. He has been granted a courtesy appointment as Professor of Political Science.

TRACK PHYSICS

From Professor Robert Katz

Over the past couple of years we have worked on a revised model of track formation in plastics, along with the parallel problem of the damage to photoresists from heavy ion irradiation. Both of these seem to yield to a track theory treatment.

For some years we have tried to persuade radiobiologists that our theory of cell survival after heavy ion irradiation should be the starting place for the design of their experiments. Now that theory is a computer utility at Berkeley, so that anyone wishing to use it in the design of his experiments with the heavy ion beams, there has ready access to the theory.

A decade ago we calculated the cross-sections for cellular inactivation from heavy ion beams and predicted that there would be a "thin-down" in cellular

From Professor Robert Katz (continued)

inactivation from heavy ions at low velocities, just as such a thin-down can be observed in particle tracks in emulsion. The idea met with resistance from radiobiologists and physicists alike, who preferred to believe that the "core" of a particle track, where most of the energy was deposited, was responsible for cell killing, rather than the delta-ray cloud. Recent experiments at Darmstadt in Germany confirm our earlier predictions.

With Werner Hofmann, Salzburg, and Zhang Chunxiang, Canton, we are studying the effects of radon and thoron decay products in the lung. Both have been interested in these problems in their home laboratories. When we take cell killing into account in an explanation of cancer induction at low doses it appears to us that the hazard from alpha particles in the lung has been overestimated substantially. It will make an interesting year to get this sorted out.

As usual we have a group of very capable undergraduates working on track physics. Much of the effort has been to get a minicomputer going so as to free ourselves from the university mainframe. We are trying to get a UNIX system working, under Dan Schlitt's invaluable leadership. So far we have learned that putting together a computing system with minimal expense consumes a great deal of time and can be very frustrating. But things are not all bad. Some calculations are being made, and we have a version of ASME, a word processor for physics originally designed by Dave Miller in operation. One of our undergraduate collaborators, Bruce Oberg, was an alternate on the university computing team last year, and is a team member this year.

Occasionally we hear from alums. Roseann is a group leader now, at IBM Burlington. Dave Miller is with Bell Labs. Mike Waligorski is still in Krakow, but gets around, most recently to a meeting in Ottawa. Subhash Sharma is an associate professor of radiological physics at Lexington, KY. Leif Larsson is a manager at Ceaverken, a photo film manufacturer in Sweden.

Things carry on, thanks to DOE, that has now funded these efforts for 18 years.

PARTICLES AND FIELD: THEORETICAL PHYSICS

From Professor Paul Finkler

Present research activity is concentrated mainly in the area of topological S-matrix theory. This approach, which is complementary to the more conventional field-theoretical methods, utilizes self consistency or bootstrap equations to predict the properties of elementary particles and their constituents.

From Professor Dan Schlitt

Computational aspects of physics have been the recent major focus of my efforts. Pursuit of some novel methods of interpreting the time dependent Schroedinger equation is the main portion of the work. There seem to be some possible connections to current theories at chaotic behavior in classical systems which provide some interesting sidelights.

From Professors Campbell, Jones, Joseph and Morgan:

The theoretical group specializing in elementary particles carries out research on problems at the frontier of modern physics, aimed at elucidating the basic physical laws that govern the forces acting between the most elementary constituents of nature. The group brings to bear an unusual breadth of overlapping research interests that cover nearly every major theoretical approach to the understanding of elementary particles and their interactions. These include gauge theories, classical Yang-Mills equations, bag models and topological S-matrix theory.

Recent results from work done in the group on classical Yang-Mills theories have indicated that bag-like solutions may be a common phenomenon in strong-coupling theories. Under current study are similar solutions occurring in Dirac theory in an attempt to establish the physical foundations for bag models in confining gauge theories.

Another line of research being carried on was also motivated by the study of classical Yang-Mills theories. These theories are similar to general relativity and have a rich and interesting structure. One striking result recently found is that a test charge at <u>rest</u> in a background Yang-Mills field radiates away energy. This unexpected phenomenon may moderate the divergences of the quantum theory.

Active research also is being pursued in the topological S-matrix theory approach to particle theory. This unconventional approach employs self-consistency or bootstrap equations to predict properties and parameters of the elementary particles and quarks. Among the results achieved by this study are a series of remarkably accurate mathematical relations among the masses of elementary particles. Under current study using this new approach is the problem of providing an explanation for the presence of the discrete symmetries of parity, time-reversal and charge conjugation invariance in elementary particle interactions, and reasons why the degree of symmetry is correlated with the strength of force.

RESEARCH AND DEVELOPMENT IN PHYSICS EDUCATION

From Professor Robert Fuller

Professor Robert G. Fuller served as a consultant on interactive video at The Open University in Great Britain during 1982-83. While he was there he served on the course team to develop and interactive videodisc lesson on engineering materials. His recent publications have been physics videodiscs, The Puzzle of The Tacoma Narrows Bridge Collapse, Studies in Motion, and Energy Transformations, co-authored with Professor Dean Zollman, Kansas State University.

Dr. Fuller and Dr. Clifford Bettis received both NSF and University of Nebraska Foundation funds to create the University of Nebraska Computer Learning Experiment project. They, with the help of an artist and student programmers, have been developing computer games for teaching physics using Terak 8510 graphics minicomputers. One of their games, The Benjamin Franklin Game of Electric Fields, won the grand prize in the first International Computer EdGame Challenge sponsored by the Verbatim Corporation. As a result the group received an IBM PC computer and \$500 worth of computer software.

WE HEARD FROM THESE ALUMNI:

- ABRAHAMSON, Dean, Hubert H. Humphrey Institute of Public Affairs, 909 Social Sciences Tower, 267 19th Avenue South, Minneapolis, MN 55455 Professor and Director, Master of Arts in Public Affairs (M.A.) Program. Donald P. Geesaman is also Professor at this Institute.
- ANANIA, Russell, POB 58551, Houston, TX 77258

 Is Senior Staff at Singer-Link. Analyze, propose and design simulators & systems related to aerospace applications; space shuttle, remote manipulator arm, high speed computational systems, digital & optical imaging systems, etc.
- BAIRD, Leemon, C., Allegheny General Hospital, Pittsburgh, PA 15212
 Associate Director Mideast Center for Radiological Physics.
 Wife: Jeanne (UN M.S. in math 1963) teaches at Robert Morris College
 Children: 4, ages 6 to 16. His work involves evaluating physics
 parameters of medical radiation as used through a 13 state region. He
 also does a little research on related topics, especially xray imaging.
- BARRETT, Wm. A., 1164 Hyde Ave., San Jose, CA 95129
 Is project leader at Hewlett-Packard. Is responsible for an advanced LSI design system, using Lidp and ideas borrowed from AI. Have good relationship with several professors at Cal Tech, Berkeley, MIT, Lehigh University. Must visit Brace Lab soon.
- BEDWELL, Thomas H., Northern Arizona University, Box 6010, Flagstaff, AZ 86011 Professor of Physics-Emeritus, retired. Working in the field of Atmospheric Geophysics mountain meteorology, setting up field laboratory at base of San Francisco peaks. This is in a cooperative program with USFS on USFS research land with two physical meteorologists studying mountain waves.
- BERBERET, John A., 8644 Reseca Ln, Springfield, VA 22152
 Is Scientific Advisor, U.S. Army. Serves in the Headquarters, Department of the Army in Washington, D.C. area.
- BRANDENBURG, John T., Port Arthur Research Labs, Texaco, Inc. Port Arthur, TX 77640

 Is Senior Project Chemist at Texaco, Inc.
- BROWN, Robert H., Yucaipa, CA 92399
 Is Senior Research Scientist at Geoscience Research Institute.
 Semiretired since 1980 after serving as Director of the Geoscience
 Research Institute, an affiliate of Andrews University (Berrien Springs,
 MI) and Loma Linda University (Loma Linda, CA). Current emphasis is
 radiometric dating, particularly modeling the Carbon-14 exchange system.
- CHAPMAN, Elvin B., 1105 Kramme Dr., Fort Dodge, Iowa 50501
 Retired from Head of Science Department, Iowa Central Community College,
 Fort Dodge, Iowa. Is glad to see the H. H. Marvin and John E. Almy
 Scholarship Awards. Had classes under both of these fine teachers and
 did his research under Professor Almy.

- CHASSON, Robert L., Dept. of Physics, University of Denver, Denver, CO 80208
 Is Professor at the University of Denver. Says it is flattering to be thought of as an alum of the UN Dept. (Says he certainly learned a lot in his eleven years here!), and is very proud to have had a part in the development of a fine dept. Gene Merzbacher, Bob Coleman, and Frank Yang know a good thing when they see it. Brace Lab lives on, too!
- COPENHAVER, Thomas W., 219 Devon Blvd., Devon, PA 19333

 Is Manager, Preclinical Statistics at Wyeth Laboratories. Received M.S.,
 Computer Science, U. of Arkansas, 1970; Ph.D., Statistics, Colorado State
 University, 1976.
- COZAD, David E., 4104 Coronet Ln, Arlington, TX 76017
 Project Manager, Software Engineer at Tandy Electronics
- DARLAND, Jeff, 3446 Shenandoah, Dallas, TX 75205

 Is Systems Analyst at Texas Instruments. Has recently been researching Surface Acoustic Wave devices used to do signal processing at high frequencies. He attended a lecture by Brian Josephson on a synthesis between science and religion which has strengthened his long standing interest in General Systems theory.
- DAVIS, Robert H. Davis, Physics Dept., Florida State University, Tallahassee, FL 32306

 Is a Professor at Florida State University, serving a second term as Department Chairman.
- DUMKE, Warren, L., Rt. 1. Box 125, Chesapeake, Ohio 45619
 Is Associate Professor of Physics at Marshall University. His wife says we just have done a conversion job on Warren as he switched from chemistry to physics 3 years after leaving Nebraska. She thinks it was a good move.
- FORESTER, Donald W., 6105 Harmon Pl., Springfield, VA 22152

 Is Research Physicist at Naval Research Lab. Since leaving Univ. of Nebraska: Ast. Prof. of Physics Georgia Institute of Technology 1966-1969. Naval Research Laboratory 1969 present. Has served as Supervi-Supervisory Research Physicist, Section Head, Acting Assoc.Superintendent Elec. Technology Div., Consultant on millimeter wave physics. Current research: mm-wave properties of Ferroelectrics, radar absorbing materials, magnetic and amorphous films, magnetic optical fiber sensors. Presently doing some collaborative work with present and former University of Nebraska people Dr. John Hardy (NE) and Dr. Larry Boyer (NRL).
- GASS, Clinton B., Greencastle, IN 46135

 Is Professor and Chairman of Mathematics & Computer Science Department at De Pauw University. He was pleased to read about Charlie Ackerman, a student of his at Nebraska Wesleyan many years ago. Will be watching for news of Bruce Anspaugh and Chet Sautter, both NWU students of his who went to the U of N about the time he left Wesleyan to come to De Pauw University (1954). What happened to Paul Roesch?
- GINGLES, William G., 10314 Bilston Court, Apt. 4, St. Louis, MO 63141

 Is Engineering Specialist at Emerson Electric. Says it is good to hear from the department.

- GROSS, Everett W., Crete, NE 68333

 Is a piano technician has his own business servicing pianos repair, rebuilding, tuning.
- GRUZALSKI, Greg R., 118 Monticello Rd., Oak Ridge, TN 37830

 Is looking forward to receiving the list of addresses of the Department's alumni. Would find it both useful and interesting if the list would include other information as well, e.g., home and work phone numbers and addresses, description of current position, when and what degree was obtained from U. of NE, family information and so on. Suggests a questionnaire for compiling such a list.
- HAGRMAN, Don, Idaho Falls, Idaho 83402
 Is Supervisor at EG&G Idaho. Enjoyed the newsletter. Happy to see E.P. has succeeded with the helium recovery system. Had a similar system at the Univ. of Utah when he was there.
- HAIN, Don, Seward, NE 68434
 D.P. Manager at Jones National Bank. Wife's name is Brenda. Has one son, Seth, and another child on the way.
- HANSON, Roger, Dept. of Physics, Univ. of Northern Iowa, Cedar Falls, Iowa 50614 Is Professor of Physics at University of Northern Iowa. Appreciated the Newsletter and is passing it on to colleagues interested in phase transitions, low temp. etc. After many years of nuclear physics work he has turned to musical acoustics, studying changes in time of frequency spectrum of plucked strings. Was Dept. Head there for 11 years. Is now enjoying full time teaching and research.
- HARMS, Lawrence L., MD, Hershey Med Center, Hershey, PA 17033 Is Medical Intern at Hershey Med Center. How did you find me here?
- HARTT, Kenneth L., P. O. Box 73, Kingston, RI 02881
 Is Professor of Physics at University of Rhode Island. His main research effort is in the few-nucleon problem. Professors Fuller and Thornton have stimulated some teaching innovations along Piagetian lines. He gave invited lectures in August in Pakistan on "Nonlinear Waves and Solitons."
- HEEGER, Alan J., Santa Barbara, CA 19106
 Is Professor of Physics and Director of the Institute for Polymers and Organic Solids at the Dept. of Physics at the University of California at Santa Barbara (USCB). Was informed of the award of the Oliver E. Buckley Prize for Condensed Matter Physics for 1983. The citation: "For his studies of conducting polymers and organic solids, and in particular for his leadership in our understanding of the properties of quasi-one-dimensional conductors."
- HENDERSON, Gerald J., 2716 Chamberlain, Plano, TX 75075
 Is Province Exploration Mgr. at ARCO Exploration Co. Enjoyed receiving the Newsletter. Since leaving U. of N. in '67 he obtained a Ph.D. in geophysics from Indiana University in 1973 and has been employed by ARCO since that date, first in the application of computer technology to oil and gas exploration and now as an exploration manager.
- HIETBRINK, Ervin H. Homat West #440, 15-11 Roppongi S'Chome, Minato-Ku, Tokyo 106 Japan. Is Director of Commercial Analysis with IBM Corporation.

- HINTON, Barry B., 6013 Piping Rock Rd., Madison, WI 53711

 Is Assistant Scientist at University of Wisconsin Space Science & Engineering Center. Ph.D. University of Michigan 1975 in Atmospheric Science (Aeronomy). Now working in remote sensing, especially satellite meteorology, microwave radiometric measurement of rain. Surface wind by microwave scatterometry, air-sea interaction studies using in situ data and observing low level cloud motions.
- HOLCOMB, David J., 12600 Morrow, NE., Albuquerque, NM 87112

 Is MTS at Sandia National Labs. After completing a Masters in physics and math at Univ. of Neb., went to Univ. of Colorado, Boulder and completed Ph.D. in Physics. Specialty is geophysics. Spent 1 ¹/₂ years at Lamont-Doherty Geological Observatory (Columbia Univ., NY). Currently at Sandia Labs doing rock mechanics with applications to nuclear waste disposal.
- HUANG, Keh-Ning, 8S.086 Hudson St., Westmont, IL 60559

 Is Physicist at Argonne National Lab. Enjoyed reading news from old friends and glad that the department is active and doing extremely well.
- JACOBS, Loyd D., 2004 128th Ave. SE, Bellevue, WA 98005
 Is Principal Engineer with The Boeing Company. Works in Noise Technology
 Staff as head Engineer. Work involves control of commercial airplane
 cabin noise.
- JAFAREY, S., 5015 Forth Bridge Dr., Houston, TX 77084

 Is Exploration Geophysicist with Shell Oil Co. Visited Prudhoe Bay in Alaska last year. It was an interesting experience.
- KEEDY, M. L. (Mike), Box 2416, W. Lafayette, IN 47906

 Is Professor of Math at Purdue University. Has been there since 1961.

 Is active writing textbooks. Currently writing on a Calculus text.
- KRUHMIN, Larry A., 10677 Caminito Derecho, San Diego, CA 92126

 Is Senior Guidance Analysis Engineer at General Dynamics, Convair
 Division
- LEE, Millard A., Dickinson, ND 58601

 Is Chairman of Division of Natural Sciences and Mathematics at Dickinson State College.
- MAURER, Christopher, 4117-251 SW 20th, Gainesville, FL 32607
 Is Postdoctoral Associate at Department of Anthropology at University of Florida. Will be working on dating pottery and arrowheads using thermoluminescence.
- NELSON, Stuart O., 270 Idylwood Drive, Athens, GA 30605
 Is Research Agricultural Engineer with the U.S. Dept. of Agriculture,
 Agricultural Research Service. Is Senior Scientist at the USDA Russell
 Research Center, Athens, GA and Adjunct Professor, University of Georgia.
 Conducting research on the dielectric properties of materials and methods
 of measurement. Recipient of the Decade Award for Scientific
 Contributions to The Journal of Microwave Power from the International
 Microwave Power Institute.

- NUTTER, Gene D., 6117 Old Middleton Road, Madison, Wisconsin 53705
 Is Assistant Director of Instrumentation Systems Center at University of
 Wisconsin-Madison. They provide all aspects of instrumentation engineering and related services to Graduate School programs at U.W.-Madison,
 and have been active in training and technology transfer programs in
 developing nations (mostly Egypt and Singapore) over the past ten years.
 He has also specialized in precision radiometry, radiation thermometry
 and meteorology. Wants to know the whereabouts of Fred Phelps.
- OTNES, Robert K., 2160 Middlefield Rd., Palo Alto, CA 94301
 Is a partner in Time Series Assoc. He and his partner, Loren Enochson, have written a book, Applied Time Series Analysis, Vol. I, Wiley Interscience, 1978, which is being translated into Russian. An earlier book was translated into Polish. They are doing consulting and short courses in the areas of digital signal processing, modal analysis, etc. He is also doing some work in the EW area.
- PANKONIN, Vernon L., 7155 Game Lord Drive, Springfield, Virginia 22153

 Is Electromagnetic Spectrum Manager at the National Science Foundation.
 1968-73 Graduate Student, Cornell University. 1973 Ph.D. (Radio Astronomy) Cornell. 1973-79 Staff Scientist, Max Planck Institute for Radio Astronomy, Bonn, Germany. 1974 present Electromagnetic Spectrum Manager, Division of Astronomical Sciences, National Science Foundation, Responsible for maintaining quiet electromagnetic environment at observatory sites.
- SAZAMA, Franklin J., 9020 Bronson Drive, Potomac, MD 20854
 Is Principal Scientist, Nuclear Weapons Effects Division, at the Naval Surface Weapons Center. Enjoys Newsletter.
- SRAMEK, Stanley J., 5711 Westward, Apt. 181, Houston, TX 77081
 Is Geophysicist at Texaco, Inc. Enjoys working for Texaco. Although he did not remain in his graduate and post-doctoral research field, the experience gained at UNL has been very useful. After all, number crunching is number crunching, regardless of its field of application. Good luck to all of you!
- STARKEY, Major Gary L., 241 Willow St., Pacific Grove, CA 93950

 Is Technical Advisor, The High Technology Test Bed of the U.S. Army.

 Newsletter: Great!
- SULLIVAN, George A., 4204 Kota Avenue, Harrisburg, PA 17110

 Is Statistical Analyst III, for PA Board of Probation and Parole. Wife, Virginia, Capitol Police Corporal for State of PA. Son, Timothy (19 yrs), sophomore Cadet at USMA (West Point), Dean's list. Daughter, Bonnie, (nearly 21), Junior at Penn State U., majoring in psychology. Remember Norman Freed, one of Dr. Goldhammer's Research Associates in Nuclear Structure around 1962 or 1963? He is currently Asst. Dean of College of Sciences at Penn State. He visited with him, his wife and son in Nov. of 1982 for several hours.
- SUMMERS, Donald L., Albuquerque, New Mexico 87111

 Is Senior Research Mathematician
- VENHUIZEN, J. R., 1011 Woodruff, Idaho Falls, ID 83401 Is Supervisor, Simulation Lab, EG&G Idaho.

- WALIGORSKI, Mike P. R., Institute of Nuclear Physics (INP), Radzikowskiego 152, 31-342 Krakow, Poland
 Is now in the Radiation Protection Group at INP Krakow working with Dr. Niewiadomski. Is applying the Katz track structure theory to sort out mechanisms in TLO's, and other solid-state dosimeters, such as alanine. Also works in nuclear cardiology with a medical team in Zabrze, Silesia, and in environmental radiation protection. Is also trying to find IAEA (Vienna) support for returning to Dr. Katz, maybe for another year, maybe 1984? Hopes it works out! Best Wishes of 1983.
- WIRSIG, Jean C. (Davis), 523 Birchcrest, River Falls, WI 54022
 Is Assistant Professor at University of Wisconsin-River Falls.
 Milestones: 1972 Master's Degree in Math Ed; Dec. 1977 marriage of daughter; Feb. 1978 death of husband, John G. Wirig, Jr.; May 1979 marriage of son; 81-82 post-grad studies in Management Information Systems at U. of Minn.; Sept. 81 Birth of grand-daughter; Sept. 82 First contract as Asst. Prof. Math & Computer Systems
- WRIGHT, J. Howard, 9759 Good Luck Rd. #12, Seabrook, MD 20706
 Retired from NASA Goddard Space Flight Center in 1976. Involved in drama (acting, directing) musical performing, and reading for the blind.
- ZEIDLER, James R., 11829 La Colina Rd., San Diego, CA 92131

 At Naval Ocean Systems Center Head, Analysis Branch, Code 6322. Head of a group of physicists, mathematicians, electrical engineers and computer scientists working on digital signal processing, detection, localization and information processing and display techniques. Began a one year assignment on the technical staff of the Assistant Secretary of the Navy for Research, Engineering and Systems in July, 1983.

IN MEMORIAM

Dr. Emerson Jones died December 3, 1980.

Dr. Roy C. Spencer, a professor here from 1927 to 1941 died at the age of 80 on December 28, 1982.

NAMES AND ADDRESSES:

Here are the names and addresses of former students, faculty and research associates known to us. If you spot any corrections, or if you have any additions, please let us know on the attached postcard.

ABRAHAMSON, Dr. Dean, Hubert H. Humphrey Institute of Public Affairs, 909 Social Sciences Tower, 267 19th Avenue South, Minneapolis, MN 55455

ACKERMAN, Dr. Charles B., 6720 Bluebird Lane, Paradise Valley, AZ 85253

ACKERSON, Dr. Bruce J., Assistant Professor, Department of Physics, Oklahoma State University, Stillwater, OK 74078

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