

E.A. Knapp Succeeds H.G. Stever in U.R.A. Presidency

Harry Woolf, Chairman of the Board of Trustees of the Universities Research Association, announced on August 1, 1985, that Dr. Edward A. Knapp had been elected President of the Association, to succeed Dr. H. Guyford Stever. Universities Research Association is the consortium of 56 universities which operates Fermilab for the U.S. Department of Energy, and assists the Department in the management of the national effort during the R&D and con-

ceptual design phase of the Superconducting Super Collider accelerator project.

Dr. Stever became the fifth president of URA in March of 1982. He had previously had an outstanding career as University President, Director of the National Science Foundation, and advisor to Presidents Nixon and Ford. As President of URA, his major task had to do with masterminding the complex issue of management of SSC R&D.

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Helen Edwards Receives 1985 Physics Award

Helen Edwards, Deputy Head of the Accelerator Division, has been awarded one of two Achievements in Accelerator Physics and Technology awards for 1985, the first year the award is being given. Edwards was cited for her "essential contributions in making the world's first superconducting synchrotron a reality." The award was presented on the evening of July 25, 1985 at SLAC during the Summer Accelerator School. Helen's co-recipient was John M.J. Madey of Stanford University, cited "for the invention and demonstration of the free-electron laser."

When contacted for her reaction to the award, Helen responded with the following statement to her colleagues:

"I can only accept the award in the spirit of it really belonging to the many people of Fermilab who worked to make the Energy Doubler a reality. If there is anything I feel I can take personal credit for it is for helping the various teams define their jobs and get them done, and to coordinate between these teams.

"A project such as the Energy Doubler goes through many phases, starting with the initial vision of a superconducting accelerator, through the painful research phase, the manufacturing phase, to final installation and commissioning. Leadership by necessity has come from a number of individuals, not the least of whom has been



Helen Edwards

Leon Lederman without whose determination the Tevatron, as both a fixed-target and colliding accelerator, would not have taken place so as to give us the best high-energy physics tool of the decade."

1985 marks the fifth consecutive year of operation of the U.S. Summer School on Particle Accelerators, but the first year for the Achievement in Accelerator Physics and Technology award. The cash awards are made possible by donations from the Universities Research Association, Inc.; Varian Associates; the Houston Area Research Council; and Westinghouse Electric Company. The selection committee for the 1985 awards consisted of Burton Richter (Director of SLAC), Andrew Sessler (former Director of LBL), and Maury Tigner (Cornell University/Central Design Group, SSC).



Users Executive Committee Elects Officers, New Members



The members of the Users Executive Committee are (left to right) D. Buchholz, D. Green, J. Wiss, N. W. Reay, M. Shapiro, T. Burnett, C. Brown, R. McCarthy, K. Heller, D. Levinthal, P. Hale (Users Administrator), and F. Merritt. Not pictured are P. Grannis and A. Scribano.

by Phyllis Hale

The Users Executive Committee (UEC) performed its annual rite of summer on July 17 and elected a new chairman in the person of Neville W. Reay (Ohio State University), succeeding Robert McCarthy (SUNY/Stonybrook). Daniel Green (Fermilab), in addition to beginning his first year on the UEC, was elected to the post of Secretary, replacing Charles N. Brown (Fermilab).

Other newly-elected members of the UEC as of June of this year are David Buchholz (Northwestern University), Thompson Burnett (University of Washington), Angelo Scribano (INFN/Pisa), Marjorie Shapiro (Harvard University), and James Wiss (University of Illinois). These new members join continuing members Paul Grannis (SUNY/Stonybrook), Kenneth Heller (University of Minnesota), David Levinthal (Florida State University), Frank Merritt (University of Chicago) and Neville W. Reay. Both Robert McCarthy and Charles Brown will also continue as members of the UEC.

The 13 members of the UEC meet bi-monthly to consider matters of import to Fermilab's user community. The minutes of these meetings are distributed to users world-wide. From among many user concerns each year, the committee selects a small number to pursue in depth. Last year,

increased user presence during Accelerator operation made the Users Center upgrade, as well as plans to increase housing, matters of primary concern. During the upcoming Accelerator-down year, Reay feels user interests might also include improvements in large-scale computing ability, and Laboratory plans for long-term programs to enhance Accelerator and Experimental Areas efficiency. He expressed the hope that members of the user community would feel free to discuss their concerns with the UEC.

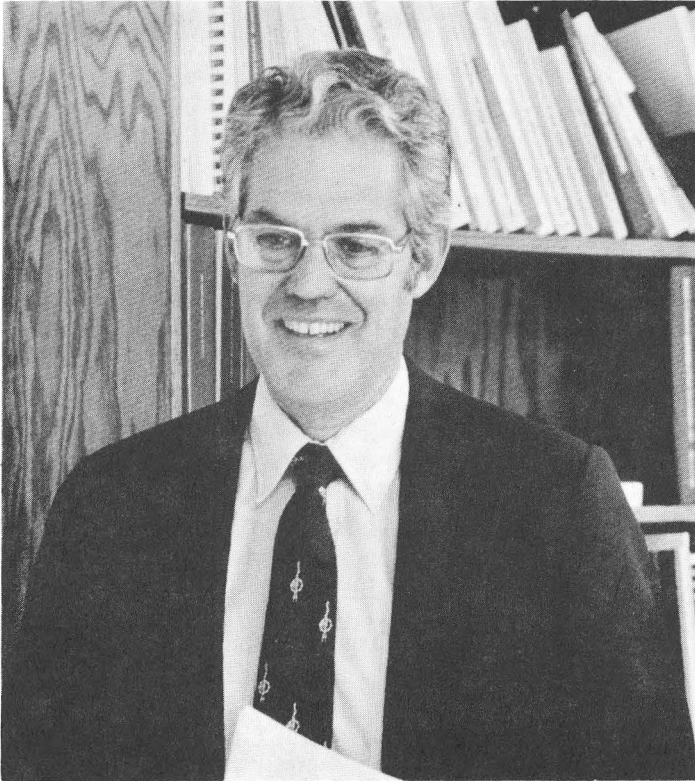
The UEC also functions as the representative for the members of the Fermilab Users Organization (UO) in discussions with URA and Laboratory management, as well as interacting directly with congressmen from their individual districts.

The Fermilab Users Organization has a long and productive history beginning with its establishment in 1967 during a general meeting of 500 Fermilab users. At that meeting the first Organizing Committee was chosen, consisting of two representatives from each of the existing users organizations from BNL, ANL, and SLAC-LBL. This committee drafted a constitution in addition to outlining provisions for the first UEC. On December 9, 1967 a general meeting of about 150 users ratified the proposed constitution.

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...**"Knapp"** cont'd. from page 1

Dr. Knapp will come to the Association from the position of Senior Fellow and Research Advisor at the Los Alamos National Laboratory. Prior to returning to Los Alamos in August, 1984, he was the Director of the National Science Foundation in Washington, D.C.



Dr. Edward A. Knapp

He is a member of several boards and committees, including the Board of Governors of Argonne National Laboratory, the Board of Overseers of the Superconducting Super Collider Project, and the Advisory Committee at the Massachusetts Institute of Technology Nuclear Science Laboratory. He is Chairman of the Board of Trustees of the Santa Fe Institute.

Fermilab Director Leon Lederman, in commenting on the succession of Dr. Knapp,

stated, "Both Fermilab and the SSC Central Design Group have thrived during Guy Stever's tenure. Guy has been a wise and enthusiastic supporter of the Laboratory, one to whom we will continue to look for advice and support in the coming years. We look forward to the regime of Ed Knapp who will be the first full-time President of URA, and who will face the joint challenge of guiding Fermilab into the era of TEVATRON operations and of bringing SSC into existence."



...**"UEC"** cont'd. from page 2

The first Annual Meeting of the Fermilab Users Organization was held in December of 1969. At that time, membership in the UO was placed at slightly over 900 users. In the intervening years, membership has grown to over 1300, representing institutions from over 30 countries including the US and Canada.

Donald F. Moyer, an historian from the University of Michigan, in his study of the Fermilab Users Organization, observed that "Records of the FNAL UO/UEC provide a significant concrete example of cooperative work which illustrates an important pattern of self-determination with a strong trend toward greater democracy and broader representation in the competition for scarce resources in big science, which should be understood by managers and policy makers who want to foster good work."

Membership in the Fermilab Users Organization is available to individuals with a professional interest in the scientific program at Fermilab. Applications for membership, as well as other day-to-day business pertaining to matters of user interest, may be directed to the Users Office, WH 1E, ext. 3111.



Construction Begins on D0 Experimental Hall

On July 29, 1985, the Department of Energy and Fermilab issued a Notice to Proceed to Reliable Construction, winner of the bid award for construction of the D0 Experimental Area, the last major civil construction element in the Tevatron Collider upgrade. Early the next morning, Reliable's earthmoving equipment began scooping out what will in time be an 85,000 cu. yd. excavation.

Nine bids on the D0 project were accepted on July 19, 1985. At precisely 3 p.m., in Curia II, Rich Farritor of the Contracts Department opened and inspected the bids, and each bid was recorded in turn on the blackboard. Upon determination of the low bidder, the bid package was carefully checked prior to DOE approval of the award.

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... "D0" cont'd.

According to Dick Auskalnis of Procurements and Ed West of Contracts, the D0 bid is the largest bid let by Fermilab since the initial construction phase of the Lab, and the largest bid in the TeV I/TeV II project. As with previous construction projects, Contracts will monitor the flow of requisitions and maintain appropriate payment schedules.

Eventually going down to 44 ft. below grade, excavation for the D0 Assembly for the D0 Assembly Hall will proceed until the end-of-September Accelerator shutdown. Following the shutdown, 220 ft. of the existing Main-Ring tunnel enclosure will be removed, and excavation and construction of the D0 Collision Hall will begin.

Taken together, the D0 Assembly and Collision Halls will displace 1,300,000 cu. ft. of earth, utilize 11,000 cu. yds. of reinforced concrete, and 200 tons of structural steel. Under 21,000 sq. ft. of roof, the contractor will install a 50-ton crane, and a 3000-ton shielding door made of precast concrete blocks.

Wayne Nestander's Construction Engineering Services pulled the specifications together, and will continue to provide follow-up inspection and coordination to ensure the design is followed.

Bob Wendt, TeV I Construction Manager, will oversee day-to-day field inspections, and Mel Magnuson and Linda Weaver of Tevatron Construction will monitor monthly work schedules and provide progress updates.

The colliding-beams detector at D0 will put in place the last piece in Fermi-



lab's colliding-beams puzzle, which includes the Tevatron, the Antiproton Source, and the B0 colliding-beams detector (CDF). In the 1985 review of Lab experimental programs presented to DOE, the D0 detector was characterized as "designed to explore the mass region opened up by the TeV I energy and luminosity. In a number of important ways, D0 will complement the CDF detector. The experiment will stress the measurement of the primary entities emerging from short distance hadron collisions: leptons (both muons and electrons), parton jets, and missing transverse energy signalling production of non-interacting particles.

"The primary physics goals of the experiment include precision studies of the W and Z bosons, where it should be possible to detect departures from the standard model predictions at the level of higher order corrections, and the search for new states or phenomena in the mass region above the W and Z.

"With the completion of the D0 detector in 1989...the TeV I Collider will finally come of age with two powerful detectors [B0 and D0] exploring new mass range."

Hank Hinterberger Announces Retirement from Fermilab

Hank Hinterberger, Fermilab's former Associate Director for Engineering and Head of Technical Services, and a major contributor to both conventional and superconducting magnet engineering, retired from Fermilab last week.

Following graduation from City College of New York (Class of '48), Hank spent some time working in the steel mills while awaiting the right opportunity. The right opportunity proved to be an advertisement by the University of Chicago seeking engineers for their cyclotron.

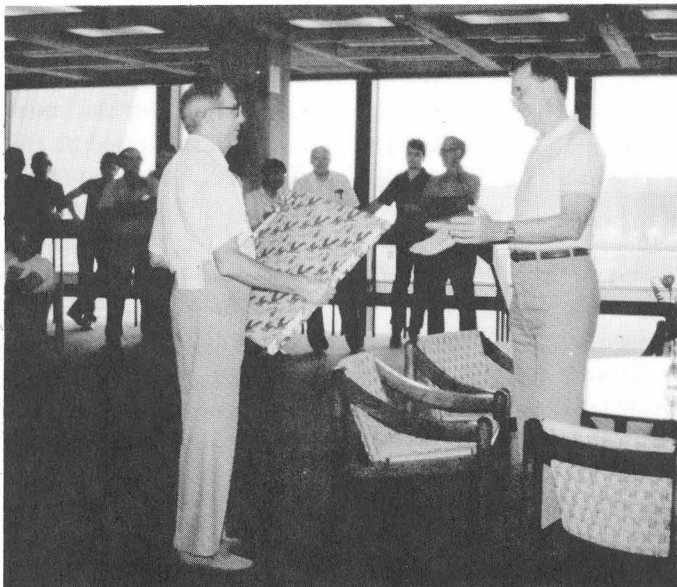
"When I talked to them about the position," Hank recalled recently, "they asked me if I knew how to design a condenser. Well, I'd just had a course in power-plant design which included condensing steam with cold water, so I said, sure, I know how to do that, and I was hired. It turned out they were looking for a design for a high-speed rotary electrical condenser. I went ahead and designed it."

Around Christmas, 1967, Hank received a call from the College of William and Mary in Virginia, soliciting his services as chief engineer for a new cyclotron. When he told the U. of C. he was leaving to join the Virginia project, they advised him that cyclotrons were rapidly becoming obsolete, and suggested he contact the people just beginning work on a new synchrotron not far from Chicago. Hank contacted then-Deputy Director Ned Goldwasser at the National Accelerator Lab design group at Oakbrook. After an interview with Tom Collins and Stanley Livingston, Hank became the 14th engineer hired by NAL, I.D. #139. Fermilab's Deputy Director Phil Livdahl said of those days: "At that particular moment, getting someone with the kind of experience Hank had [with the Chicago Cyclotron] was extremely important to our work."

Hank was appointed Head of the newly-created Technical Services on February 21, 1969. He became involved in the conventional magnet project, improving on the existing design. Among other additional tasks, he planned the plumbing for the Main Ring, and designed the first Magnet Mover.

In July of 1969, when the Main Ring entered its construction phase, Hank, Ernie Malamud, and Dick Cassel were appointed by then-Director Robert Wilson to oversee day-to-day construction operations.

Hank's engineering acumen also led to his involvement in the architectural aspects of NAL. Along with Tom Collins, Hank met regularly with DUSAF architects to



Hank Hinterberger (left) and Phil Livdahl at the reception marking Hank's retirement from Fermilab.

advise on the engineering of site architecture. One such project was the Bubble Chamber building. Robert Wilson asked the architects to design the bottom half of the structure, and left it to the physicists to design the dome. Hank provided the interface between the two groups, and when aluminum cans overlaid with fiberglass sheets became the design of choice for the Bubble Chamber dome, Hank worked out the engineering details. As Bob

Wilson recently recalled, "Hank is always willing to work for the common cause. His innovation, his ability to come up with new ideas, gives him the capacity for getting the job done, and getting it done with style."

The idea for the Saver was in Robert Wilson's mind from the very beginning of NAL. As Hank remembers it, "One day, when we'd just about finished building the Main-Ring magnets, Bob Wilson showed me a little sketch of a superconducting magnet, and asked me to think about it."

As a member of a steering committee which included Don Edwards, Bill Fowler,



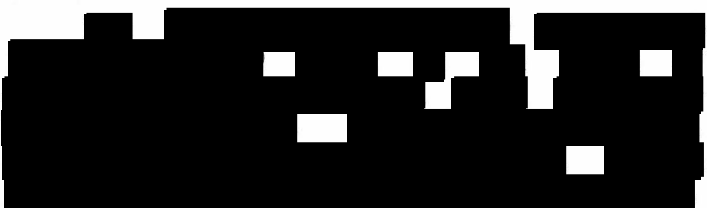
...**"Hinterberger"** cont'd from previous page Will Hansen, and Paul Reardon, Hank met regularly with Bob Wilson to discuss magnet design concepts.

"Alvin Tollestrup solved one of our problems by recognizing that laminated magnet collars were the way to go," Bob Wilson related. "Hank then implemented the principal plan for the replication and manufacture of the magnet collars. Many of the important ideas of the Tevatron were due to Hank's engineering schemes."

In addition to the impact Hank had on magnet technology, his legacy to Fermilab includes the results of his 10-year tenure as head of Fermilab's Engineering Policy Committee and his involvement in the development of a strong engineering community at Fermilab. Phil Livdahl noted that "Today's engineering practices and standards were all initiated under Hank's stewardship, and they have served to create an engineering resource which is held in the highest regard throughout the world's high-energy physics community."

Hank, who holds more patents than anyone else at Fermilab, developed a strong interest in superferric magnet technology. When Russ Huson moved to Texas A&M's Texas Accelerator Center at Houston, Texas, he asked Fermilab to assign Hank to TAC's work on SSC magnet design. Hank will continue his work at TAC under an affiliation with Rice University.

Congratulations To . . .



Check Any Insurance Offers

From time to time we are contacted in the Personnel Office by employees who have received sales letters from insurance company representatives. These letters offer to provide information on insurance and investment plans and often infer that Fermilab has endorsed or supports the product.

We believe the distribution results from persons using our Laboratory telephone directory. We have no direct input into these mailings. The products may be competitive and worth considering if you are seeking a personal insurance plan, but please do not assume the reference to Fermilab is in any way an endorsement or sponsorship for the solicitation.

Information on company benefits is regularly distributed and will come to you on Fermilab letterhead. If you do receive a mailing and are concerned regarding the source, please call the Benefits Office at ext. 3395 for clarification.

— Chuck Marofske

The Benefits Office recently sent to employees copies of the booklet *Supplement to Fermilab Pension and Group Insurance Programs*, together with information on Connecticut General Life Insurance Company's Group Insurance Plan. Among the important matters discussed in these publications are recent upgrades in employee medical coverage, including 100% coverage of pre-admission testing and out-patient surgery.

If, for some reason, you did not receive this information, or if you have any questions, please contact the Benefits Office at ext. 3395 or 3793.

Langsdorf Exhibit Opens This Month

The next exhibit in the 2nd floor gallery of Wilson Hall will be the work of Martyl Langsdorf, an internationally recognized Chicago-area artist. The exhibit will include drawings, paintings, and prints, and will open August 12, 1985.

Ms. Langsdorf is represented in many collections, including those of the Whitney Museum of American Art, the Los Angeles County Museum, the Art Institute of Chicago, and the Hirshhorn collection.

Family Picnic to Feature Child Safety as Well as Fun



Children are always an important part of Fermilab's Family Picnic, and this year's picnic will provide something extra for children and parents in addition to the usual food and fun.

Fermilab Security, in conjunction with National Video, will be offering "video prints" of children who attend the picnic. A "video print" is a brief (no more than 10 minutes) video record of your child, displaying the child's height, voice, walk, mannerisms, etc. The video prints will be available at Picnic Security Headquarters in the Users Center from 11 a.m. to 6 p.m. on picnic Sunday, August 11.

John Middleton, who operates three National Video stores in St. Charles and Aurora, and who has extensive experience with "video printing" as the result of participation in National Video's Child Awareness program, will be setting up both VHS and Beta recording equipment in the Users Center.

According to Middleton, "We encourage parents to become involved in the taping by asking their children to recite name, age, and address for the camera; we also encourage parents to join their children on-camera. The tapings are conducted in a relaxed, friendly atmosphere that allows children to appear as they do in everyday life."

Parents may bring their own blank tapes, or tapes in both VHS and Beta formats will be available at cost (roughly \$4). In addition, a Polaroid of each child can be obtained for an at-cost fee of \$1.

Fermilab Security will also be showing two child-safety films at Picnic Hq: "Too

Smart for Strangers", produced by the Walt Disney organization, and "Strong Kids, Safe Kids", narrated by Henry Winkler and John Ritter. Chief Bob Armstrong of Fermilab Security emphasized that both films present their message in a "format designed to inform, and not frighten, children. Both of these films are geared to children but, at the same time, are meant to be watched by parents and children together."

For more information, call Security at ext. 4949.

NALREC FAMILY PICNIC INFO

WHERE: Playing fields next to Kuhn Barn

WHEN: August 11, 1985, 11 a.m. to 6 p.m.

WHO: All Fermilab employees, users, DOE and Security personnel, contractor personnel, and families of all of the above.

WHAT: Door prizes throughout the day; 50¢ hamburgers or hots dogs with chips; soft drinks, other beverages, cotton candy, ice cones, and popcorn are 25¢.

Activities will include hayrides, games, an All-Star baseball game, pony rides, Teen Town, swimming, and clowns. Once again, the ever-popular Dunk Tank will be in full swing, featuring Ed West, Marilyn Smith, Chuck Marofske, Tom Regan, Don Fichtel, Don Rapovich, and Carolyn Hines among other perennial favorites. The Fermilab Barnstormers will coordinate an air show featuring radio-controlled airplanes flown by members of the Fox Valley Aero Club.

Annual Folk Showcase Promises All a Rousing Good Time

Fermilab's annual Folk Showcase has become a favorite of our audiences for the fascinating variety of musical styles as well as the outstanding skill of the traditional musicians we have presented. The summer of 1985 promises a continuation of this tradition! On Saturday, August 17, 1985, at 8 p.m. in Ramsey Auditorium, two highly talented bands, **Sukay**, and **Norman Blake and The Rising Fawn String Ensemble**, will appear in this year's Folk Showcase.



Sukay

The four members of Sukay perform the music of Bolivia, Ecuador, Peru, and the northern regions of Chile and Argentina. Playing panpipes, wooden flutes, drums, guitar, harp, mandolin, and other instruments such as the "charango" which is fashioned from an armadillo shell, Sukay's repertoire includes both traditional Andean tunes and original tunes that are only slightly more contemporary. "Sukay's music is a happy celebration," the central sound of which is a "floating melody underpinned by syncopated rhythms and simple harmonies." The group has performed its "eerily beautiful...rhythmically compelling" music at Carnegie Hall, Lincoln Center, and virtually every major North American folk festival, including the University of Chicago, the Vancouver, and the Winnipeg Folk Festivals.

Norman Blake excels on acoustic guitar, mandolin, and fiddle. He describes the music of his trio, The Rising Fawn String Ensemble, as "old-timey music with a classical flair." The Ensemble includes Mr. Blake's wife, Nancy, on cello, mandolin, and single row accordeon, James Bryan on fiddle, and Blake's "ever-compelling picking." Prior to making a "go of it" on



*Norman Blake and
The Rising Fawn String Ensemble*

his own, Norman Blake recorded with Bob Dylan and Joan Baez, toured with Kris Kristofferson and John Hartford, and performed on Johnny Cash's television show. Now Blake has 13 recordings of American string band music; in concerts he thrills audiences with his "lightning technique," and the "emotional coloration" which reflects his rural Southern roots.

To join us for this spectacular evening of folk music, reserve your seats today. Admission is \$8, and tickets are available at the Information Desk in the Atrium of Wilson Hall, ext. 3353. Phone reservations are held for five days awaiting payment. Due to ticket demand, those reservations not paid for within five working days are released for sale.

—Jane Green

Mad Max Next Flix

On Friday, August 9, at 8 p.m., in Ramsey Auditorium, the Fermilab International Film Society will present an exciting "Mad Max" double feature: **Mad Max** and **The Road Warrior**, both starring Mel Gibson as Mad Max in his first two adventures in the violent, apocalyptic future. Tickets are \$2 for adults, 50¢ for children, and are available at the door.

*Editor: R. Fenner; Assoc. editor: S. Winchester
Photography: Fermilab Photo Unit*

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FOR SALE:

AUTOS:

1984 PONTIAC 6000LE. 4-dr, 4 CVL-FI, P/S, P/B, AT, AC, tinted glass, AM/FM cassette stereo; \$8,000. Call Gerry Czop, ext. 3981.

FOR RENT:

3-BEDROOM TOWNHOUSE. 2 baths, very close to Lab; \$600/month + deposit (available w/furnishings for slightly higher). Call Henry, ext. 3377 or 393-1711.

3-BEDROOM TOWNHOUSE. 1 bath, central air, 1-1/2 car garage, club house, swimming pool, sauna, 5 to 10 minutes from Fermilab on Farnsworth in Aurora; \$450/month. Call Chander Sood, 844-1849.

MISC:

18-FT. FIBERGLASS CANOE. Good condition. Call Stan, ext. 3340 or 985-7204 after 6 p.m.

35mm SLR CANON EF CAMERA. Canon zoom, telephoto and wide angle lenses, bounce flash, teleconverter, various filters, camera bag, all in excellent condition; \$475. Call Marie Bidstrup, ext. 3222

For the following items, call Rose Gatze, ext. 3426: 6-piece living room set includes couch, coffee table, rocking chair, arm chair, and 2 end tables, good condition, \$275; kitchenette set includes oval table, and 4 side chairs, good condition, \$100.

HOME COMPUTER TI99/4A. New, still in box; \$75. Call Bill, ext. 4597.

18' STARWIND BUCCANEER CHAMPION 1982. Fast day sailer, in excellent condition, quality sloop, top-notch Harken hardware, Kenyon spars, 3 custom Hood sails w/roller furler on jib, and spinnaker launching tube, easily towed by any car and launched at any ramp, stored in a garage, includes trailer, custom cover, removable motor mount, boom vang, etc.; \$4800. Call T. Watts, ext. 4401, or 790-3813 evenings.

For the following items, please call Bob Brooker, ext. 4700: Soligor 70mm-210mm 3.5 zoom, Nikon mount, external meter coupling, \$50; Vivitar 28mm 2.8, Nikon mount, external meter coupling, \$15.

WANTED:

LARGE PRESSURE CANNER. Wanted to buy for canning garden produce. Call Jim, ext. 4050.

STRING QUARTET MUSIC OR SCORES. To buy or borrow, any style or era. Call Henry, ext. 3377 or 393-1711.