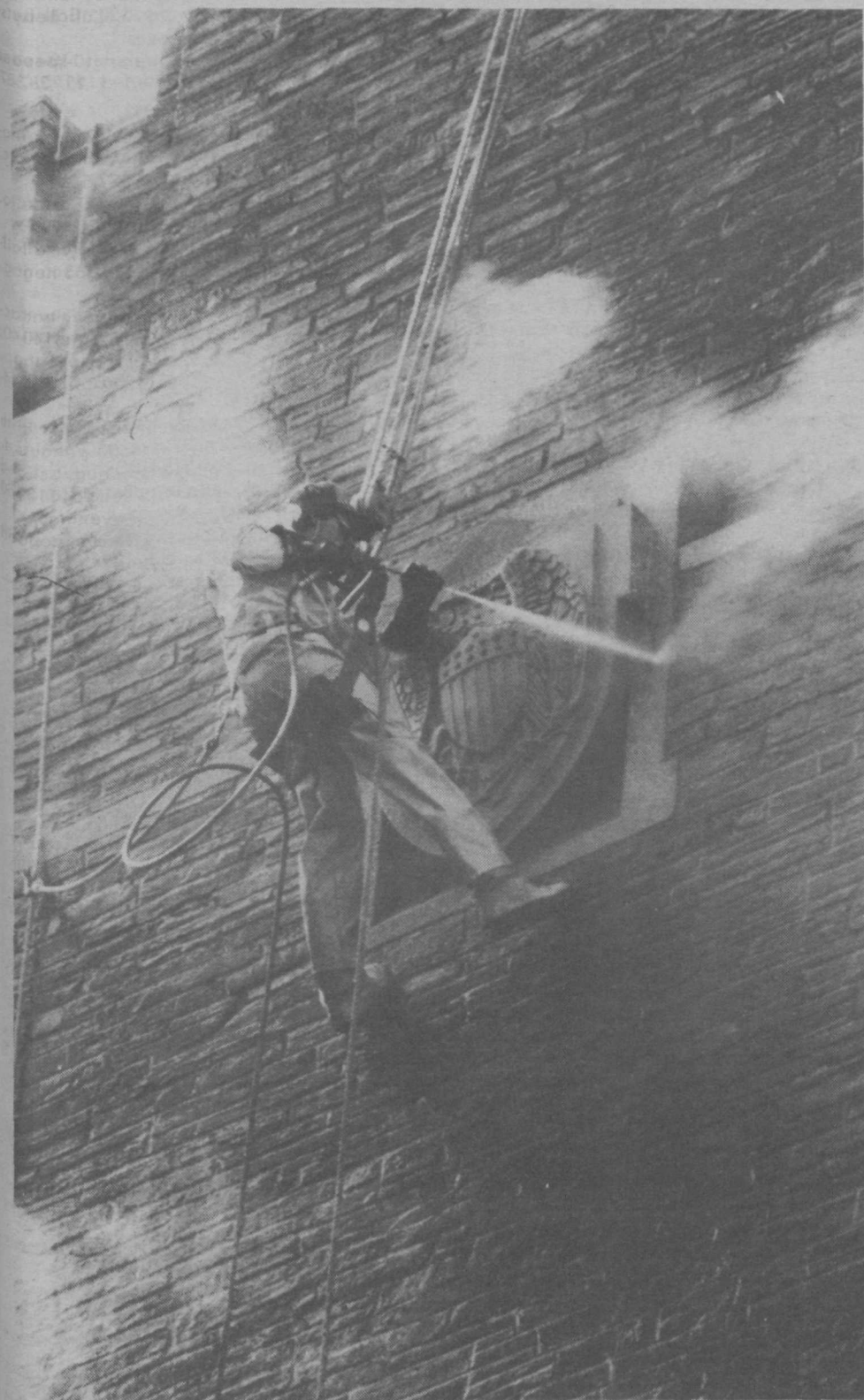


Cornell Chronicle

Volume 16, Number 43

Thursday, July 18, 1985



A workman sprays the face of Barton Hall with a high-pressure stream of hot water as part of an extensive face-lift to the 70-year-old structure. The ivy has been removed from the walls of the masonry structure which is being thoroughly cleaned and re-pointed in order to seal numerous leaks and cracks caused by the ivy and the ravages of time. In addition, the glassed areas of the building's east and west gables are being replaced with insulated translucent plastic panels, but in keeping with the original design. Most of the work is expected to be completed in the early fall. (More photographs of current construction on pages 6 and 7.)

Banking Changes Affect Few

The changes in the university's banking relationships will have no effect on the direct deposit program, and will not affect employees' personal banking relationships, the university's assistant treasurer said this week.

As of today, Cornell paychecks will be written on the Tompkins County Trust Co. rather than Security Norstar Bank. (Details were published in last week's Chronicle.)

Employees who wish to cash their paychecks may do so at the Campus Store branch of Security Norstar, or the Willard Straight Hall branch of Citizens Savings bank, for a 50-cent service charge for employees who do not have accounts with those banks. Checks may be cashed at any Trust Company location without charge.

Persons with questions may contact Mary Jo Maydew, assistant treasurer, at 256-4618, or Frieda Alexander, university cashier, at 256-3310.

Software Developed Here To Catch Jupiter's Signals

When NASA's Galileo spacecraft reaches Jupiter in 1988, it will send to Earth the most detailed images and data ever obtained from the solar system's largest planet and its moons.

The analysis of that information, which could help answer questions about the form and color of Jupiter's clouds, and the formation of the solar system more than 4.5 billion years ago, will be facilitated by new computer software being developed at Cornell.

New software capabilities are needed for two reasons. First, Galileo will transmit information that is of higher resolution than that provided by previous spacecraft, including the Voyager missions that explored Jupiter in 1979 and 1980. Second, this mission marks the first time that scientists will conduct systematic and detailed computer analyses of planetary spacecraft data at their individual institutions, rather than at a single processing site.

"The challenge of designing software to perform on computers at more than 10 different institutions in the United States, Canada, and Europe while meeting the precise needs of Galileo's dozen project scientists is enormous," said Cornell astronomer Joseph Veverka.

NASA's selection of Cornell as the test site to develop new software is only one aspect of the university's participation in the project. Veverka and fellow astronomy professor Peter J. Geirasch are part of Galileo's imaging team; Cornell astronomer Carl Sagan is an interdisciplinary scientist on the project.

Galileo, named after the Italian astronomer who discovered Jupiter's four satellites, is scheduled to be launched from the cargo bay of the space shuttle Atlantis in May 1986. The spacecraft will travel some 380 million miles before reaching the rapidly rotating fluid planet in December 1988, accomplishing on its way the first-ever flyby of an asteroid in late 1986.

Galileo will orbit Jupiter and fly by its four large natural satellites for nearly two years, passing up to 100 times closer to the satellites than any spacecraft before. It will capture more than 40,000 images that will detect surface details as small as 100 meters. A probe released by the spacecraft will de-

scend through Jupiter's upper clouds, measuring atmospheric pressure, the chemical composition of the clouds, temperature, wind velocity, radiation, and lightning before it is crushed by pressures nearly 20 times those experienced on the surface of Earth.

Jupiter, to a greater extent than any of the other planets, represents unaltered solar system material. It probably contains all of the gases that were present at the birth of the solar system; mostly hydrogen, helium, methane, water, and ammonia.

In addition to Galileo's camera, which Cornell's Gierasch and Veverka helped design, the spacecraft will include a high resolution spectrometer capable of identifying the composition of materials being photographed.

The challenge facing the Cornell team is to develop computer software capable of using those sophisticated images to extract precise numerical data about the planet and its satellites. As part of this process, Cornell will be evaluating existing software provided by NASA's Jet Propulsion Laboratory.

One of the difficult problems facing Galileo experimenters is to know exactly where the spacecraft's camera is pointing at any time. The camera, which provides close-up views, is ideal for detecting small features. But its disadvantage is that the images cover small areas. For example, in some cases it will take hundreds of images to cover all of the huge disk that is Jupiter. The Cornell group is devising procedures that will use the images themselves to reveal where the camera is pointing at any given time.

"Galileo will provide just an incredible wealth of information," said W. Reid Thompson, a scientific computing specialist working on the project. "But that information is meaningless unless we can work with it and understand it. We need a way to relate everything together to achieve a complete picture of what Jupiter is all about."

By performing data processing at their own institutions, the dozen Galileo project scientists will have virtually constant access to the raw data gathered by the spacecraft, and will not be limited by computer time and software availability at the Jet Propulsion Laboratory, Thompson said.

Starvation Would Kill More People Than Radiation After Nuclear War

Starvation — not bomb blasts or radiation — would kill the most people in a nuclear war, and most of the suffering would occur in non-combatant countries.

That is the grim prediction of an international panel of scientists that spent the last 18 months studying the effects of nuclear warfare on this planet's climate, environment, and human health.

"Almost all the world's population lives in areas where stores of food wouldn't last more than three to six months. After one year, we could keep only 1.5 billion people alive," said Mark A. Harwell of Cornell. Harwell is the associate director of Cornell's Ecosystems Research Center and leader of the ecological portion of the study called ENUWAR — Environmental Effects of Nuclear War.

Findings of the ENUWAR study, which was directed by Sir Frederick Warner of the University of Essex, will be presented Sept. 12 in Washington, D.C. The research was

sponsored by the International Council of Scientific Unions, an organization of national science academies and royal societies. Some 200 scientists from 35 countries participated in a series of information-gathering workshops in England, Sweden, India, the Soviet Union, France, Japan, Australia, Canada, Venezuela, and the United States.

The study expands on the 1983 prediction of a "nuclear winter" caused by the long-lasting shroud of dust and smoke that could encircle the planet, blocking the sun and lowering temperatures below freezing for months. "The population size of Homo sapiens conceivably could be reduced to prehistoric levels or below, and the extinction of the human species itself cannot be excluded," 30 biologists and ecologists, including Harwell, wrote in a paper on the long-term biological consequences of nuclear war.

"The climatic picture has been clarified," Harwell said. "The TTAPS study (named

Continued on Page 5

Civil Rights Commission Chairman, Medical Series And a Variety of Music on Cornell's Summer Agenda

The smorgasbord of events on campus this week includes a lecture by the chairman of the U.S. Commission on Civil Rights, an all-day rock concert on Libe Slope and a medical series for the public. All events are free (except the medical series) and sponsored by the Division of Summer Session, Extramural Study, and Related Programs, unless otherwise noted.

Today at 7 p.m. the Cranberry Lake Jug

Band will play on the steps of Goldwin Smith Hall. Friday at 7 p.m. the Straight's Terrace Concert Series will feature the jazz band STEPS, sponsored by Willard Straight Hall and Willard Straight Dining.

Every weekend through Aug. 11, the Cornell Summer Shakespeare Festival presents "As You Like It" and "Macbeth" in repertory at 8:30 p.m. Thursday through Sunday in the Anabel Taylor courtyard. In case of

rain, the performances move indoors to the Anabel Taylor Auditorium. This weekend's schedule begins with "As You Like It" on Thursday, July 18, and again Saturday; "Macbeth" plays Friday and Sunday evenings.

In conjunction with the Shakespeare Festival there are noontime lectures every Tuesday on the costumes, stage, and language of the Bard. The series is held in the A.D. White House garden.

Worthy of note is a week-long series of lectures on up-to-date medical information for the public beginning on Monday, July 22 (see separate article).

The Cornell Summer Concert Series presents pianist Jeffrey Chappell in recital at 8:15 p.m. Monday, July 22. Chappell, a faculty member of Goucher College in Baltimore, has performed throughout the U.S. and abroad.

His program will include Partita in C Minor by J.S. Bach, Fantasy in C Major, "The Wanderer" by Franz Schubert, Ballade in F Major, Opus 19 by Gabriel Faure, and Chappell's American Sonata (1985). The concert will be held in the Statler Auditorium.

Tuesday night's outdoor concert features Peggy Haine and the Lowdown Alligator Jass Band. "Traditional Jazz Gone Slightly Berserk" takes place at 7 p.m. on the Arts Quad. In case of rain the concert moves to Kaufmann Auditorium in Goldwin Smith Hall.

Clarence M. Pendleton Jr., chairman of the U.S. Commission on Civil Rights, will discuss "Civil Rights: Where Do We Go from Here?" at 8:15 p.m. Wednesday, July 24, in Statler Auditorium.

Prior to his appointment by President Reagan, Pendleton served as president of the Urban League of San Diego. He is the first black to head the Commission on Civil Rights. U.S. News & World Report has described Pendleton as "a minority within a minority — a black who is a Reagan Republican."

Next Thursday, July 25, Jennie T. Farley, associate professor of industrial and labor relations, will discuss "Dreams and Realities: Women's Rights in 1985," at the brown-bag lunch lecture at noon in G95 Uris Hall.

Farley was a co-founder of the Women's Studies Program in 1970 and served as its first director from 1972-1976. She will address the theme of what women want and how women are achieving what they want.

A unique theatrical revue entitled "Plays on Plays on Plays" will begin at 7 p.m. Thursday, July 25, in the Kaufmann Auditorium, Goldwin Smith Hall. This evening of drama, music, and commentary on the theatre and its critics will feature excerpts from classical drama to contemporary musicals, including Shaw, Shakespeare, Yeats, Pinter and Sheridan.

Actors, producers, playwrights, managers, and directors get their credit and take their lumps in this freewheeling fast-moving revue that covers the theatre, its glamor, and its sometimes seamy practicalities.

The performance will feature Robert T. Farrell, professor of archaeology, medieval studies, and English; William Cowdery, a Ph.D. candidate in music at Cornell; David Keller, professor of English, speech, and drama at City University of New York; and author and actress Joan Jeffri, who teaches arts administration at Columbia University.

On Saturday, July 27, Urban Blight and the Drongos will perform in a free outdoor concert on Libe Slope, from 1-5 p.m.

Other weekly events include the Uris Library Tour at 4 p.m. every Monday, and later at 6:30 p.m. a walking tour of architecture on the Cornell campus (meet at the southwest archway entrance to Balch Halls).

Medical Series To Concentrate On 'Teaching'

Ten Cornell University Medical College faculty members will give a series of lectures on up-to-date medical information here next week.

The lectures, designed for a non-physician audience, will discuss the latest research applied to the prevention and treatment of illnesses and conditions such as arthritis, high blood pressure, heart disease, breast cancer, osteoporosis, and AIDS. Question-and-answer sessions will be part of each lecture.

The public may attend the lectures. Pre-registration is required. A \$25 fee covers the cost of program materials for the entire series. For one day's presentations only, the fee is \$8.

The "Update Your Medicine" program is being directed by Dr. Lila A. Wallis, a clinical professor of medicine at Cornell's medical college in New York City.

As a physician, Wallis applies a literal translation of the Latin term for doctor, which means "teacher."

"I feel that the responsibility of physicians is to educate their patients so that they become partners in their care," Wallis explains. In addition to the medical update program, she has also designed and directed the Women's Health Day programs at the medical college.

This new program will not only educate the public but will give physicians an opportunity to translate medical terms regarding the new research into a clear language that a patient can understand, Wallis says.

Here is a complete schedule of the week's lectures, all in 101 Bradfield Hall:

Monday, July 22

1 - 1:45 p.m., Vanishing Periods (Amenorrhea); Julianne L. Imperato-McGinley, M.D.

1:45 - 2:30 p.m., Brittle Bones: How to Prevent Osteoporosis; Lila A. Wallis, M.D.
Tuesday, July 23

1 - 1:45 p.m., Prevention of Heart Disease; Stephen S. Scheidt, M.D.

1:45 - 2:30 p.m., New Technology in Management of Heart Disease; Jeffrey S. Borer, M.D.
Wednesday, July 24

1 - 1:45 p.m., What You Should Know About Hemophilia; Margaret W. Hilgartner, M.D.

1:45 - 2:30 p.m., What You Should Know About Breast Cancer; Richard T. Silver, M.D.
Thursday, July 25

1 - 1:45 p.m., What You Should Know About AIDS; Barry J. Hartman, M.D.

1:45 - 2:30 p.m., Breathing Air, Automatic But Not Simple; James P. Smith, M.D.
Friday, July 26

1 - 1:45 p.m., How to Keep Your Blood Pressure Down; John Nicholson, M.D.

1:45 - 2:30 p.m., Painful Joints and Modern Drugs; Joseph A. Markenson, M.D.



Cranberry Lake Jug Band will play at 7 p.m. today on the steps of Goldwin Smith Hall. Members of the group are (from left) Rich Sobel, Harvey Nusbaum, Brian Burns and Henry Jankiewicz.



The Drongos will be joined by Urban Blight in a concert on Libe Slope Saturday, July 27, from 1 to 5 p.m.

Cornell Chronicle

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It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The university is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

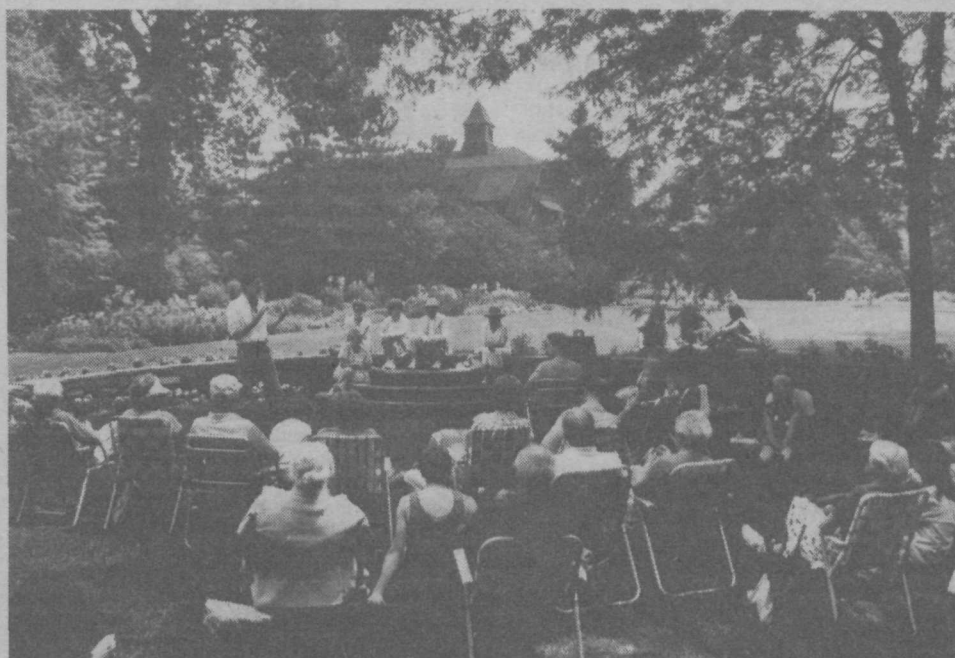


Pianist Jeffrey Chappell will be in concert at 8:15 p.m. Monday, July 22, in Alice Statler Auditorium.

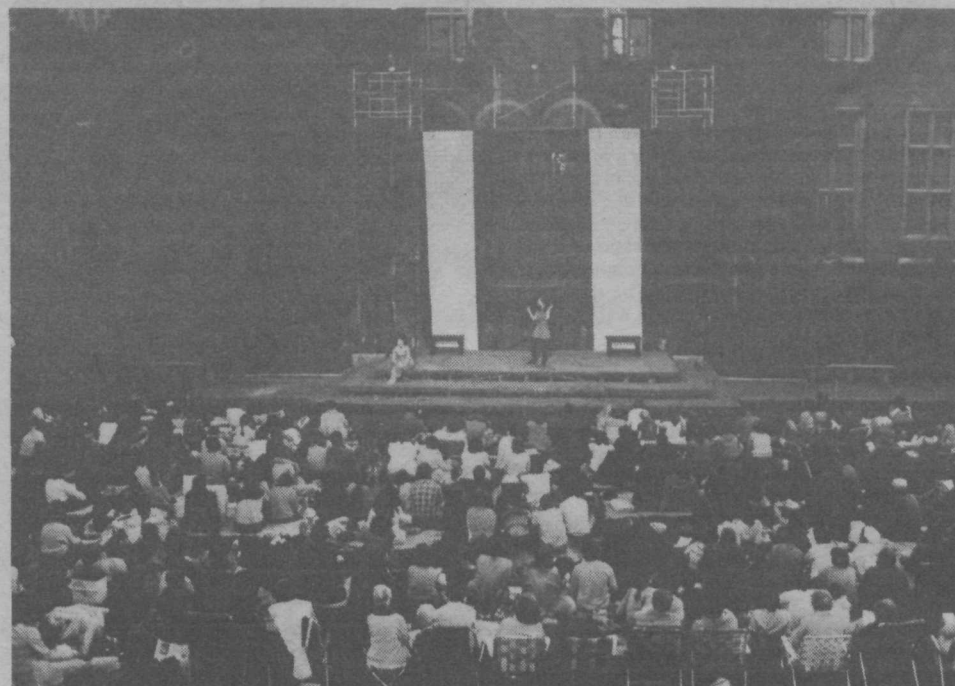
Some Scenes From Cornell Summer



Cornell Summer T-shirts are popular items at events.



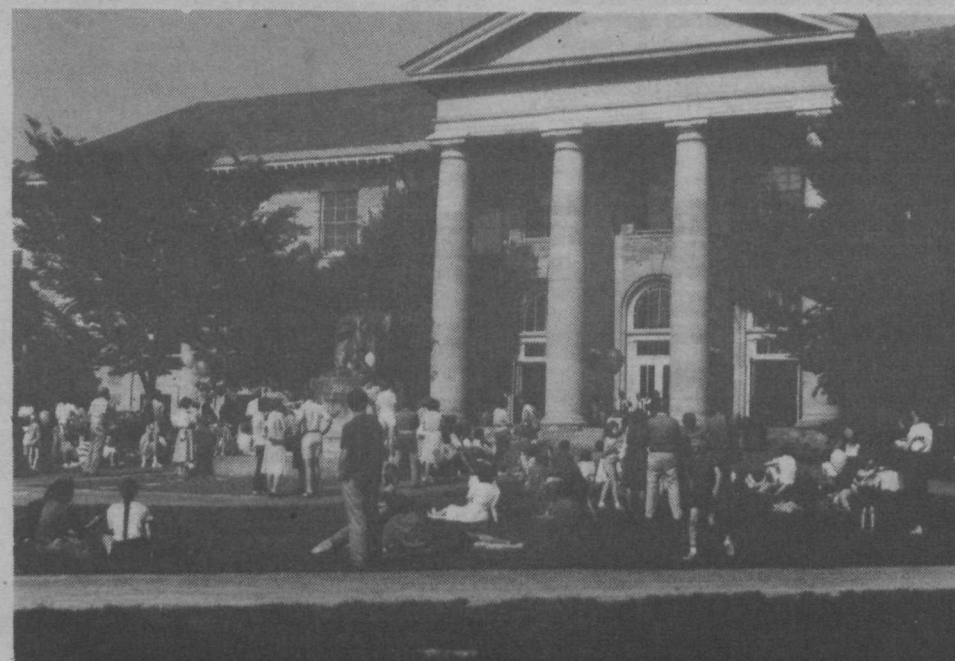
A lecture on Shakespeare takes place in the garden of the Andrew Dickson White house.



A production of Shakespeare takes place in the courtyard of Anabel Taylor Hall.



Two views of crowds gathered on the Arts Quadrangle for last Saturday's "until-exhaustion" concert (above) and another concert earlier (right).



Calendar

July	S	M	T	W	T	F	S
		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			

Wednesday

July 24, 1 p.m. Bradfield 101. "What You Should Know About Hemophilias," Margaret W. Hilgartner, M.D.

July 24, 1:45 p.m. Bradfield 101. Medical Outreach: "What You Should Know About Breast Cancer," Richard T. Silver, M.D.

July 24, 8:15 p.m. Statler Auditorium. "Civil Rights: Where Do We Go From Here?" Clarence Pendleton, Jr., chairman, United States Commission on Civil Rights.

Thursday

July 25, noon Uris Hall G94. Brown-bag luncheon. "Dreams and Realities: Women's Rights in 1985," Jennie T. Farley, associate professor of Industrial and Labor Relation.

July 25, 1 p.m. Bradfield 101. Medical Outreach: "What You Should Know About AIDS," Barry J. Hartman, M.D.

July 25, 1:45 p.m. Bradfield 101. Medical Outreach: "Breathing Air — Automatic But Not Simple," James P. Smith, M.D.

Friday

July 26, 1 p.m. Bradfield 101. Medical Outreach: "How to Keep Your Blood Pressure Down," John Nicolson, M.D.

July 26, 1:45 p.m. Bradfield 101. Medical Outreach: "Painful Joints and Modern Drugs," Joseph A. Markenson, M.D.

Seminars

Plant Biology: "The Plasma Membrane ATPase of Plant Cells and Fungi — from the Protein to the Gene," Ramon Serrano, Universidad Autonoma, Madrid, and Whitehead Institute for Biomedical Research, MIT, 4 p.m. Wednesday, July 24, 404 Plant Science.

Religious Services

Catholic

Every Saturday, 5:00 p.m. Anabel Taylor Auditorium.

Every Sunday, 10:00 a.m. Anabel Taylor Auditorium.

Sacrament of Reconciliation by appointment, call 256-4228

Episcopal (Anglican)

Every Sunday, 9:30 a.m. Anabel Taylor Chapel.

Jewish

Every Friday, 7:30 p.m. Anabel Taylor Courtyard, Founders Room rain site. (Conservative Shabbat Service).

Every Saturday, 9:15 a.m. Anabel Taylor Edwards Room. Shabbat Services (Orthodox).

Korean Church

Every Sunday, 3 p.m. Anabel Taylor Chapel.

Muslim

Monday-Thursday, 1 p.m. Anabel Taylor 218. Friday, 1 p.m. Anabel Taylor Edwards Room.

Hillel Office

Hillel Office will be open during the summer Monday to Friday, 11 a.m. to 2 p.m.

Dance

Israeli Folk Dancing

Every Thursday night at 8 p.m. in the One World Room, Anabel Taylor Hall.

Exhibits

Herbert F. Johnson Museum of Art

Because of unprecedented interest, "Selected Works from the Prinzhorn Collection" currently on view, has been extended through August 11. Featured are approximately three hundred artistic expressions by institutionalized psychiatric patients, most of whom were diagnosed as schizophrenic. The majority of works were created in Germany, Austria, Switzerland, Italy, and the Netherlands between 1890 and 1920. "Paintings by Philip Sherrod" an exhibition of sixty-one city scenes, figures, and still lifes by a New York contemporary artist. Exhibit will be on view July 16 through August 26. "Anticipation on the Commons" takes place under the Central Pavilion, on the Commons in downtown Ithaca, Thursday, Friday, and Saturday, July 11, 12, and 13, from noon until 3 p.m. The Herbert F. Johnson Museum of



Phillip Sherrod, "Gayle's Still Life/or the Isosceles Triangle of Man," oil on canvas, collection of the artist, from the Sherrod exhibition at the Johnson Museum through Aug. 26.

Art, is located at the corner of University and Central Avenues on the Cornell campus, is open Tuesday through Sunday from 10:30 a.m. to 5 p.m. Admission is free.

Olin Library

Graphic Shaw: photographs, drawings, posters, and engravings relating to George Bernard Shaw and his plays, many accompanied by notes of Shaw himself. Hours 10 a.m.-5 p.m. Monday through Friday. Through September 10.

Films

Unless otherwise noted films are sponsored by Cornell Cinema.

Thursday

July 18, 8 p.m. *Uris Hall Auditorium. "The Other Half of the Sky" (1976), directed by Claudia Weill & Shirley McLaine. Shown with: "The Bitter Tea of General Yen" (1933), directed by Frank Capra, with Barbara Stanwyck.

Friday

July 19, 8 p.m. *Statler. "The Shining" (1960), directed by Stanley Kubrick, with Jack Nicholson and Shelley Duvall.

July 19, 8 p.m. *Uris Hall Auditorium. "Jail House Rock" (1957), directed by Richard Thorpe, with Elvis Presley and Judy Tyler.

July 19, 10:15 *Uris Hall Auditorium. "Get Out Your Handkerchiefs" (1978), directed by Bertrand Blier, with Gerard Depardieu and Patrick Dewaere.

Saturday

July 20, 8 p.m. *Statler. "Gandhi" (1983), directed by Richard Attenborough, with Ben Kingsley and Candice Bergen.

July 20, 8 p.m. *Uris Hall Auditorium. "Get Out Your Handkerchiefs."

July 20, 8 p.m. *Statler. "Gandhi."

July 20, 10:15 p.m. *Uris Hall Auditorium. "Jail House Rock".

Sunday

July 21, 8 p.m. *Uris Hall Auditorium. "Christmas in July" (1940), directed by Preston Sturges, with Dick Powell and Ellen Drew.

Monday

July 22, 8 p.m. *Uris Hall Auditorium. "Ugetsu" (1953), directed by Kenji Mizoguchi, with Machiko Kyo.

Tuesday

July 23, 8 p.m. *Uris Hall Auditorium. "Andrei Rublev" (1966), directed by Andrei Tarkersia, with Ivan Lapitkov.

Wednesday

July 24, 8 p.m. *Uris Hall Auditorium. "Freud" (1962), directed by John Huston, with Montgomery Clift and Susannah York.

Thursday

July 25, 8 p.m. *Uris Hall Auditorium. "Gates of Heaven" (1978), directed by Errol Morris, with Floyd McClure.

Friday

July 26, 7:30 p.m. *Statler. "The Last Waltz" (1978), directed by Martin Scorsese. Concert.

July 26, 8 p.m. *Uris Hall Auditorium. "WR-Mysteries of the Organism" (1971), directed by Dusan Makavejev, with Milena Dravic.

July 26, 10:15 p.m. *Statler. "Last Tango in Paris" (1973), directed by Bernardo Bertolucci, with Marlon Brando.

Saturday

July 27, 7:30 p.m. *Statler. "Last Tango in Paris."

July 27, 8 p.m. *Uris Hall Auditorium. "Excalibur" (1981), directed by John Boorman, with Nicol Williamson and Nigel Terry.

July 27, 10:15 p.m. *Statler. "The Last Waltz."

Lectures

Thursday

July 18, noon Uris Hall G94. Brown-bag lunch lecture: "How Supercomputers Affect Scientific Thinking," Charles Van Loan, associate professor and director of graduate studies in computer science.

Monday

July 22, 1 p.m. Bradfield 101. Medical Outreach: "Vanishing Periods (Amenorrhea)," Julianne I. Imperato-McGinley, M.D.

July 22, 1:45 p.m. Bradfield 101. Medical Outreach: "Brittle Bones — How to Prevent Osteoporosis," Lila A. Wallis, M.C.

Tuesday

July 23, noon A.D. White House Garden. Shakespeare lunch lecture: "The Language of Shakespeare," Rachel Ehrlich, lecturer and guest speaker.

July 23, 1 p.m. Bradfield 101. Medical Outreach: "Prevention of Heart Disease," Stephen S. Scheidt, M.D.

July 23, 1:45 p.m. Bradfield 101. Medical Outreach: "New Technology in Management of Heart Disease," Jeffrey S. Borer, M.D.

Herb Days to Be July 27 and 28

The third annual Herb Days celebration at Cornell Plantations' Robison York State Herb Garden is planned Saturday and Sunday, July 27 and 28.

People attending can discover some intriguing and unusual uses of herbs in vinegars, breads and cookies, medicines, and everlasting bouquets.

Pam Connet of Butternut Canning will start Saturday's program at 11:30 a.m. with a talk on herbal vinegars and how to make them at home. A selection of vinegars will be for sale.

At 1 p.m. Saturday, Dorry Norris of Sage Cottage in Trumansburg will offer advice on baking salt-free herbal breads, and will have complimentary samples for tasting.

"How to Make Flowers Everlasting" is the topic of Linda Kabelac's presentation at 11:30 a.m. Sunday. Methods of drying and preserving flowers for use in arrangements

and other creations will be discussed.

Dr. Scott Camazine, will offer a historical perspective on 'Medicinal Plants' at 1 p.m. Sunday.

There will be two guided tours of the herb garden at the same time each day, lasting about 45 minutes. The first will begin at 12:15 p.m. and the second at 2 p.m.

Herbal cookies and breads packaged with their recipes will be offered for sale by June Darfler of Brown Hill Bakery during Saturday's program. The Plantations' Garden Gift Shop will have a good selection of live potted herb plants for sale on both Saturday and Sunday during regular hours.

All events will take place in the Robison York State Herb Garden at Cornell Plantations, One Plantations Road, off Judd Falls Road and Rt. 366. Admission to Herb Days is free to members and a \$1 donation is requested of non-members.

All items for publication in the Calendar sections, except for Seminar notices, must be submitted (typewritten, double spaced) by mail or in person to Fran Apgar, Central Reservations, 531 Willard Straight Hall at least 10 days prior to publication. Seminar notices should go to the Chronicle office, 110 Day Hall. Items should include the name and telephone number of a person who can be called if there are questions, and also the subheading of the calendar in which it should appear (lectures, colloquia, etc.) ALL DEADLINES WILL BE STRICTLY ENFORCED.

*—Admission charged.

Announcements

EARS

Empathy, Assistance and Referral Service, fondly known as EARS, announces that it has recently expanded its hours. Friday hours have been extended from 7-11 p.m. to 5-11 p.m. Regular hours Sunday through Thursday, 3-11 p.m. and Saturday, 7-11 p.m. continue unchanged. EARS provides short-term peer counseling on a walk-in as well as telephone basis; it is located in Willard Straight Hall, room 211, and the phone number is 256-EARS. All services are free and completely confidential. EARS counselors look forward to being of support to all members of the Cornell community.

Cornell Toastmasters

Do you have a stage fright when speaking before an audience, or are you planning to speak before your committee or organization? Or would you like to meet new and different people? Then Toastmasters is for you. Toastmasters is a professional organization whose goal is to help its members become comfortable and able in public speaking and dealing with large groups of individuals.

If you are interested in joining a professional speaking club, then come and participate with the Cornell Toastmasters. First and Third Tuesdays at 5:30 p.m. in 135 Emerson Hall. Contact Rafael at 257-7669 for details.

Hillel Office

Hillel Office will be open during the summer Monday - Friday, 11 a.m. - 2 p.m.

Alternatives Library

Alternatives Library is open to the public. Wide range of materials on spirituality and self-growth. Anabel Taylor Hall. The Library has a large selection of books, periodicals and tapes. Open to the public.

Flea Market/Craft Fair

Willard Straight Hall is sponsoring a series of Flea Markets this summer, on July 11-12 and August 8-9. The Straight is located in the center of campus, directly north of the Central Avenue and Campus Road intersection, adjacent to the Gannett Health Center. The markets are sponsored as a service to Cornell's summer students, staff, faculty, and visitors. Items to be offered include art, crafts, jewelry, fabrics, garments, fruits, vegetables and assorted small goods. If you are interested in securing space in the flea market, contact Robert Ishii at 256-4311 or 156-8572.

Helen Newman Bowling Lanes

Summer operating hours are Monday-Saturday from 3-11 p.m. and Sunday from noon-5 p.m. There will be summer leagues on Wednesday and Friday nights. The telephone number for the leagues is 256-4200.

Gay Jews Support Group

A support group for gay Jews is being formed, to share and explore related concerns and conflicts, possible ways to confront them, exchange religious and cultural context material. If interested in taking part, please call GayPac, 256-6482. Confidentiality ensured.

Thursday

July 18, 4 p.m. Tour of Robison York State Herb Garden, Raylene Gardner, Cornell Plantations education coordinator. Meet at Cornell Plantations headquarters building.

Monday

July 22, 4 p.m. Tour of Uris Library. Begins in lobby.



Yoka Suzuki, 24, of Tokyo, Japan, responds to a suggestion by Malcolm Bilson, during a fortepiano workshop session this week in Barnes Hall. Bilson, recognized as one of the leading fortepianists of our time, is conducting a two-week workshop (July 8-19) on campus, attended by seventeen accomplished musicians from this country and around the world. The group will give a free public concert, starting at 8:15 p.m. Friday, July 19, in the Barnes Hall Auditorium.

Talented International Musicians Study Here with Malcolm Bilson

Seventeen accomplished musicians from around the world are taking advanced instruction here this summer in the playing of 18th and 19th century pianos. They are under the direction of Cornell's Malcolm Bilson, renowned pianist.

Bilson, a professor of music at Cornell, is considered one of the leading fortepianists of our time. He uses replicas of 18th century five-octave pianos to instruct the playing of music by Haydn, Mozart, and early Beethoven.

The students, whose countries of origin include Australia, Japan, Germany, and the United States, are also receiving instruction for the later piano repertoire on Cornell's newly acquired six-octave Neupert copy of an 1815 Louis Dulcken instrument.

Modern pianos have 7.3 octaves and are made with far stronger combinations of

wood and steel than their earlier prototypes, for which Classical and most Romantic music was written.

The workshop, which began July 8, will culminate with a student concert, free and open to the public, starting at 8:15 p.m. Friday, July 19, in Barnes Hall Auditorium.

The workshops, which Bilson has given each summer since 1976, include private lessons and master classes. In addition, there is instruction on the tuning and maintenance of these prototype pianos, not to be confused with either harpsichords or clavichords.

Bilson's first fortepiano workshops were given at various locations in this country and abroad. In 1984, Cornell became the permanent site for what have become world renowned workshops.

Starvation

Continued from Page 1

for its authors, R.P. Turco, O.B. Toon, T.P. Ackerman, J.B. Pollack, and Carl Sagan) was one-dimensional. Our understanding is now three-dimensional, and we have information on the interaction between heating and circulation in the atmosphere."

"We know now that to not have a nuclear winter, you would have to have a carefully concocted scenario," continued Harwell. "And we will be able to make the case that — even without a nuclear winter — consequences would be more severe than people thought." Harwell is author of the 1984 book, "Nuclear Winter: The Human and Environmental Consequences of Nuclear War."

As part of their studies, the biologists asked experts on the Hiroshima and Nagasaki atomic bombings to extrapolate the known effects of those relatively small devices to one megaton (one million tons of TNT) explosions. They also reviewed historical crop records and conducted a series of computer simulations that showed that an average temperature drop of only 3 degrees Celsius would severely decrease crop yields, and that a very large fraction of crops would be lost altogether.

"It look like nuclear winter would cause a drop of 3 to 5 degrees," Harwell said. "In the temperate zone, where grain crops are concentrated, none could be grown. Immediately after a summer nuclear war, there would be no crop productivity in the Northern Hemisphere and perhaps little in the Southern. Food exports from the U.S. and Australia would be shut down. You don't need to have a bomb detonated over India to

have mass starvation there, for example. Without continual production by agricultural systems, the world could support nowhere near the current population."

Even the popular image of post-nuclear war existence, with people returning to the hunting-and-gathering life of cavemen, is flawed, Harwell said in a recent interview. Tropical ecosystems, where that kind of existence is now possible, are particularly vulnerable to temperature changes, the ecologists noted in their report, and little food would be found anywhere for gathering, at least on the scale needed to feed several billion people.

"People aren't going to die from a drop in temperature or from having light reduced. They will die because they can't grow crops," according to Harwell. "It doesn't matter whether the drop is 30 degrees or 10 degrees — we will lose the agricultural systems. The end point is human survival."

The ecologists' report will recommend further study on the impact of nuclear winter on societal, economic and medical systems, Harwell noted. In the meantime, they believe that their message is particularly compelling to leaders of third world countries, which would not be directly involved in a nuclear exchange.

"Four out of five people alive today are in non-combatant countries," Harwell said. "This fact should prompt a very careful look at the policy implications of arms buildups."

"We are not looking at the environment just for the environment's sake," Harwell emphasized. "This study is anthropocentric (centered on humankind), not about the loss of butterflies. The environment is essential for the support of the human population."

Supercollider a Relative 'Bargain' to Run: Tigner

The enormous machine American physicists want for investigating subatomic forces never before seen on earth — the proposed Superconducting Supercollider or SSC — will be something of a bargain because of new technologies now available, according to one of its planners.

Capable of accelerating particles to 20 trillion electron volts around the ring as long as 100 miles, the largest and most expensive scientific instrument ever attempted will cost no more to operate than today's conventional synchrotrons. That's what Cornell physics professor Maury Tigner told high school science teachers recently at the annual meeting of the American Association for the Advancement of Science (AAAS) in Los Angeles.

These cost savings will be possible by building the thousands of electromagnets for the collider from an alloy of niobium and titanium, a superconducting material. When maintained at a temperature near absolute zero, electric current will flow through the wire of the magnets virtually without resistance. The only electric power needed to maintain operation of the magnets will be for refrigerating equipment to chill liquid helium — which in turn will cool the magnets — to about four degrees above absolute zero.

This superconductivity technique would be used in the bending magnets to guide particles around the track, and in focusing magnets to keep the particles together in a tight beam.

"That the technology of superconductivity is mature enough to use for the SSC is shown by the fact that the Fermilab Tevatron, built (at Batavia, Ill.) with the first generation of superconducting accelerator magnets, now runs routinely for scientific research," Tigner told the teachers.

Operating a synchrotron of Supercollider size, between 60 and 100 miles in circumference, with ordinary iron electromagnets would require an operating power of more than a billion watts, Tigner added.

Colliders accelerate beams of subatomic particles in opposite directions at nearly the speed of light until collisions occur. The resulting showers of smaller particles are studied for clues to the fundamental nature of matter and energy.

High energy physics, also known as elementary particle physics, has already discovered dozens of kinds of particles, and is beginning to understand the forces that bind them together within atoms. Larger and more powerful "atom smashers" are needed because of the fundamental law of physics that says the smaller an entity, the greater the energies holding together its component parts.

Preliminary plans call for a linear accelerator and a "cascade" of smaller synchrotrons to inject proton beams into the SSC, Tigner said.

Physicists and engineers, who are seeking funding from the U.S. Department of Energy to build the SSC for operation in the 1990s, are studying three different and technically feasible plans, the Cornell researcher told his audience. All three designs are estimated to cost about \$3 billion in 1984 dollars, a figure that includes contingency funds, but not the cost of land, construction of the particle detector, and development costs. A site has not yet been selected for the huge facility; among the suggested sites are Texas, Arizona, Illinois, and Florida, among others.

Tigner, who is on leave from his position at Cornell, is the director of the SSC Design Center, located at Lawrence Berkeley Laboratory. Chairman of the Board of Overseers for the project is Boyce D. McDaniell, professor of physics and former director of the Laboratory of Nuclear Studies. Robert M. Matyas, who is on leave from his post as vice president for facilities and business operations at Cornell, is the management adviser for the project's central design group.

If built, the SSC would become the fifth national high energy physics facility in this country.

Teachers Studying Here In Six NEH Seminars

Seventy-five college and secondary school teachers are studying here this summer in six seminars being sponsored by the National Endowment for the Humanities.

The seminars, rather than focusing on teaching skills, are intended to give participants a better understanding of the subjects they teach. Participants are selected by each seminar director, and they conduct research of their own choosing in addition to the seminar work.

NEH is offering 138 seminars at some 90 colleges and universities across the nation this summer to provide college and secondary school educators with an opportunity to study with the leading scholars in their fields and to conduct research at institutions with libraries suitable for advanced study.

Cornell faculty are directing five seminars for college teachers this summer, second in number only to Yale, where six such seminars are being held. One Cornell professor is also directing a seminar for secondary school teachers.

"The NEH program gives secondary school teachers an opportunity to renew their intellectual curiosity in a stimulating environment," said English professor Daniel R. Schwarz, who directed a seminar for college teachers last summer. This year, he is leading secondary school teachers in a seminar entitled "James Joyce's *Ulysses*."

"The college teachers who participate in the NEH program usually have a heavy tea-

ching load and little time for research," added Cornell philosophy professor Sydney S. Shoemaker, who is directing a seminar in "Self-Consciousness and Self-Reliance" for college teachers. "Many will seek to publish research that they conduct as part of their summer work."

In addition to Shoemaker, four other Cornell professors are directing seminars for college teachers this summer. They are:

—Robert G. Calkins, professor of the history of art, "The Medieval Illuminated Book: Context and Audience;"

—Ciriaco Moron-Arroyo, professor of Romance studies, "Ortega y Gasset's Idea of Art, Literature, and Literary Criticism;"

—Sidney G. Tarrow, professor of government, "Reassessing Histories of Collective Action;" and

—Calum M. Carmichael, professor of comparative literature and Biblical studies, "Biblical Law in Historical Perspective."

The five eight-week seminars for college teachers began June 17 and will conclude August 9. Schwarz's seminar for secondary teachers began June 24 and will conclude August 2.

Seminar directors are chosen on a competitive basis by NEH. Program participants receive a stipend to cover their travel, living, book and research expenses. The 75 teachers studying at Cornell this summer represent all regions of the country.



New computer and telecommunications cables are being laid on the Arts Quad in this view from atop Morrill Hall, with Clark Hall in the background.

Construction 1985

Digging down and going up, projects under way in many areas of campus

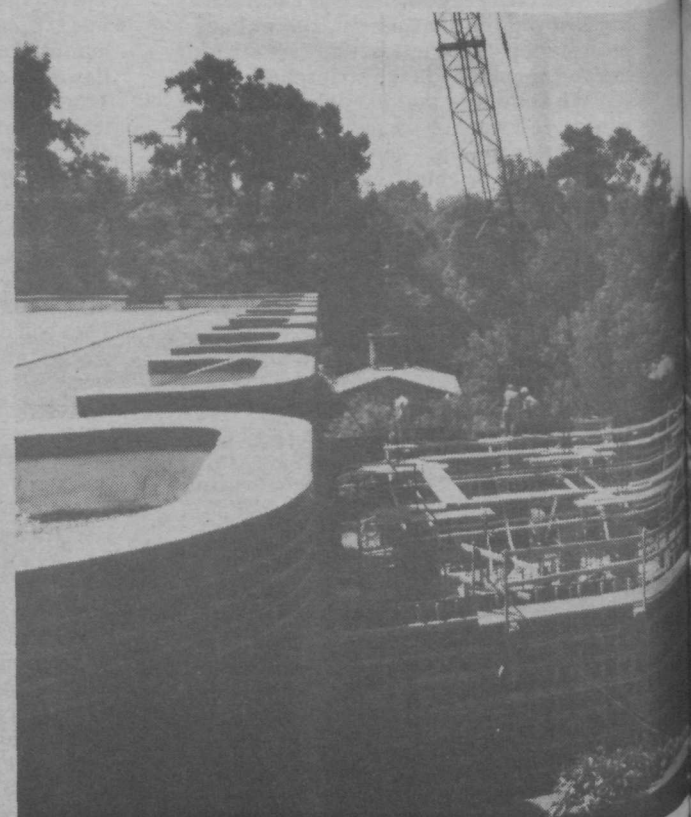


The Tobin Field House and bus stop combined is at the corner of Jessup and Triphammer roads, adjacent to the North Campus playing fields.

Photographs by Charles Harrington



This addition to Comstock Hall will be home to the university's new telecommunications unit.



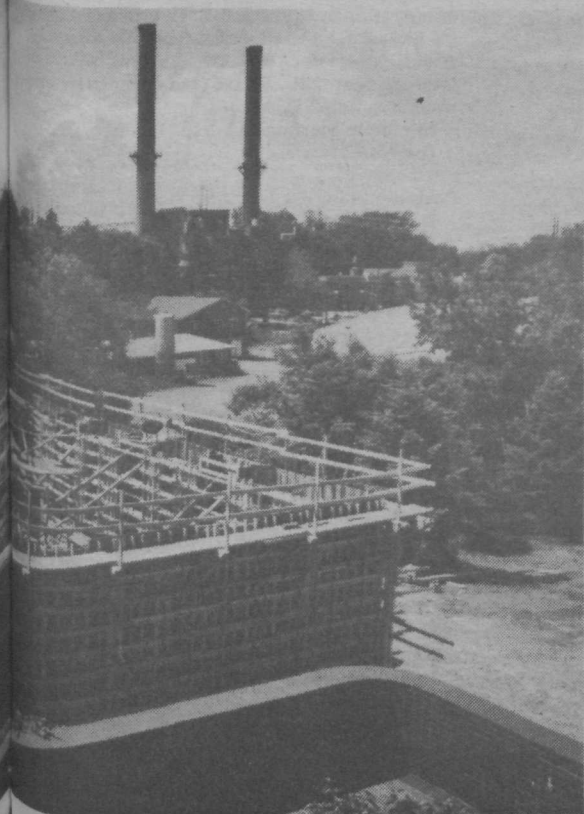
The addition to the synchrotron, with the heating plant



Water pipe is laid just west of Olin Hall, with the new Snee Hall building for geophysics in the background.



Steam return lines are going into this trench just south of the tennis bubble, with Schoellkopf Field crescent in the background.



in the background.



The new Micro-Kelvin Laboratory construction, with Clark Hall at left.

Number 28

Cornell University

University Personnel Services

Day Hall

Ithaca, New York 14853

607/256-5226

Please Note:

Job Opportunities is a publication of Staffing Services and is distributed each Thursday through the Cornell Chronicle.

Job Opportunities lists current vacancies within the University, consistent with the University's commitment to promotion from within, affirmative action, and equal opportunity employment.

Applications for employment are available at Cornell University's employment office at East Hill Plaza at the intersection of Ellis Hollow Road and Judd Falls Road in Ithaca, from 9:00 a.m. to 12:00 noon, Monday through Friday. Applications can be submitted through the mail to University Personnel Services, Staffing Services, 160 Day Hall, Ithaca.

N.Y. 14853. For more information on jobs listed, contact Staffing Services (607) 256-5226.

Employee Transfer Applications: Employees who wish to transfer to other jobs within the University should complete a separate Employee Transfer Application form for each position and submit them to Staffing Services. Individuals with official University layoff status will be given preference in referrals.

This listing is also available on CUINFO

Cornell University's computerized information service. For further CUINFO details, contact the Information and Referral Center at 256-6200 or Computer Services.

New vacancies are listed for two weeks in Job Opportunities.

*Asterisks identify jobs that were not listed last week.

Full-time jobs are 39 hours per week unless otherwise indicated. Jobs listed as SO, U1 and U2 are represented by bargaining units.

July 18, 1985

ty's central public affairs and college programs.

Requirements: Bachelor's degree required. 3-5 years of experience in public affairs, development and/or alumni relations in higher education or a closely related field. Demonstrated managerial ability. Must have high initiative and self starting ability, good organizational skills, and the ability to relate to a wide range of individuals. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA272

Position: Assistant Director, Development & Public Affairs

Department: College Public Affairs - Law School

Description: Assist with planning, development and implementation of the Law School's effort to obtain support from private sources. Primary responsibility is the operation of the Law School Annual Fund.

Requirements: Bachelor's degree required; advanced degree preferred. Experience in directing volunteers and some knowledge of fund raising required. Organizational skills essential. Excellent oral and written communication skills. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA273

Position: Staff Architect

Department: Facilities Engineering

Description: Perform architectural design and drafting services for University renovations. Consult, discuss, review and advise clients regarding construction design plans and cost estimates. Independently undertake in-house projects and assist on major projects.

Requirements: Bachelor of Architecture or equivalent. 3-5 years experience in building renovation designs. Organizational and interpersonal skills necessary. Excellent oral and written communication skills required. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA271

Position: Physical Therapist (Repost)

Department: University Health Services

Description: Evaluate and treat orthopedic and sports related problems. Responsible for planning and implementing physical therapy programs for referred patients. Maintain appropriate records in compliance with ethical and legal standards. Participate in in-service programs as appropriate. Participate in ongoing projects.

Requirements: Bachelor's degree or equivalent. Registered Physical Therapist in New York State required. Certification by National Athletic Trainer's Association preferred. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA1913

Position: Sanitation Services Supervisor

Department: Statler Inn

Description: Responsible to the Manager—Guest Services for the highest level of cleanliness of all Statler guest rooms, dining rooms, contiguous corridors and stairwells in addition to the efficient operation of the linen room.

Requirements: Bachelor's degree in hotel administration or equivalent work experience; working knowledge and experience in hotel room operations. Supervisory experience; strong interpersonal skills. Please send cover letter and resume to Ralph D. Jones.

Minimum Starting Salary: \$14,170

Job Number: PA276

Position: Manager, Guest Services

Department: Statler Inn

Description: Directly responsible to the Director of Operations of Statler Inn for the proper supervision and functions of the Front Office and Guest Services department.

Requirements: Bachelor's degree or equivalent. Working knowledge of and experience in hotel room operations. Supervisory experience preferred. Please send cover letter and resume to Ralph D. Jones.

Minimum Starting Salary: \$14,170

Job Number: PA275

Position: Campaign Manager (Repost)

Department: Johnson Graduate School of Management

Description: Responsible for the day to day operation of JGSM's capital fund raising plan and be principal liaison among JGSM, central University Development staff and Campaigns' Steering Committee. Additional responsibilities will include planning, directing and executing the overall coordination of campaign fund raising for JGSM, preparing budgets, developing operating plans and fund raising strategies.

Requirements: Bachelor's degree or equivalent is necessary. Candidates must have five years fund raising experience with specific capital campaign experience and experience with volunteer development. Please send cover letter and resume to

Please Post

Administrative/Professional

The minimum salaries listed are for recruitment purposes only.

*Position: Assistant Director

Department: Computer Services (APS)

Description: Responsibilities include: Directing professional staff in designing and developing programs, maintaining existing systems and developing new systems; insuring proper operation and maintenance of all computer and data processing equipment; planning budgets and managing personnel activities and providing technical support and expertise as appropriate.

Requirements: Bachelor's degree with computer or business related courses or equivalent combination of education and experience. Master's degree highly desirable. Considerable experience in computer operations and/or applications or operating system development. Considerable administrative or supervisory experience is necessary. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA284

*Position: Director of Student Aid Fund Raising

Department: University Development

Description: Senior fundraiser responsible for student—financial aid fundraising. Coordinates University-wide financial aid fundraising initiatives seeking large individual gifts from individuals, corporations, and foundations.

Requirements: Bachelor's degree or equivalent. Five years of broad based development experience preferably in higher education. Knowledge of and ability to articulate contemporary financial aid issues at a major college or university. Please send cover letter and resume to Ralph D. Jones by August 9, 1985.

Job Number: PA289

*Position: Research Support Specialist III

Department: Center for Environmental Research

Description: Supervise community and statewide groundwater investigation projects; assist government officials and interested citizens in understanding and managing groundwater systems.

Requirements: Bachelor's or higher degree in environmental science or engineering field and 3 years professional experience in water resource management; strong quantitative skills; some computer programming experience; training in soil science, hydrology, geology preferred. Excellent oral and written communication skills. Please send cover letter and resume to Cynthia Smithbower.

Minimum Starting Salary: \$20,000

Job Number: PT2810

*Position: Student Development Specialist IV

Department: Minority Educational Affairs

Description: Serve as the Assistant Director of Minority Education Affairs office. Provide organizational, administrative and technical assistance to minority student organizations as they plan, develop, and implement cultural, educational, and social programs. Administer the departmental student employment program. Provide direct supervision for student support staff and indirect supervision over the student employees.

Requirements: Master's degree or equivalent combination of education and experience is necessary. Degree in student personnel administration, higher education administration, psychology, or sociology is desirable. A demonstrated knowledge of group dynamics, organizational psychology or humanistic education is essential. Please send cover letter and resume to Ralph D. Jones by August 15, 1985.

Job Number: PA2811

*Position: Auditor II

Department: Auditor Office

Description: Under supervision of the University Auditor, perform audits within all areas of the University's fiscal operations including cash, investments, inventories, receivables, payables, payroll, grants and contracts and computer services. Evaluate internal controls and determine compliance with University procedures. Draft reports outlining results of audits for key University administration. Provide direction and supervision to clerks or other audit personnel in the performance of some audit assignments.

Requirements: Bachelor's degree in accounting. 2-3 years experience in public accounting or internal auditing. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA2814

*Position: Theatre Production Coordinator

Department: Theatre Arts

Description: Supervise scheduling requirements for Theatre Cornell productions, including design and production deadlines; coordinate and monitor rehearsal procedures; train student production crews, particularly stage managers; conduct production meetings.

Requirements: Bachelor's or Bachelor's of Fine Arts in Theatre Arts; technical theatre or stage management concentration required. Broad understanding of all areas of theatre production; production management or stage management experience; excellent organizational and interpersonal skills; professional theatre background preferred. Please send cover letter and resume to Ralph D. Jones by August 9, 1985.

Job Number: PA283

*Position: Grant & Contract Officer I

Department: Office of Sponsored Programs

Description: Responsible for reviewing, processing and administering proposals and resulting awards subject to review and approval of an Associate Director and negotiating research contracts.

Requirements: Bachelor's degree or equivalent or 3-4 years of equivalent work experience. Excellent interpersonal and communication (written and oral) skills; ability to work independently. Some traveling involved. Please send cover letter and resume to Ralph D. Jones by August 9, 1985.

Job Number: PA287

*Position: Health Associate II

Department: University Health Services

Description: Using health association physician approved guidelines, provide primary health care to university students, faculty and staff members. Emphasis is placed on continuity of care, health education, health maintenance and preventive care.

Requirements: NYS RN—PA license and graduate of an accredited NP—PA program required. Experience and professional certification preferred. Please send cover letter and resume to Ralph D. Jones by August 9, 1985.

Job Number: PA2815

*Position: Staff Nurse

Department: University Health Services

Description: Screen, assess and treat or refer outpatients, utilizing clinical nursing skills. Assist nursing supervisor with the management of clinic flow.

Requirements: Three year nursing program degree required. New York State Nursing License. One or more years recent experience in outpatient nursing. Please send cover letter and resume to Ralph D. Jones by August 9, 1985.

Job Number: PA286

*Position: Staff Nurse

Department: University Health Services

Description: Assist the nurse supervisor with the management of clinic flow and operation of the Contraception, Gynecology, and Sexuality Service (CGSS)

Requirements: New York State Licensed Registered Nurse. Family planning experience desirable, some RN and managerial experience. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA2812

*Position: Senior Accountant

Department: Controller (Endowed Accounting)

Description: Serve as liaison between central accounting and all Enterprise and Service Units on accounting and systems matters. Monitor units' operations and provide information as requested by University management; responsible for Endowed Colleges plant fund accounting and University debt service payments; prepare University tax returns and portions of quarterly and annual financial reports; supervise staff of three.

Requirements: Bachelor's degree or equivalent in business or accounting. Minimum of 3 years professional accounting experience. Strong interpersonal skills and previous supervisory experience highly desirable. Familiarity with computerized financial systems is essential. Please send cover letter and resume to Esther L. Smith by August 1, 1985.

Job Number: PC288

*Position: Graphics Research Programmer

Department: Theory Center

Description: Provide, under general supervision, highly specialized systems support to an advanced graphics program. Develop highly specialized and complex large scale operating systems, software and hardware. Design and oversee engineering modifications on extension to such operating systems to meet organizational goals for computer usage. Responsible for overall system efficiency. Oversee development of scientific work stations.

Requirements: Bachelor's degree or equivalent with related computer courses. 3-5 years experience. Knowledge of UNIX, microcomputers and graphics hardware devices. Ability to program in FORTRAN, C, PASCAL, and Assembler. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT124

Position: Director, Northeast Regional Office

Department: Public Affairs Regional Offices - Wellesley, Mass.

Description: Plan, organize and direct a comprehensive regional Public Affairs program representing the University in its Alumni Affairs, Development, Public Relations and Alumni Secondary Schools activities. Recruit, train and manage an extensive alumni volunteer regional network in close coordination with the University.

Job Number: PA038

Position: Counselor—Therapist
Department: University Health Services
Description: Provide professional expertise in working with a university population as a short-term therapist. Crisis intervention, campus outreach, emergency coverage, group work, couple therapy, and applied clinical research will comprise the majority of duties.
Requirements: Ph.D. in clinical or counseling psychology from an American Psychological Association (APA) approved program and completion of an approved APA internship required. University experience preferred. Please send cover letter and resume to Ralph D. Jones by July 26, 1985.
Job Number: PA264

Position: Applications Programmer III
Department: Mechanical & Aerospace Engineering
Description: Responsible for continued development of a large, sophisticated software package. Will be involved in documentation, development of new applications and system utilities to support ongoing application development.
Requirements: Bachelor's degree or Master's in a technical field. Some programming experience in C, C++, UNIX, color graphics and distributed processing. Please send cover letter and resume to Cynthia Smithbower.
Job Number: PT266

Position: Dining Manager
Department: Cornell Dining
Description: Coordinate campus-wide Nutrition Awareness program and manage an independent dining unit.
Requirements: Bachelor's degree or equivalent Certified Dietician (American Dietetic Association). Two to three years experience as dietician dining manager required. Teaching experience desirable. Please send cover letter and resume to Ralph D. Jones by July 26, 1985.
Job Number: PA263

Position: Technical Services Supervisor
Department: Lab of Nuclear Studies
Description: Provide support for design of software for a high energy physics research facility. Manage the drafting group involved in mechanical drafting and detailing technical illustrations and electrical drawing.
Requirements: Bachelor's degree in mechanical engineering or Associate's degree in mechanical engineering plus at least five years of experience. Supervisory experience is required. Familiarity with mechanical illustrating and/or electrical drawing preferred. Please send cover letter and resume to Cynthia Smithbower.
Job Number: PT253

Clerical

applicants interested in positions requiring must take an official University test. Tests given on Monday and Wednesday at 10:00 in Room 337, Statler Hall. Please contact Services for an appointment.

Position: Administrative Aide, GR22
Department: Summer Session, Extramural Studies and Related Programs
Description: Directly assist the Summer Session Extramural Registrar in the development, presentation, and execution of all processes necessary to register participants in the Division. Process all paperwork for Extramural Study registration processes; course enrollment record keeping registrants; work with clientele as well as staff and faculty of the University.
Requirements: Associate's degree in business or equivalent. Medium typing. Extensive knowledge of University Registrar operations as well as administrative procedure for various colleges within Cornell. Excellent communication and organizational skills required. Some experience with 3270 on-line computer system desirable. Some accounting.
Minimum Starting Salary: \$13,667
Job Number: C2810

Position: Accounts Coordinator, GR21
Department: Public Affairs Records
Description: Monitor and analyze University transactions specifically to compile and generate reports conforming to the criteria of flow of data with accounting, the Investment office, Public Affairs, as well as all other Cornell departments and colleges; include mainframe and P.C. data and retrieval.
Requirements: Associate's degree or equivalent in accounting. Light typing. Ability to supervise,

schedule work, meet deadlines and work under pressure with minimal supervision. Good interpersonal, organizational and communication skills. Minimum 1-3 years experience with on-line computer system helpful. CRT experience preferred. Knowledge of Cornell accounting preferred.
Minimum Starting Salary: \$12,968
Job Number: C283

***Position:** Administrative Aide, GR20
Department: University Development
Description: Provide administrative assistance to the Director of Capital Projects. Coordinate flow and oversee completion of work within the office; prepare reports; arrange meetings; compile data; oversee production of proposals; assist in special projects and events.
Requirements: Associate's degree or equivalent. Medium typing. Minimum 3 - 5 years experience working in a busy office with considerable public contact. Ability to work with a wide range of individuals.
Minimum Starting Salary: \$12,209
Job Number: C284

***Position:** Administrative Aide, GR20
Department: National Astronomy & Ionosphere Center
Description: Provide administrative and secretarial assistance to N.A.I.C., Research Park facility. Purchase electronic components; maintain accounting system for several projects; preparation of technical publications, reports, operational manuals and proposals; type all necessary accounting forms and purchase requisitions; make travel arrangements for engineers and technical people; maintain technical files and library.
Requirements: Associate's degree or equivalent. Medium typing. Minimum 3 - 5 years secretarial experience. Excellent typing skills, including technical typing. Knowledge of microcomputer applications necessary. Ability to use technical software, e.g. WordPerfect, Britscientek. Knowledge of Cornell Endowed accounting system necessary. Excellent organizational, interpersonal and communication skills. Ability to organize time and responsibilities efficiently. Ability to work independently. Confidentiality essential.
Minimum Starting Salary: \$12,209
Job Number: C281

***Position:** Secretary, GR20
Department: Vice President for Research & Advanced Studies
Description: Provide secretarial and administrative support to V.P. Research and Advanced Studies, Executive Staff Assistant, Director of Government Affairs and Assistant to President. Handle travel arrangements; telephone; type a variety of complex materials using word processor; maintenance of data and filing systems; handle other projects as assigned.
Requirements: Associate's degree in secretarial science or equivalent combination of education and experience. Heavy typing. Minimum 2 - 5 years secretarial experience (Cornell preferred). Familiarity with Cornell travel arrangements desirable. Advanced training—skills with IBM Displaywriter. Technical typing. Excellent spelling, grammar, and syntax. Organizational skills. Attention to detail very important in a fast paced environment.
Minimum Starting Salary: \$12,209
Job Number: C2816

***Position:** Circulation—Reserve Supervisor, GR20
Department: Fine Arts Library
Description: Direct the operation of the Circulation—Reserve Desk and maintain stacks. Supervise and evaluate work of the night supervisor and student assistant; interpret circulation policy to the public; continuous contact with faculty, students and staff. Other duties as assigned. Some weekend hours.
Requirements: Bachelor's degree or equivalent. Medium typing. Previous library experience highly desirable. Strong public service orientation and demonstrated supervisory skills. Ability to work quickly and accurately under pressure.
Minimum Starting Salary: \$12,209
Job Number: C2815

***Position:** Research Aid, GR20
Department: Neurobiology & Behavior
Description: Provide administrative support to professor and research group. Assist in preparation of research grants; prepare reports; type and proofread scientific papers; serve as liaison with on- and off-campus contacts in setting up meetings, workshops, lectures; coordinate travel; handle daily correspondence; maintain files; order supplies; assume other responsibilities as needed.
Requirements: Associate's degree or equivalent required. Heavy typing. Scientific background helpful, particularly biology. Minimum 3 - 5 years secretarial experience. Word processing experience

required (TRS-80 or IBM-PC preferred). Excellent organizational and communication (written and oral) skills.
Minimum Starting Salary: \$11,739
Job Number: C286

***Position:** Office Assistant, GR18
Department: Law School
Description: Assist Admissions staff with processing application materials and records; type correspondence; telephone and receptionist duties; use IBM PC for word processing.
Requirements: High school diploma or equivalent. Business or secretarial school desirable. Medium typing. Good verbal and written communications skills. Ability to process large amounts of information quickly and accurately. Ability to deal with highly confidential material. Knowledge of IBM PC or willingness to learn.
Minimum Starting Salary: \$10,920
Job Number: C2811

***Position:** Data Entry Operator, GR18
Department: Computer Services
Description: Key enter or key verify data via CADE keystations. 39 hours a week; shiftwork; weekends.
Requirements: High school diploma or equivalent. Medium typing. Data entry and/or key-punch experience, preferable CADE system. Minimum 1 - 2 years experience.
Minimum Starting Salary: \$10,920
Job Number: C282

***Position:** Office Assistant, GR18
Department: Veterinary Medical Teaching Hospital
Description: Responsible for cashing and compiling bills for outpatients; answer telephone; take messages for clinicians and scheduling appointments; coordination of Large Animal Clinic census; assemble medical records; mail progress reports to referring veterinarians; maintain file of referring veterinarians; xerox; type. Other duties as assigned; act as back-up for admissions receptionist and ambulatory secretary. Some weekends and holidays required.
Requirements: High school diploma or equivalent. Light typing. Good public relations. Knowledge of medical terminology essential. Ability to work well under pressure.
Minimum Starting Salary: \$10,500
Job Number: C2814

***Position:** Office Assistant, GR18
Department: Unions & Activities
Description: Provide clerical support for Head Account Clerk. Process daily banks, checkout sheets, daily cash reports, monthly reports, Cornellcards and mail; oversee drycleaning, laundry and film development services and the Student Services area.
Requirements: High school diploma or equivalent; course work in accounting preferred. Some accounting and bookkeeping experience desired. Strong organizational, communication and interpersonal skills.
Minimum Starting Salary: \$10,920
Job Number: C2813

***Position:** Office Assistant, GR17
Department: Diagnostic Laboratory
Description: Primary receptionist for the Diagnostic Lab. Answer telephones (7 line system); assist the professional and technical staff by communicating test results to clients by answering and/or referring questions to the proper areas of concern and by sending out and filling all test results for future reference; deal with the general public and all incoming visitors and clients.
Requirements: High school diploma or equivalent. Light typing. CRT terminal familiarity. Good general office skills (filing, photocopying, and communication).
Minimum Starting Salary: \$9,967
Job Number: C289

***Position:** Office Assistant, GR17
Department: Summer Session, Extramural Studies, and Related Programs
Description: Serve as receptionist; process mail; order supplies; perform general typing for office; process requests for information. Serve as assistant to Division Registrar in registration processes; operate 3270 computer system in key punching and date verification.
Requirements: High school diploma or equivalent. Medium typing. Some familiarity with Cornell highly desirable. Minimum 1 to 2 years office experience. Ability to work with diverse public. Excellent telephone communication skills required. Requires ability to work independently and under great pressure. Background with IBM 3270 computer and familiarity with University Registrar's system desirable. Experience with WordPerfect.
Minimum Starting Salary: \$10,366
Job Number: C2812

Position: Administrative Aide, GR20
Department: University Admissions Office
Description: Prepare statistical reports; format data tables and draw graphs from raw data; perform day-to-day clerical duties; respond to requests from other University offices or the public for statistical information; prepare and disseminate drafts of university publications for revision; prepare forms for travel. Responsible for written correspondence and phone calls.
Requirements: Associate's degree or equivalent. Heavy typing. Excellent secretarial skills. Extensive experience with the preparation of statistical reports and tables and graphs. Strong organizational and interpersonal skills. Ability to deal positively with the public.
Minimum Starting Salary: \$12,209
Job Number: C2714

Position: Administrative Aide, GR20
Department: Natural Resources
Description: Responsible for secretarial and clerical activities of the Cooperative Fish and Wildlife Research Unit. Word processing of theses, reports, manuscripts; preparation of budget materials for research proposals; receptionist; schedule appointments and coordinate meetings for staff. Other duties as assigned.
Requirements: Associate's degree or equivalent. Medium typing. Minimum 2-5 years experience. Knowledge of word processing essential. Knowledge of University and U.S. government accounting and procurement procedures required. Excellent organizational, interpersonal and communication (written and oral) skills.
Minimum Starting Salary: \$11,739
Job Number: C2716

Position: Administrative Aide, GR20 (Repost)
Department: Physics
Description: Provide administrative and secretarial support to department chairman and manager. Prepare appointment forms and payroll vouchers. Maintain student, faculty and staff records. Organize department and grad student activities. Extensive contact with students, faculty and public. Word processing and records processing.
Requirements: High school diploma or equivalent. Heavy typing. Business or secretarial school desired. At least three years related experience. Familiarity with academic environment and programs necessary -- knowledge of Cornell particularly helpful. Strong organizational and interpersonal skills; ability to handle large volume of detail essential. Word processing helpful.
Minimum Starting Salary: \$12,209
Job Number: C2411

Position: Senior Searcher, GR20
Department: Serials—Olin Library
Description: Search, order, check-in, claim and invoice approval for serials titles in Chinese, Japanese and Korean; participate in special projects which involve East Asia serial titles; responsible for problem solving related to East Asian serials.
Requirements: Bachelor's degree or equivalent; academic background in East Asian studies. Light typing. Knowledge of East Asian bibliography or willingness to take course in this subject at Cornell. Knowledge of Chinese and Wade-Giles system of romanization; knowledge of Japanese.
Minimum Starting Salary: \$12,209
Job Number: C275

Position: LC Cataloger, GR20
Department: Catalog—Olin Library
Description: Catalog monographs with LC copy on Humanities Team utilizing RLIN system (with advanced training and some proficiency, may catalog some RLG member library copy) authority work; shelflist; added volumes; data base maintenance activities. Other cataloging duties as assigned.
Requirements: Bachelor's degree or equivalent; academic background in humanities preferred. Light typing. One year work experience in libraries, preferably technical services. Ability to accurately perform and organize detailed work. Strong communication and interpersonal skills.
Minimum Starting Salary: \$12,209
Job Number: C276

Position: Accounts Assistant, GR19
Department: Summer Session
Description: Assist accounts coordinator in computerized accounting functions and business transactions. Payments; monthly reconciliation with operating statement; some typing and filing.
Requirements: High school diploma or equivalent. Light typing. Minimum 3-5 years bookkeeping experience, preferably with Cornell. Experience with IBM PC and LOTUS 123 required.
Minimum Starting Salary: \$11,570
Job Number: C271

Job Opportunities

Position: Secretary, GR19

Department: LASSP

Description: Provide secretarial support for 4-5 faculty members and their research groups. Assist professors in preparation of grant proposals; type and prepare articles for publication; maintain professor's calendars and make travel arrangements. Considerable interaction with other Cornell departments.

Requirements: Associate Secretarial Science degree or equivalent. Heavy typing. Good technical typing and communication skills essential. Knowledge of Cornell and Ithaca communities helpful. Strong organizational skills and ability to work independently. Experience with Microm Word Processor helpful.

Minimum Starting Salary: \$11,570

Job Number: C277

Position: Secretary, GR18

Department: University Admissions

Description: Provide secretarial support to Associate Director and UAO Administrative Manager. Type; file; machine transcribing; answer telephones; compile reports; prepare vouchers and travel reimbursements; handle mail and correspondence; assist in budget preparation; facilitate folder flow to and from committees; work with Alumni Secondary School Committee members, parents, counselors, students and college personnel. Use word processor and CRT terminal (computer system).

Requirements: High school diploma or equivalent; business or secretarial school desirable. Heavy typing. Minimum 1-3 years experience. Word processor and transcribing skills. Excellent organizational, interpersonal and communication (written and oral) skills.

Minimum Starting Salary: \$10,920

Job Number: C2718

Position: Senior Records Assistant, GR18

Department: Serials—Olin Library

Description: Assist in the acquisitions, receipt and processing of government document material which includes checking-in; maintaining serials Kardex section; place document monograph and serial orders and claims; maintain routine correspondence; approve invoices; audit charges on deposit accounts. Other duties as assigned.

Requirements: High school diploma or equivalent. Light typing. Some business—clerical experience desirable. Ability to perform detailed work accurately.

Minimum Starting Salary: \$10,920

Job Number: C274

Position: Secretary, GR18

Department: Office of Instruction - Agriculture & Life Science

Description: Provide receptionist—secretarial support for the Office of Student Services; channel all traffic (students, faculty, telephone inquiries); type correspondence, office forms and reports; handle student records; large mailing; file; arrange meeting and travel reservations. Monday - Thursday, 8:00 a.m. - 5:00 p.m.; Friday, 8:00 a.m. - 4:00 p.m.

Requirements: High school diploma or equivalent; business or secretarial school desirable. Medium typing. Computer and/or word processing courses helpful. Strong interpersonal skills with ability to deal with students. Excellent spelling and grammar. Previous experience in an academic environment desirable. Word processing or micro-computer experience helpful. High level of confidentiality required.

Minimum Starting Salary: \$10,500

Job Number: C272

Position: Secretary, GR18

Department: Cooperative Extension Administration

Description: Provide secretarial support for the Associate Director of Cooperative Extension and a Program Coordinator in the Agriculture and Natural Resources Program Office. Type a wide variety of materials; assist in creating and maintaining files; handle mail; schedule appointments, etc.; arrange travel; receptionist.

Requirements: High school diploma or equivalent; business or secretarial school desirable. Medium typing. Knowledge of IBM Word Displaywriter and IBM PC. Minimum 1-3 years experience. Excellent organizational, interpersonal and communication (written and oral) skills.

Minimum Starting Salary: \$10,500

Job Number: C2712

Position: Senior Circulation—Reserve Assistant, GR18

Department: Veterinary Library

Description: Coordinate the daily operation of

the Circulation—Reserve Desk and perform various circulation functions. Search missing items; bill fines and replacements, etc.; maintain the reserve collection and stacks; staff the Circulation—Reserve Desk and answer directional and informational questions; oversee and train 12 student assistants; coordinate non-ILL photocopy service.

Requirements: Bachelor's degree or equivalent experience and/or training. Light typing. Strong public service orientation essential. Previous library experience highly desirable. Ability to accurately perform and organize detailed work. Strong communications and interpersonal skills.

Minimum Starting Salary: \$10,500

Job Number: C2713

Position: Office Assistant, GR16

Department: History

Description: Provide secretarial support to Director of Undergraduate Studies. Receptionist; manager of office supplies; type; general office assistance. Other duties as assigned.

Requirements: High school diploma or equivalent. Medium typing. General office skills. Excellent organizational, interpersonal and communication (written and oral) skills.

Minimum Starting Salary: \$9,874

Job Number: C278

Position: Office Assistant, GR15

Department: University Development

Description: Type; maintain files; answer phones. Other duties as assigned.

Requirements: High school diploma or equivalent. Light typing. Minimum 6 months - 1 year of office experience. Good organizational skills.

Minimum Starting Salary: \$9,403

Job Number: C2715

General Service

*Position: Maintenance Mechanic, GR23

Department: Buildings & Properties, Geneva

Description: This position reports to the Foreman of the Electric—Refrigeration Shop with prime responsibility for service, repair, maintenance and installation of refrigeration systems and related electrical and plumbing equipment.

Requirements: High school diploma or equivalent combination of formal training and experience required. Minimum 5 years of demonstrated knowledge and actual experience in the service of and installation of refrigeration, electrical and plumbing systems is required.

Minimum Starting Salary: \$13,928

Job Number: S284

*Position: University Service Officer, GR21 (Two positions)

Department: Public Safety

Description: Responsibilities include prevention and detection of criminal behavior; external and internal patrol of University property within his/her area for fire, safety and crime hazards; enforcement of parking regulations occurring on the property of Cornell University.

Requirements: High school diploma or equivalent. Further formal education, training, and/or experience in the law enforcement field preferred. Satisfactory completion of basic University Service Officer training. Knowledge of Cornell University rules and regulations; U.S. citizenship; eyesight 20/40 corrected to 20/20; no record of convictions other than minor traffic infractions; NYS driver's license; ability to obtain a NYS pistol permit within 90 days of employment. Must pass physical examination.

Minimum Starting Salary: \$12,968

Job Number: S288, S289

*Position: Animal Attendant, SO20

Department: Poultry & Avian Sciences (Statutory)

Description: In-line supervisor at Poultry Farm. Responsible for health, welfare (daily care) of research laboratory animals being raised and maintained in support of genetics, physiology, nutrition, food science and extension research projects; also facilities and equipment maintenance—care, etc. Monday - Thursday, 8:00 a.m. - 4:30 p.m.; 8:00 a.m. - 3:30 p.m. Friday and/or weekends as requested.

Requirements: Associate's degree in animal science or equivalent experience; certified animal technician. Pesticide application certified, NYS drivers license, NYS Red label certification. 3 to 5 years experience working with chickens as a laboratory—research animal. Supervisory experience.

Minimum Starting Salary: \$6.04—hour

Job Number: S285

*Position: Groundsworker, SO18

Department: Grounds Department (Endowed)

Description: Perform general landscape maintenance and construction tasks on campus grounds. Operate motorized turf tractors, mowers, snow plows, and trucks. May be assigned other groundsworkers and seasonal help. Monday - Thursday, 7:30 a.m. - 3:30; Friday, 7:30 a.m. - 2:30 p.m.

Requirements: High school diploma or equivalent. Knowledge of landscape maintenance skills and techniques. Courses in ornamental horticulture, agronomy, arboriculture desirable. Excellent physical condition. Field experience in landscape maintenance, landscape contracting and construction, grounds equipment operation, application of pesticides, and equipment repair desirable.

Minimum Starting Salary: \$4.98—hour

Job Number: S283

*Position: Animal Attendant, SO18

Department: Veterinary Medical Teaching Hospital (Statutory)

Description: Milk cows; clean and maintain milking equipment; feed and care for animals in the Large Animal Clinic; groom animals; disinfect stalls when animals are discharged. Unload trucks, i.e. hay, straw, wood shavings, supplies. Other duties as required by the supervisor. Monday - Friday, 39 hours (to be arranged); some holidays and weekends required.

Requirements: High school diploma or equivalent. Some experience with large animals. Milking experience desirable.

Minimum Starting Salary: \$5.41—hour

Job Number: S287

*Position: Food Service Worker, SO16

Department: Unions and Activities (Endowed)

Description: Prepare meats, cheeses, salads, and soups daily. Work opening shift. Prepare catered coffee services as required. Delivery of prepared food items to campus and community locations. Monday - Friday, 7:00 a.m. - 3:30 p.m.

Requirements: High school diploma or equivalent. Use of cash register, slicer, ovens, coffee-makers, basic food preparation and skills dealing with customers. Driver's license necessary.

Minimum Starting Salary: \$4.47—hour

Job Number: S286

Position: Cashier, GR17

Department: Statler Inn

Description: Under general supervision, oversee and maintain cashing—accounting operation through training, scheduling and supervising cashiers. Monday - Friday, 9:00 a.m. - 5:30 p.m.; occasional weekends.

Requirements: High school diploma or equivalent. 1-2 years cashier experience; some supervisory experience.

Minimum Starting Salary: \$10,366

Job Number: S273

Technical

Outside applicants for technical positions should submit an employment application, resume, transcripts and a list of laboratory techniques and equipment or computer languages and hardware with which you are familiar. This information will be kept active for six months. For each position you are qualified and wish to be a candidate for, submit a cover letter including position title, department and job number, to Cynthia Smithbower. Current Cornell employees should submit an employee transfer application, resume and cover letter. Outside applicants with training and/or experience in the following areas are encouraged to apply: biochemistry, chemistry, microbiology, electronics, physics and licensed animal health technician.

*Position: Technician, GR20

Department: Veterinary Medical Teaching Hospital

Description: Take radiographs, process films of animal patients and research materials as required. Some weekend and holiday work.

Requirements: NYS Licensed Animal Health Technician or eligible for licensure and/or Licensed Radiologic Technician. Experience handling animals preferred.

Minimum Starting Salary: \$11,739

Job Number: T284

*Position: Animal Health Technician, GR19

Department: Veterinary Administration

Description: Provide night coverage for the Large Animal Clinic to assist with emergency surgery, night admissions, medications and to check on animals throughout the night. Nights - 11:00 p.m. - 7:00 a.m.

Requirements: Animal Health Technician, li-

censed by the State of New York required. Two years of experience with large animals preferred. Apply by August 2, 1985

Minimum Starting Salary: \$11,125

Job Number: T282

*Position: Technician, GR18

Department: Equine Drug Testing & Research NYC

Description: Perform analysis of blood and urine samples in a field drug testing laboratory to serve Aqueduct, Belmont and Saratoga Race Tracks. Relocation to Saratoga Springs, NY the month of August each year. Assist laboratory director as requested. Five days a week; includes weekends and holidays.

Requirements: Associate's degree in chemistry or a related field. Some experience with Thin Layer Chromatography and general laboratory procedures required. Familiar with gas chromatography preferred.

Minimum Starting Salary: \$10,500

Job Number: T283

Position: Electronics Technician, GR24

Department: Biomedical Electronics Service

Description: Provide technological support to research, teaching and clinical programs of the College of Veterinary Medicine with emphasis on electronics and some microprocessor development. Repair, maintain, design and build electronic and electromechanical instrumentation.

Requirements: Associate's degree in Electronics with courses in computer technology. Some microprocessor experience preferred; FCC license desirable. Some experience working with and designing of electronic circuits at state-of-the-art level as well as experience with electronic instrumentation and computer interfacing circuits. Apply by August 2, 1985.

Minimum Starting Salary: \$14,779

Job Number: T274

Position: Technician, GR24

Department: Diagnostic Laboratory

Description: Manage and supervise technical operations of Mycobacteriology laboratory and the Johnes control program. Perform and supervise research techniques and procedures for the isolation, identification and serological detection of Mycobacterium paratuberculosis (Johnes).

Requirements: Bachelor's degree in microbiology or related field; Master's degree preferred. Must have a NYS drivers license. Three to five years laboratory and supervisory experience. Experience with DNA hybridization, Enzyme linked Immunosorbent Assay, tuberculosis culture techniques, aerobic—anaerobic bacteriology, mycology and agar gel immunodiffusion and fluorescence antibody techniques.

Minimum Starting Salary: \$14,779

Position: Technician, GR22

Department: Pharmacology

Description: Conduct experiments and analyze results in physiological—pharmacological research relating to the cellular and organ uptake and metabolism of thyroid hormones. Calculation and analysis of data using statistics and graphics. Perform independently, to some extent, in the design and interpretation of results.

Requirements: Bachelor's degree in Biochemistry, Physiology, Biology or related field. 2-4 years of related work experience.

Minimum Starting Salary: \$13,141

Job Number: T271

Position: X-Ray Technologist, GR20

Department: University Health Services

Description: Responsible for general radiography of patients including students, faculty, staff and private patients of Orthopedic Surgeons. Exams include chests, extremities, spines and skull work. Other duties include office duties such as typing reports and filing.

Requirements: High school diploma or equivalent; completion of certified radiologic technologist school and NYS license for General Radiologic Technologists. Light typing. Requires some weekend work. Please submit cover letter and resume by July 26, 1985 to Cynthia Smithbower.

Minimum Starting Salary: \$12,209

Job Number: T273

Position: Technician, GR18

Department: Equine Drug Testing & Research

Buffalo—Batavia Raceway
Description: Perform analysis of blood and urine samples in a field drug testing laboratory at Saratoga. Assist laboratory director as requested. Saturday, Sunday & holidays included, 1:30 p.m. - 10:00 p.m.

Requirements: Associate's degree in chemistry

Continued on Page 12

Cornell Corn to Be Tested in Space

BY YONG H. KIM

A space shuttle flight scheduled for next summer will carry a corn variety from Cornell for an experiment on plant growth in space.

Making the historic flight will be "Cornell 281," a popular corn variety in commercial use since 1978 in the northeastern United States. Highly productive, it is grown for grain or silage.

The experiment, originally scheduled to be conducted aboard the space shuttle "Discovery" during its June flight, was put off until 1986 because of a last-minute conflict involving the plant growth unit.

That unit, however, was put into readiness for another plant experiment now under way aboard Discovery, which went into orbit July 12, according to scientists directing the study for the National Aeronautics and Space Administration.

Meanwhile, two dozen college students from Florida and other parts of the country are now conducting ground-based flight simulation tests involving the Cornell corn at the Kennedy Space Center. These six-week tests are scheduled for completion later this month, according to La Donna Montgomery of the Bionetics Corp., which is conducting plant experiments for NASA.

Results of the ground-based experiments will be compared with those to be obtained from next year's space experiment, said Montgomery, who is an experiment and curriculum assistant for the space life sciences training program designed to introduce college students to space research.

The focus of the corn experiment is to examine gravity as a stress on plant growth, based on an earlier study conducted by scientists at the Boyce Thompson Institute for Plant Research (BTI) located at Cornell. When corn plants were given a changed gravity orientation, by holding them in a horizontal position, the amount of a cell-wall material called "callose" increased in the plant tissue — a response scientists had never seen before.

This finding was made in a study conducted by Carl Leopold, a BTI scientist, and Mordecai D. Jaffe, who was a visiting scientist at BTI in 1983. Jaffe is a professor at Wake Forest University in North Carolina. The corn variety used in their study was Cornell 281.

Based on the finding, Bionetics scientists decided to test the same Cornell corn in space to see if a similar response, among other things, would occur in weightless conditions. College students involved in this ex-

periment plan to grow corn seedlings in a specially designed plant growth unit that will be installed in the space shuttle's mid-deck locker.

One half of the corn seedlings grown in space will be harvested and frozen while in space; the other half will be harvested one hour after the shuttle returns to Earth. The tissue grown during space flight will be compared with this counterpart grown on the ground under simulated space flight conditions.

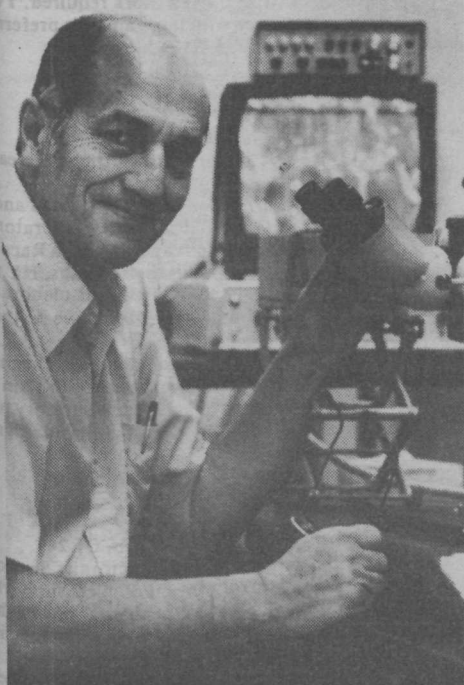
The aim is to determine several stress indicators, including cell size, shape, and callose deposition, according to Montgomery.

Bionetics scientists obtained the Cornell 281 corn seed through Leopold and the New York State Seed Improvement Cooperative, located near campus.

The Cornell corn variety was developed by Clifford Manchester and the late Clarence Grogan in the State College of Agriculture and Life Sciences at Cornell.

Use of the Cornell corn came as a surprise to William D. Pardee, chairman of Cornell's Department of Plant Breeding and Biometry.

"We are delighted that our corn can be helpful in this space research," he commented. "We thought Cornell 281 would go far, but this is farther than we expected."



Carl Leopold, a scientist at the Boyce Thompson Institute for Plant Research, will be watching to see how "Cornell 281" corn behaves in space during an upcoming shuttle flight.

BUILDINGS

'Sick Building Syndrome' Growing in Energy-Saving Construction

By SUSAN S. LANG

Do you get headaches at work? Are you cranky after just a few hours on the job? Do your eyes burn; does your nose run, throat hurt, or stomach get upset at the office, but you feel fine as soon as you leave?

If so, you may be a victim of the "sick building syndrome," a growing phenomenon where offices are making workers sick. Air pollution in offices where ventilation is poor can cause headaches, breathing problems, skin rashes, eye irritations, lethargy, dizziness, and even memory lapses.

Pollution in many offices, in fact, is as bad and sometimes worse than the air in America's most polluted cities, according to several recent studies.

"As buildings have been buttoned up to save energy, the problem has grown more serious," according to Franklin Becker, associate professor of human/environmental relations in the State College of Human Ecology. "Polluted air not only can make people ill, but also have a dramatic impact on performance."

Sources of the pollution are many. Tobacco smoke is considered one of the worst cul-

prits because it contains very small particulates that hang in the air for hours and can be easily inhaled. In addition, it contains several hundred substances that could be toxic, including carbon monoxide, formaldehyde, hydrocarbons, ammonia, tars, and nicotine.

Formaldehyde is another major source of problems, Becker said. It is a gas that seeps out of urea formaldehyde foam insulation, particle board, partitions, paneling, new furniture, and carpets, rugs, and drapes made from synthetic fibers. It can cause eyes to burn, or coughing, breathing problems, nausea, and dizziness.

A multitude of chemicals used in duplicating machine fluids, rubber cement, carbon and carbonless paper, correction fluids, telecopiers, and even typewriter ribbons and typing paper can contribute to an indoor pollution problem.

Photocopiers also can be bad for your health. Not only are some of the chemicals used in toners and fluids dangerous if inhaled, but when the machine is in a poorly ventilated room or isn't serviced regularly, ozone can rise to dangerous levels. The telltale sign is when "electrical smells" can be

detected around the machine.

Even the bricks, rocks, and soil used in building materials are a source of air pollution because of a radioactive gas called radon that exists naturally in these substances.

"All of these factors can contribute to creating a noxious environment that affects workers physiologically and can have a very debilitating effect on motivation," Becker said. He said, however, that detecting the source of a problem often is very difficult, and when individuals complain to an employer, the complaints may not be taken seriously.

"If someone believes their office is making them sick, they should ask co-workers if they are experiencing similar difficulties. It's very hard for one person to do anything about an office pollution problem," Becker said.

Removing photocopying machines, typewriters, or bricks that may be the culprits is not the solution; improving ventilation is. Increasing the number of air exchanges, installing a better ventilation system, or checking the one that exists can be very effective, Becker said.

Sometimes, ventilation systems just recycle indoor air; sometimes the exhaust and intake pipes are close to each other so the intake sucks in polluted air. In cities where air pollution outside is a problem, systems that just bring in fresh air might not be enough. To clean the fresh air, special technology may be needed to "scrub" the air clean.

Sometimes, the ventilation system itself is the problem if it has become contaminated with bacteria, fungi, or allergens. Installing a heat exchanger might be the best alternative for many offices. Heat exchangers retain the heat from the stale indoor air as it is vented out and transfer the heat to incoming fresh air.

Becker also recommends paying greater attention to how chemicals and supplies are stored and raising the awareness among co-workers about how to minimize office pollution.

"Buildings shouldn't test the limits of human adaptability," Becker concluded, "but should support human well-being and worker effectiveness."

'Talking, Smart' Houses Respond to Electronic, Voice Commands

After a tough day at the office, all Joan wants to do is to get home to a warmed-up, well-lit house, a cooked supper, and a clean load of laundry. Although no one is home, a call to the house does the job.

That's because she has the smartest house on the block.

Although "talking, smart" houses may sound like a futuristic fantasy, it's a present reality: several hundred homes in the U.S. already are automated and can respond to electronic or even voice commands, says Joe Laquatra, a housing specialist for Cornell Cooperative Extension. Meanwhile, building associations are working on standards for more sophisticated systems in the coming decade.

So-called smart houses have a variety of capabilities. Most of the functions are designed to improve security, safety, and energy efficiency. Features may include:

- * the ability to control and automate the heat, lights, coffee pot, water sprinklers, etc. from a television set for each day of the week. Lights upstairs, for example, also could be turned off from the TV or turned on when the hall light goes on and the sprinklers could be programmed to go on when water rates of water demand are the lowest;

- * remote control capabilities from any push-button phone: commands can be made to the system from anywhere or messages can be left on the TV screen. By calling the system and pushing a particular number on the phone, for example, the house's heating system and outside lights can be triggered;

- * the sensitivity to detect an intruder and to respond by automatically sounding the alarm, blinking all the lights in the house simultaneously, and locking the bedrooms so occupants are protected;

- * the capacity to distinguish between

adult- and child-sized persons so that the system won't respond to commands to turn on the oven, for example, if there's not an adult present. Likewise, many systems have electrical sockets that won't shock probing fingers, and wiring that can't be shorted, thus preventing electrical fires;

- * the function to monitor outdoor temperatures so that the furnace goes on in just enough time to warm the house up by the time occupants come home in the evening; and

- * the ability to sense that there is no movement in an elderly person's home, for example; such a system would trigger a call or message to a relative or ambulance.

"More than one million homes already have some kind of home control system," says Laquatra who is in the department of design and environmental analysis in the State College of Human Ecology. "Accord-

ing to one manufacturer's prediction, half of all homes will be 'intelligent' by 1995."

Although that may be an exaggeration, industry associations are developing a new wiring system to be compatible with appliances that can "communicate." The National Association of Home Builders, for example, is currently working on new wiring standards that will modify current electrical codes. Soon, some new homes will be built with a wire harness so that all the appliances, phones, TV, computers, thermostats, etc. will be on a single cable wiring system. A prototype is planned for 1986.

One of the primary changes, Laquatra says, will be to replace the high voltage AC (alternating current) that is now in homes with the low voltage DC (direct current) because DC would be compatible with appliances that have microprocessors for their logic circuits.

Brief Reports

German Solid State Chemist To Lecture

Prof. Wolfgang Jeitschko of the Westfälische Wilhelms-Universität Münster will be visiting the Department of Chemistry here July 26-Aug. 21.

Jeitschko was born in Czechoslovakia, studied in Austria and has worked at the University of Illinois and the duPont de Nemours Co. before moving to professorships at Giessen, Dortmund and Münster. He is one of the world's experts on the synthesis, structure and properties of extended three-dimensional molecular structures, especially phosphides and ionic conductors.

Jeitschko will present a general lecture on his work, entitled "Preparation, Crystal Structure and Properties of Transition Metal Phosphides and Polyphosphides" at 4:40 p.m. Monday, July 29, in Baker Lab 119. He will also teach a short course on "Solid Electrolytes" on six successive Tuesdays and Thursdays, beginning at 10 a.m. July 30 in Baker Lab 132.

Poetry, Fiction Reading Benefits Famine Relief

A poetry and fiction reading to benefit African famine relief is planned by the Theatre of Ideas at 8:15 p.m. today in the Anabel Taylor Chapel.

The event is co-sponsored by the Coalition for Famine Relief, Ujamaa, the Creative Writing Committee and Sigma Phi Oliphant. A donation of \$1 will be asked, to be split

evenly between Oxfam and the Red Cross for relief efforts.

Those reading will include David McCann, director of foundation relations in the Office of University Development; Kenneth McClane, associate professor of English and director of the Creative Writing Program; Vernon Jackman '86; Nancy Lee Couto, MFA '80; Roberta Valente, Grad; and David Burak, MFA '80, with Jeff Eldredge '84 on the synthesizer.

Divestment Protesters Hold Day Hall Sit-In

Divestment protesters held a sit-in at Day Hall last Friday afternoon. The sit-in was preceded by a 3:30 p.m. rally in front of the administration building; at 4 p.m. the anti-apartheid demonstrators entered the building.

By 5 p.m. there were some 120 protesters in the building. All except one left Day Hall after being asked to do so by Cornell officials. Diarmuid J. Maguire, 28, remained and was charged with criminal trespass.

Some Openings Available For Tennis Clinics

A few openings remain for a series of 10 tennis clinics which begins Monday, July 22, at the Kite Hill courts.

Signups are open for either the 6 p.m. or the 7 p.m. sessions, which continue nightly until Friday, Aug. 2, taught by Steve Medoff. Cost of the series is \$25.

Reservations are required in advance and may be made by calling either 256-4662 or 257-4584.

Gordon Fairbanks

Gordon Hubert Fairbanks, faculty member of the Division of Modern Languages at Cornell from its founding in 1946 through 1970, died Saturday, July 13, in New Port Beach, Calif., of a heart attack. He was 72.

A specialist in Indo-European, historical linguistics, and the modern languages of South Asia, Fairbanks was cited in 1978 for his leadership in training young Indian scholars in linguistics, by the Linguistic Society of India on the occasion of its Golden Jubilee.

He was born in Calgary, Canada, attended the University of Alberta and earned a doctorate in 1947 from the University of Wisconsin.

Fairbanks left Cornell in 1970 for a position at the University of Hawaii, where he was made an emeritus professor in 1978.

He is survived by two daughters, Constance Fairbanks of Vancouver, B.C., and Anna Katherine Fairbanks Chakravarti of Calcutta, India. His wife Anna died in 1983.

Job Opportunities

Continued from Page 10

or a related field. Experience with Thin Layer Chromatography and general laboratory procedures.

Minimum Starting Salary: \$10,500
Job Number: T276

Part-time

Position: Secretary, GR18

Department: History

Description: Type and edit historical manuscripts; assign undergraduate majors to faculty advisers; maintain faculty-adviser records; assist department supervisor in administrative duties of the department. 20 hours a week.

Requirements: High school diploma or equivalent; business or secretarial school desirable. Heavy typing. Minimum 1-3 years experience. Knowledge of word processing. Strong interpersonal and communication (written and oral) skills. Minimum Starting Salary: \$10,920—annual equivalent.

Job Number: C279

Position: Laboratory Attendant, SO16

Department: Veterinary Microbiology - James A. Baker Institute for Animal Health

Description: Prepare glassware and related equipment for use in tissue culture and biochemical analysis. Sterilize glassware and prepare in order to maintain sterile condition. Monday - Friday, 8:00 a.m. - 12:00 noon.

Requirements: High school diploma or equivalent. Knowledge of autoclaves, dishwashers, acid

cleaning and methods used in cleaning glassware used in tissue culture preferred.

Minimum Starting Salary: \$4.84—hr
Job Number: S272

Position: Technical Consultant I

Department: Computer Services - Academic Computing

Description: Support the CUTHESIS word processing environment: write SCRIPT programs according to the formatting specifications prescribed by the Graduate School and maintain these programs on IBM mainframes; prepare workshops and provide consulting support for CUTHESIS software and mainframe laser printers. Monday - Friday; 20 hours a week.

Requirements: Bachelor's degree or equivalent. Three to six months of programming experience; knowledge of SCRIPT, CMS, and MVS; good communications skills; prior use of CUTHESIS in preparing theses preferred. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT265

Temporary

TEMPORARY OPPORTUNITIES: Cornell University has an ongoing need for qualified individuals willing to work on a temporary basis. We frequently need individuals to work as word processor operators, secretaries, typists, receptionists, office assistants, account clerks and data entry clerks. Requirements for these positions range from medium to heavy typing, some office—secretarial experience and knowledge of word pro-

Barton Blotter

Six incidents of cash being stolen from offices and living units on campus were reported during the period of July 8 through 14, according to morning reports of the Department of Public Safety. The losses totaled \$192.

In all, there were 13 thefts reported on campus during the seven-day period. These included \$534 in tools and building materials stolen from Robert Purcell Union, a \$225 stereo receiver taken from Von Cramm Hall, and a \$150 bicycle taken from Kappa Alpha fraternity.

Safety officials are investigating a report of an incident of sexual abuse in Clara Dickson Hall, and another case of a person serving an alcoholic beverage to an underage person.

Several incidents of criminal mischief were reported, including the setting off of two false fire alarms and the damaging of a ceiling sprinkler in Cascadilla Hall.

'Master Gardeners' from State Here Next Week to Learn More

Some 150 garden experts known as "master gardeners" who volunteer their time and expertise in carrying out horticultural programs of Cornell Cooperative Extension throughout New York state will be on campus next week to learn about teaching and research in plant sciences and related disciplines at Cornell.

The 1985 "Master Gardener Conference," scheduled for July 22-24, is expected to draw participants from 30 counties across the state, according to the conference coordinator, Robert E. Kozlowski, a Cooperative Extension associate in the Department of Floriculture and Ornamental Horticulture in the State College of Agriculture and Life Sciences.

"The purpose is to acquaint the master gardener volunteers with Cornell's research and teaching facilities in plant sciences and related fields and to exchange ideas and share experiences gained by the participants as gardening advisers," Kozlowski says.

Established in 1976, the "master gardeners" program now involves more than 700 volunteers in New York state, who assist Cornell Cooperative Extension agents by

SAGE CHAPEL

Evangelical Alliance Adviser Will Speak

Sage Chapel Services continue at 11 a.m. Sunday, July 21, with Joanne Bartel, adviser, Evangelical Alliance at Cornell, speaking on the topic, "Knowing God."

The Summer Session Choir will provide music for the service and is directed by Donald R.M. Paterson, university organist and Sage Chapel choirmaster.

Upcoming speakers include Robert Hunter, Regional Inter-Varsity Christian Fellowship, Cornell, on Sunday, July 28; Sharon Dittman, chaplain, Protestant Cooperative Ministry, Cornell United Religious Work, Sunday, Aug. 4; and Jonathon D. Levy, assistant dean in the New York State School of Industrial and Labor Relations, Cornell on Sunday, Aug. 11.

providing up-to-date information about all aspects of plants and gardening and by fielding numerous gardening questions from the public.

The Cornell conference will feature a series of workshops and tours of teaching and research facilities on and off campus. Workshops will deal with home lawn care, flower arranging, the use of plants in landscape design, and collecting and maintaining insect and disease specimens. Also planned is a demonstration on beekeeping.

Tours will include the Cornell Plantations, the ornamentals test garden, the Urban Horticulture Institute, the Boyce Thompson Institute for Plant Research at Cornell, and the Ornithology Laboratory, the Kenneth Post Laboratory and its greenhouse complex where numerous varieties of horticultural crops are studied, vegetable field trials, perennial and rock gardens, the Cornell orchard, and the Dyce Laboratory for the studies of honeybees.

For more information about the program, contact Robert Kozlowski, Department of Floriculture and Ornamental Horticulture, 15-F Plant Science, or call 256-4506.

or equivalent. Medium typing. Familiarity with Cornell accounting system preferred.

Minimum Starting Salary: \$5.69—hour
Job Number: C287

Position: Temporary Secretary, GR18

Department: Theoretical & Applied Mathematics
Description: Type technical—mathematical reports and papers for several faculty, using an IBM Personal Computer or word processor. Good organizational, communication and interpersonal skills (written and oral) required. Other duties as assigned.

Requirements: High school diploma or equivalent. Secretarial or business school preferred. Heavy typing. General office experience, technical typing, personal computer and word processing.

Minimum Starting Salary: \$5.80—hour
Job Number: C2717

Academic

Please contact department directly.

*Position: Extension Associate
Department: Education
Contact: Dr. Arthur L. Berkey, Department of Education, 209 Stone Hall. Apply by July 31.
Job Number:

Position: Research Associate

Department: Materials Science and Engineering
Contact: Professor J.M. Blakely, Department of Materials Science and Engineering
Job Number: A271

*Position: Accounts Assistant, GR19

Department: Center for International Studies
Description: Prepare vouchers, reconcile monthly accounting statements, basic records keeping, filing. Full-time, temporary until November 6, 1985.

Requirements: Associate's degree in accounting