



Tenth Birthday for Arecibo

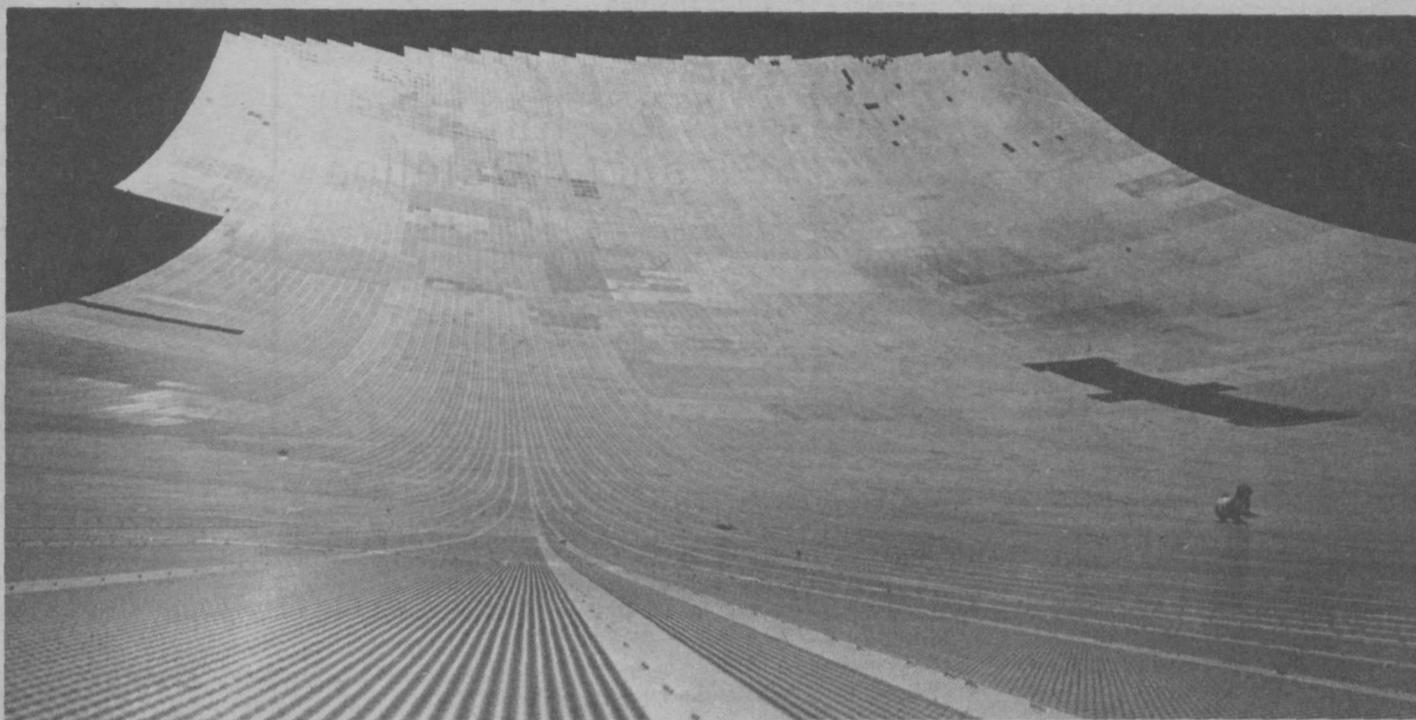
(See Photo Feature, Pages 6-7.)

The discovery of mountains on Venus, thick dust on the moon, Mercury's spin, a new superdense form of matter, a number of pulsars and the nature of the ionosphere are some of the candles on the cake for the radio telescope at the Arecibo Observatory as scientists celebrate the instrument's tenth birthday today.

Rising stark white and 565 feet in the air out of a blue-green jungle in the mountains of Puerto Rico, the concrete and steel structure has been a mecca for radio astronomers from all over the world, interested tourists and scores of graduate students, 28 of whom earned their doctoral degrees with the aid of data gathered in observations at Arecibo.

The observatory is part of the National Astronomy and Ionosphere Center (NAIC), a national research center operated by Cornell University under contract with the National Science Foundation (NSF). The NAIC has a staff of 166 members in Ithaca and Arecibo. Harold D. Craft Jr., was recently named director of operations at the observatory.

The telescope itself, the largest of its kind, is indeed getting better and not older. Ten years of constant adjustments, improvements, additions and innovations



NEW PANELS FOR OLD BOWL — The aluminum panel resurfacing is part of a current upgrading project which will render the Arecibo telescope some 2,000 times more sensitive for radar work than it was when completed in 1963.

have increased the instrument's sensitivity a thousandfold.

"We can now map distances on Venus with accuracies better than the length of a city block," said Frank D. Drake, NAIC director and professor of astronomy at

Cornell. "There are areas of the earth we don't know as well as that."

Described in the press as "the world's biggest eye," "the world's largest ear," "a spidery mechanism on a web of steel," the radio telescope at Arecibo can reach

farther into deep space than any other instrument built by man. Its 1,000-foot reflector bowl has collected radio signals emitted by quasars — mysterious star-like objects which appear to exist at the edge

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... or Treat!

Willard Straight Hall's Ivy Room features a display of cider and pumpkins for sale for Halloween yesterday.

Student Teaches Course In Biological Technology

Technology, like politics, makes strange bedfellows.

Theoretical and Applied Mechanics, 1801 is a course in Cornell's College of Engineering and is a study of the marriage of biology to engineering and mechanics. It is taught, in part, by a 21-year-old senior in the engineering college named Jeffrey P. Gold.

Gold, who is now applying to medical schools and hopes to have a career in pediatric cardiovascular surgery, thinks that his engineering background will give him "a great deal of insight into patient treatment." Indeed, in these days of electrically and nuclear-powered pacemakers, artificial kidneys and heart-lung bypass machines, the engineer and the doctor are seeing more and more of each other.

"The day of the physician as artist is ending," Gold feels, "and the day of the physician as scientist is arriving."

Twenty-one may seem young to be teaching a specialized college course, but Gold was only 16 when he won an international science fair for his design of an artificial heart with its own energy supply. The first prize helped him get a volunteer research position at The New York Hospital-Cornell University Medical Center (CUMC), where he has spent every vacation period for the past five years.

"About five years ago, I needed to get involved in surgery to test some of my apparatus," Gold said. He studied surgical techniques with Dr. Paul Ebert, chairman, Dr. William A. Gay Jr. and Dr. Robert J.

Ellis of the Department of Surgery at Cornell Medical College. Last summer, Gold was performing open-heart surgery on laboratory animals nearly every day.

"The only difference between experimental surgery and real surgery," he commented, "is the patient."

When he is in New York City, Gold has been able to collaborate with physicians and surgeons at CUMC on technical solutions to medical problems.

"One problem in treating cardiac patients," he said, "is to determine how much blood per minute their hearts are pumping." Gold was part of a team effort which produced a technique called thermal dilution for making this determination. He has written an article on the work for an upcoming issue of *The Cornell Engineer*, and he was co-author of a paper which appeared in a recent issue of the *Journal of the American Medical Association*.

The first step of the procedure is the insertion of a temperature-sensitive device, called a thermistorcatheter, into the patient's pulmonary artery, the path by which blood flows from the heart to the lungs. The device is lodged in a catheter which is connected to an external meter. A small volume of saline (salty fluid) is injected into the patient's veins "downstream," or before, the thermistorcatheter. As the saline passes the device, a change in temperature registers on the meter.

"We know that the body temperature is around

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From Outside Cornell

Senate Unit to Seek Trustee

The University Senate's Nominations and Elections Committee has announced formation of a nine-member Trustee Search Committee charged with nominating a University trustee-at-large.

The Senate may elect up to four persons from outside the University for terms of four years each, the initial four to be elected one each year for four consecutive years. The Senate recently approved a constitutional amendment reducing the number from four to three to allow for the election of an employe trustee. However, this legislation will not take effect until a referendum of students and employes approves the change, as well as a simple majority of the faculty and of the Board of Trustees.

The search committee members are: Kenneth W. Comor, College of Arts and Sciences '74; Neal D. Haber, New York State School of Industrial and Labor Relations (ILR) '75; Randi Kanuk, Arts '75; Harold O. Levy, ILR '74; Charles MacKay, graduate student; Paul Olum, professor of mathematics; William Erickson, professor of electrical engineering; Milton R. Konvitz, professor emeritus of ILR and law, and Theresa A. Rinkcas, statistical clerk, Poultry Science.

Since its establishment in 1970, the Senate has elected Desdemona P. Jacobs, Glenn W. Ferguson and James L. Gibbs Jr. trustees-at-large. Mrs. Jacobs, an Ithaca resident, is supervisor of

counseling aides at Boynton Junior High School. Ferguson, currently president of the University of Connecticut, earned his bachelor's and master's degree in business administration from Cornell in 1950 and 1951 respectively. Gibbs has served as dean of Stanford University's undergraduate studies since 1970. He earned his bachelor's degree at Cornell in 1952 and is the son of Mr. and Mrs. James L. Gibbs, 512 Plain St.

Persons interested in submitting names for the search committee's consideration should contact any of the committee members or the Senate office, 133 Day Hall.

Academic and Financial Dateline

Friday, Nov. 2 — Last day for Arts College students' preregistration. Arts College students may pick up schedule cards in Rm. 134, Goldwin Smith.

Reminder: Arts College freshmen may pick up mid-term grades in Rm. 137, Goldwin Smith.

Religious Concentration Begun in Arts College

The College of Arts and Sciences has established a minor course of studies in religion to be constructed from among a historical, structural or comparative point of view in keeping with Cornell's history as one of the nation's first non-sectarian universities.

The minor, which is known as a "concentration" in Cornell terminology, has been approved by the Arts College's Educational Policy Committee (EPC), according to Dean Alfred E. Kahn.

The concentration was conceived by a faculty ad hoc committee on religious studies headed by J. Bruce Long, assistant professor of Asian religions, and is now open to students. There are more than 70 courses already being given at Cornell that qualify for the concentration, according to a study conducted last winter, Long said.

This fact and the growing interest on campus and across the country in the area of religious studies, according to Long, prompted the committee to petition for the establishment of the concentration.

Nearly 20 Arts College faculty members took part in the ad hoc committee's activities. They included professors from such departments as Asian Studies, Classics, English, History of Art, Anthropology, Semitic Languages and Literature, History, Sociology and Comparative Literature, and represent the areas of study in which the courses for the concentration are being given.

Students interested in taking a concentration in religious studies should contact Long at 158 Rockefeller Hall. At least four

courses totaling about 15 credit hours will be required for the concentration. The courses will be worked out with an advisor in the area of concentration and should be based on a "certain principle of coherence," according to the committee.

In its petition to EPC, the ad hoc committee listed a few examples of courses being given that could form the base around which a student could plan taking either a historical, structural or comparative approach. These courses are Introduction to Hinduism, History of Jewish Philosophy, Church and State During the Middle Ages, Studies in Christian Origins and Gothic Art and Architecture. Those interested in a structural or comparative view might plan their work around the following base courses: Comparative Religious Systems, Myth, Ritual and Symbol and Myths and Symbols in Classical Hinduism.

According to the committee, "A student taking a concentration in Religious Studies might be required to concentrate in one or the other of the above-mentioned approaches while taking at least one course which utilizes the other approach."

To Save Time, Labor

Libraries Join Computerized Catalog System

The Cornell University Libraries have recently joined a computerized cataloging support system which should substantially reduce the cataloging time for most new books. In addition to the savings in processing time, the new system will result in labor savings according to Ryburn Ross, assistant director for technical and automated services.

Ross explained that in October the libraries joined the Ohio College Library Center (OCLC) located in Columbus, Ohio, and, along with 65 other university, college and public libraries in the eastern United States, are using the center's computer-based cataloging system. The data base of this system contains catalog records for 700,000 titles with information for 5,000 additional titles being added each week. This number includes all Library of Congress cataloging records since 1968 as well as those supplied by the member libraries.

Cornell has installed three computer terminals in the Catalog Department of Olin Library providing instantaneous hookup via a special telephone line with the computer in Columbus.

The new system has several functions, Ross explained. When new books arrive in the library, the data base is searched to see if it contains the needed cataloging information. If it does, the desired record is displayed on the screen of the terminal and Cornell catalogers make certain adjustments to the record to fit the special requirements of the Cornell libraries. Catalog cards are then ordered. This whole operation takes only a matter of minutes. On a daily basis the computer in Columbus prints the cards and automatically arranges them in the proper filing order according to author, title and subject. They are then mailed to Ithaca.

The present manual operation of preparing, proofreading and printing catalog cards and arranging them for filing in the various catalogs takes at least six weeks. The automated system reduces this to a matter of minutes. The longest time consumed in the process is the mailing time from Columbus to Ithaca.

When there is no information in the data base for a title received at Cornell, Cornell's catalogers prepare a record and feed it into the data base. Cards for Cornell catalogs can be ordered from this record which is also immediately available for use by any other member library in the network. For these titles the cataloging time is the same as before but the card process is again greatly speeded up.

Ross said that after the system has been fully utilized as a cataloging aid it will be useful in locating books not at Cornell but possibly in one of the other member libraries for borrowing through the Libraries' Interlibrary Loan System.

The objective of the network is to lower the rate of rise of per-unit processing costs while increasing the availability of library resources for use by patrons of participating libraries, he said.

Ross said the central Catalog Department located in Olin is now cataloging new books for Cornell's 15 campus libraries and collections on this automated system. He said it is expected that 36,000-40,000 new titles each year will be searched and cataloged with the data bank. The data bank, he said, is particularly strong in the humanities, the social sciences and the arts.

The new automated library processing system, Ross said, has been installed in central and western New York State as a result of the



INPUT — Marie-Claire Delporte, catalog assistant in Olin Library, is modifying a catalog record of a book contained in the computerized cataloging support system now being used by the University Libraries. The main computer is located in Columbus, Ohio.

cooperative planning efforts of the member libraries of the Five Associated University Libraries. The libraries in addition to Cornell are University of Rochester, Syracuse University, State Library of New York at the SUNY units at Albany, Binghamton and Buffalo.

"It is expected," Ross said, "that this processing system as well as other modules will be replicated in New York State under the aegis of SUNY and the Five Associated University Libraries. The future system will serve as one library network center within a large national system and will share its resources and information with not only the Ohio System but a national system."

CORNELL CHRONICLE

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AT THE DIG — Marsha Pilat, third-year architecture student, is seen with a fellow worker as she draws details of excavation being done of a Hellenistic city at Tel Anafa in Israel. She worked at the site for two months this summer as a draftsman and surveyor earning credit for a special course in archeological field work.

8 Students Take Part In Archeology Project

Architectural students at Cornell are earning course credit this fall for discussing, in endless detail, what they did last summer while in such exotic places as Turkey, Greece, Israel and Yugoslavia.

The students, eight in all, are part of an expanded archeological field studies course in the College of Architecture, Art and Planning. As undergraduate and graduate students in the Architectural School they spent six to eight weeks last summer working as excavation architects, surveyors and draftsmen at archeological diggings in the near east.

This fall in fulfillment of all the course requirements they meet in debriefing seminars with W. Willson Cummer, assistant professor of architecture. A specialist in the history of ancient architecture, he is the coordinator of the summer field study program, based largely on his own experience of more than eight years as an archeological field worker and his two years as director of the American Research Institute in Ankara, Turkey.

Also attending the seminars are students interested in doing field work next summer. In preparation for working at the archeological sites the students took an extensive course in transit surveying last spring under the guidance of Arthur J. McNair, professor of environmental engineering at Cornell.

The students worked this summer at sites located in Gordion and Sardis in Turkey, Kea and Mycenae in Greece, Tell Anafa in Israel and Stobi, Yugoslavia.

The eight students are Frederic Hemans, John Miller, Nicholas Tountas, Douglas Thompson, Marsha Pilat, Charles Ehrhorn, Edward Russell and Kenneth Schaar.

The expanded field program is an outgrowth of a program in which Cornell has sent two architecture students to work at Sardis since the excavation began in 1960 as a joint Cornell-Harvard project. The archeological field work is an extension of the College of Architecture curriculum, which includes courses in architectural history and conservation of historic monuments, as well as the standard courses in building technology, graphics and design.

The students worked alone sometimes this summer but more often in the company of a more experienced staff member. In each case, they were responsible for surveying trenches and building walls as these were dug. They prepared grid plans, site plans, large-sized state plans combining previous season's drawings, sections and elevations, restored plans and analytic drawings.

"In the spring term, 1974," Cummer said, "we plan to train more students for survey and drafting assignments on archeological excavations; 10 or 12 students are interested. We will continue to train a few new students and place them in apprenticeship positions, so they can learn directly from an experienced field architect. Those who worked last summer, and those who came to Cornell with archeological experience, form a pool of talented individuals who are ready to take on any job. They learn from each other; they help to train the new hands, and together we hope to improve the general level of architectural study, provide excavation teams with reliable surveyors, and enjoy our participation in unearthing the ancient cities."

Some of the students were paid salaries during the past summer, all received free room and board at the various sites and Cornell, through certain grants and funds, paid the transportation costs for the students.

New Net Demonstrated

Sea Grant Program Aids L.I. Fishermen

The success of a newly designed fishing net, one of the recent major advances in fishing gear, may increase the catch of Long Island's commercial fishermen, says a Cornell marine extension specialist.

"This new otter trawl, developed by Capt. Bert Hillier of the University of Rhode Island, picks up bottom fish as well as higher swimming species including butterfish, scup, and whiting," explained Bill Walters.

The conventional trawl, used since the turn of the century, he said, is good for catching flounder, cod and haddock swimming just above the ocean floor.

Walters recently arranged the demonstration of the net to a small group of Long Island fishermen as part of his work with the New York Sea Grant Program. Otter trawls catch nearly 70 per cent of the finfish landed in New York.

Early fishermen used sloops, dependent on sails for power, to drag the net, a large bag made of netting.

"Today the gear is drawn by a motorized vessel," Walters said. "The net is kept open, as it is drawn on the ocean bottom, by otter boards acting as wings on each side of the trawl's mouth."

The new, modified otter trawl has a 'hi-rise' design permitting it to net fish swimming further above the ocean floor. It also has an opening much larger than the old design.

"Capt. Hillier's new otter trawl is an effective combination net," Walters said.

The Cornell marine extension specialist noted that, "Little has been done in the past to advance the fishermen's cause. In the United States there is little research on nets or other gear to aid commercial

fishermen."

Walters explained that New York's Sea Grant Program, a joint State University of New York-Cornell effort, focuses on developing coastal resources, reversing the downward trend of the commercial fishing fleet and assisting recreational fisheries. It is part of the larger, national marine program sponsored by the National Oceanic and Atmospheric Association.

The Sea Grant Advisory Service, administered from the New York State

College of Agriculture and Life Sciences at Cornell, helps funnel the program's findings to interested citizens. Walters works from one of the advisory service's regional centers, at the Marine Sciences Center of the State University of New York at Stony Brook.

Walters said that the advisory service asked Capt. Hillier to demonstrate his modified trawl to some Long Island fishermen.



DAY'S CATCH — Capt. Bert Hillier (left) and an assistant sort and examine the catch from a newly designed fishing net. The modified otter trawl, designed by Hillier, nets midwater fish as well as fish swimming near the sea bed.

Sage Notes

The Social Science Research Council offers many research training fellowships and postdoctoral research grants under joint programs of the American Council of Learned Societies. These may be used for training or research in many areas throughout the world. A brochure describing the different programs is available on request from Social Science Research Council, Fellowships and Grants, 230 Park Avenue, New York, N.Y. 10017. The fellowships may be of interest to graduate students wishing to do their dissertation research abroad, while the postdoctoral grants might interest faculty.

The latest date to make course registration changes is Friday, Nov. 9. Since this is rapidly approaching, graduate students are urged to file the proper forms with the Graduate School Office in Sage Graduate Center promptly.

Kodak Gives Grants to Cornell

Cornell has received grants totaling \$65,500 under the Eastman Kodak Co. 1973 Educational Aid Program, University officials have announced.

Kodak's financial support includes an unrestricted direct grant of \$43,500, research grants totaling \$12,000 and additional support of \$10,000.

Cornell is among 123 four-year privately supported colleges and universities receiving unrestricted direct grants from Kodak this year. The grants are based on the number of graduates from these institutions who joined Kodak within five years after graduation and are currently in their fifth year of employment. Kodak contributes \$750 for

each academic year — undergraduate or graduate — completed at a privately supported school. This year, Kodak has awarded \$787,500 in unrestricted direct grants to four-year privately supported institutions.

Kodak has presented research grants this year to selected graduate departments at 39 colleges and universities, including the departments of Chemical Engineering and Applied and Engineering Physics at Cornell. The funds are designed to encourage graduate education and research at the doctoral level or for new and improved facilities. Some \$328,000 in research grants was given to graduate departments by Kodak this year.

Chronicle Comment

Chronicle Comment is a forum of opinion for the Cornell community. Comment may be addressed to Kal M. Lindenberg, managing editor, Chronicle, 110 Day Hall.

Rationality and Air Conditioning

Editor:

The juxtaposition of recent news accounts makes it increasingly clear that Cornell is incapable of rational planning. My comments are motivated primarily by the announcement that the Board of Trustees has agreed to spend \$140,000 to air condition the North Campus dining facilities and is investigating air conditioning of the dining portions of Willard Straight Hall. The rationale seems to be that such changes will be good for business, and will stimulate the usage of these facilities by outside groups.

I imagine that few, if any, of the Trustees have actually ever eaten in North Campus, although occasionally some of them are seen at the Straight. If they used those areas in the summer, they would be aware of the fact that they are not uncomfortably warm. I can think of numerous

The Irony Is Increased by the Energy Crisis

areas on campus (not the least, the fourth floor of Hollister Hall) where summer temperatures present a far more uncomfortable problem. Or, if the Trustees are committed to investing such monies in the dining areas, one might hope that the wages of the dining workers would be seen as a more pressing need.

The irony is increased because the above plans are announced in the context of a "national energy crisis." Where will the University get the energy for its air conditioning? It is clear to many of us that the 6 per cent of the world's population which lives in the United States cannot

continue forever to exploit 40-60 per cent of the world's resources. Political factors (such as the Middle East oil stoppage), if not notions of equity, should drive this point home. A bill to regulate strip-mining (coal production) is making its way through the Congress. Natural gas supplies are very tight, so the energy companies tell us.

Somehow, Cornell is institutionally unable to put together the above factors and to conclude that the University, like other segments of American society, is no longer able to continue doing things in the old style. President Corson makes public speeches raising the implications to the University of "no-growth" policies. Isn't the institution able to translate the pious talk about "new priorities" into new realities?

*Philip L. Bereano,
Assistant Professor of
Environmental Engineering*

... and a Reply From Campus Life

Editor:

Professor Bereano's letter seems to us to raise three important points. (1) Is the expenditure of \$140,000 for air conditioning in North Campus Union justified? (2) Should Cornell invest funds in air conditioning at this time when the nation is facing an energy crisis? (3) Why does the University not have an overview of its energy consumption?

As regard the first point, the Campus Life Committee and its Subcommittee on Unions both approved the expenditure because the conditions in the particular area of North Campus where the air conditioning is to be installed are, in fact, intolerable on hot days in the summer. The building was designed for air conditioning and this area has large windows that cannot be opened. On several occasions last summer, people occupying these areas simply had to leave. Air conditioning this part of North Campus will mainly have the effect of making life bearable for those who reside in the Union and secondarily, more attractive for small conferences during the summer months which should somewhat ease Cornell's financial plight. The second point is the most difficult to deal with. With an energy crisis looming, the University should be taking every step to limit its consumption of energy. At this time we would take the position that it is justified to use air conditioning in truly intolerable circumstances because in this way one will be able to use the physical plant of the University more effectively. At the same time, we also take

Air Conditioning Is Justified In This Case

the position that the University should do everything it can to minimize the energy consumption. To this end we have already initiated discussions with the Vice President of Campus Affairs, Mr. William Gurowitz, to see what steps can be taken to decrease the consumption of energy in the departments of the Division of Campus Life. We suggest that this be done by every other department in the University. It is possible that very considerable energy savings could be made for comparatively little investment. This brings us to the

third point. The University should have an overview of how it consumes natural resources. We would presume, for example, that one of the functions of the new Campus Planning Committee is to have such an overview, at least in the area of land use. We take this opportunity to urge that there be constructed within the Division of Buildings and Properties, and within the University administration, a mechanism whereby the energy consumption of Cornell can be closely monitored and, hopefully, controlled.

*Robert McGinnis,
Chairman, Campus Life
Committee*

*Geoffrey V. Chester,
Campus Life Committee*

Complaint on Hockey

Editor:

A letter in the Chronicle (Aug. 30) indicates "the sale of reserve seat season books for hockey will be administered as in the past."

Why are there reserved seats at all?

The CUAA does not realize any more money from a student reserve ticket holder than it does from an "unreserved" seat filled for every game.

In last year's fiasco not even all the students waiting when ticket sale time and location were announced got season tickets. True those undiscouraged enough by the line to sign the list did finally get seats through emergency Senate legislation. But this can't be repeated or the

Why Are There Reserved Seats At All?

entire rink will be sold out.

Why not distribute hockey tickets as football tickets are now?

Tickets could go on sale two weeks before the game for cash or a coupon and a lesser price. A slight rise in ticket cost probably would be necessary to pay the CUAA for losses from employe reserved seat premiums and some empty seats when

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Job Opportunities At Cornell University

The following are regular continuing full-time positions unless otherwise specified. For information about these positions, contact the Personnel Department, B-12 Ives Hall, N.W. Please do not inquire at individual departments until you have contacted Personnel. An equal opportunity employer.

POSITION	DEPARTMENT
Senior Administrative Secretary, A-17	Africana Studies & Research Center
Department Secretary, A-13	Management Systems & Analysis
Department Secretary, A-13	Law School
Department Secretary, A-13	Civil and Environmental Engineering
Steno A-11	Safety Division
Steno A-11	Graduate School B&PA
Steno II, NP-6	Poultry Science
Data Clerk A-11	Personnel Services
Senior Clerk, A-12	Purchasing
Data Clerk, A-13	Admissions Records
Sr. Account Clerk, A-13	Nuclear Studies
Principal Clerk, A-14	Career Center
Records Clerk II, NP-6	Finance & Business
Keypunch Operator II, A-13	Computer Services
Library Assistant II, A-12	Library
Library Superintendent, A-13	Library
Library Assistant III, A-15	Library
Sr. Assistant Archivist	Library
Administrative Aide I, NP-11	NYSSILR (NYC)
Senior Auditor	Auditor's Office
Assistant Counsel	University Counsel
Associate Director	OCS
Statutory Facilities Engineer	Controller's Office
Director, Western Regional Office	University Development
Area Manager	Dining Services
Catering Supervisor	Dining Services
Dining Services Manager	Dining Services
Assistant	Affirmative Action
Cooperative Extension Specialist	Extension Administration 445
Cooperative Extension Specialist TV	Extension Administration 474
Assistant to the Director (Director of the Northeast Regional Center for Rural Development)	Experiment Station
Personnel Officer, P-20	NAIC (Arecibo Observatory)
Credit and Collection Manager	Treasurer's Office
Assistant to the Dean	Law School
Lab Tech I, NP-8	Veterinary College
Clinic Assistant, NP-8	LAMOS
Research Technician III, NP-12 (1-1-74)	Plant Breeding and Biometry
Research Associate	Agricultural Economics
Research Associate (2)	Nuclear Studies
Research Associate	Entomology
Research Specialist	Agricultural Engineering
Postdoctoral Associate	LASSP
Electronic Technician, A-17	Lab of Nuclear Studies
Electronic Technician, A-17	Chemistry
Director of Laboratory	Vet College
System Maintenance Chief, A-29	Computing Services
Synchrotron Operator, A-19	Lab of Nuclear Studies
Senior Systems Programmer, A 29	Computer Services
Programmer III, A-23	Management Systems & Analysis
Custodian, A-13 (3)	B&P
Custodia, A-13 (2)	Statler
Receiving Clerk, A-12	Statler
Mail Clerk II, NP-5	Finance & Business
Maintenance Mechanic I, A-16	Traffic Bureau
Vehicle Mechanic, A-16	B&P
Short Order Cook, A-14	Dining Services
Copy Preparation Specialist, A 15	Graphic Arts Services

PART-TIME AND TEMPORARY POSITIONS
(All part-time positions are also being listed with Student Employment)

Clerk-typist A-11	Admissions - Arts & Sciences (temp. f/t)
Steno A-11	Safety Division (perm. p/t)

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Arecibo Celebrates Tenth Birthday Today

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of the universe.

Radio signals, like light, are emitted by stars and galaxies, and can be bounced off the surfaces of planets in radar experiments. Unlike light, they can be observed right through clouds or dust with equal strength in daytime and nighttime. Radio energy from some sources requires more than 10 billion years to reach the earth. Celestial radio signals are so faint that all the energy collected in the 40-year history of radio astronomy is about equal to that released when a few snowflakes fall on the ground.

Instead of lenses, the radio telescope uses a huge mirror antenna plus a radio receiver to gather signals. The receiver is connected to a recording device such as a magnetic computer tape which stores the information. The depths of the universe are alive with noise; a loudspeaker hooked up to the Arecibo receiver plays static and hiss from distant points in the sky.

Of the more than 3,000 radio sources the telescope has heard, only about 100 have been identified optically, including the sun, the moon, some planets, the Milky Way and other galaxies, as well as many nebulae and quasars.

The telescope can also transmit radar pulses at a given frequency and then measure the return signal. This radar capability has been used to map the moon and Venus, and to study the composition of the ionosphere — a region of charged particles in the earth's atmosphere extending from about 50 to 500 miles above the ground. The special properties of this region (i.e., it reflects radio waves) make long-distance radio communications possible.

The telescope was built under the leadership of William E. Gordon, formerly professor of electrical engineering at Cornell. Its cost — close to \$9 million — is one of many "gee whiz" statistics describing the observatory.

The total collecting area of the dish is 18.5 acres, which is about equal to the combined collecting area of all the telescopes built since 1610 when Galileo

invented the instrument.

The suspended structure weighs over 600 tons — nearly three times the weight of the Statue of Liberty.

The spherical bowl could hold approximately 357 million boxes of corn flakes. Really.

To Drake and his colleagues, however, the scientific information gleaned by Arecibo is far more impressive. The telescope's early years were largely devoted to detailed studies of the ionosphere. Much of this work was supported by the U.S. Air Force.

In 1964, radar signals which pierced the dense cloud cover of Venus determined the planet's period of rotation with unprecedented accuracy and also confirmed the theory about its retrograde rotation. (Venus spins on its axis in a clockwise direction. Earth and all the other planets spin counter-clockwise.) Later studies revealed the phenomenon of "earth lock," whereby Venus turns the same face to the earth each time it swings by.

Early radar maps of the moon produced at Arecibo revealed thick layers of dust which would have posed a hazard for astronauts landing there. It was Tom Gold, John L. Wetherill Professor and director of Cornell's Center for Radiophysics and Space Research, who first proposed that the younger craters were still relatively clean and therefore made safer landing sites.

Astronomers at Arecibo found in 1965 that Mercury, the closest planet to the sun, did not always keep the same face to the sun as it made its 88-day orbit. Textbooks and encyclopedias which had stated that the sun's tremendous gravitational pull had stopped the planet's free rotation had to be revised accordingly.

In 1966 a team of astronomers which included David L. Jauncey, adjunct associate professor of astronomy at Cornell, developed the technique of long-baseline interferometry for use in radio astronomy. The process makes use of two widely separated radio telescopes to measure extremely small angles, such as those associated with the size and rate of

expansion of very energetic explosions in very distant quasars. In some instances the telescopes are stationed at almost opposite sides of the earth. For these contributions, the four-man team later received the American Academy of Arts and Sciences' Rumford Award for 1971.

When a British graduate student picked up a mysterious pulsing signal from outer space in 1967, speculation ran high that an intelligent life form from another world was trying to contact us. By zooming in on the source of the signals with the Arecibo antenna, scientists were able to kill the rumors and develop new theories while they discovered new "pulsars."

In 1968 Arecibo scientists identified the pulsar in the Crab Nebula — the still-glowing remnant of a supernova, or stellar explosion, which was observed and recorded by the Chinese in 1054. Drake rejected the idea that the pulses were an intelligent signal because they were coming in over all frequencies (an inefficient way to communicate) and they were extremely intense (trillions of times greater than all the electrical energy generated on earth.)

Very careful measurements (accurate to millionths of a second) timed the arrival of pulses from the Crab and led to the conclusion that pulsars are actually fast-spinning neutron stars. This idea was first proposed by Gold. The finding of a pulsar in the Crab Nebula fully confirmed his view, as well as a previous suggestion by Franco Pacini of Cornell, that a rotating neutron star could provide the energy for the activity in the Crab and other supernova remnants. Neutron stars, which were known only in theory before this time, are giant stars which have collapsed into a dense ball a few miles wide because of the depletion of their nuclear fuel. Crushed together under tremendous pressures, the atoms become a compacted mass of neutrons with an estimated weight of as much as 10 billion tons per cubic inch. An explosion of the magnitude assumed to produce the Crab could well result in the formation of a neutron star. If Cayuga Lake were compressed to the density of neutron star matter, it would be the size of a sugar

cube — and bore a hole right through the earth.

Theoretical work on pulsars continues today, as does the discovery of new pulsars, other exciting objects known as X-ray sources (because they are sources of X-ray emissions) and the search for a black hole — the densest material possible; a body whose gravitational attraction is so great that nothing, not even light, can leave its surface.

The long-range upgrading project began in 1970. The old wire mesh surface was ripped off its cable supports piece by piece to be replaced with specially designed aluminum panels which give the dish a more perfectly spherical shape. This phase of the work is due to be completed by the spring. Other aspects of the upgrading are a new, more powerful radar transmitter and modifications in the cable support system to keep the suspended structure from swaying in the wind. The unique "feeds" which collect the energy focused by the reflector are designed and built by L. Merle LaLonde, NAIC senior research associate.

As the upgrading proceeds, work in radio astronomy continues. The workmen and scientists have arranged their schedules around the orbits of the planets so that valuable observing time is not lost. In the course of the whole project, the telescope will actually shut down for a total of about two weeks.

1970 saw a dramatic experiment performed on the ionosphere at Arecibo. Scientists heated up thousands of cubic miles of the region with a radio beam to learn more about the behavior of the various layers. As the artificially heated gases expanded, the motions of the electrically charged particles, the temperatures changes and the chemical reaction rates were studied under controlled conditions by radar techniques.

Also in 1970, the Arecibo radar was used to map a portion of Mercury, showing the planet's surface to be rougher than Venus but not quite as rough as the moon. (Arecibo produced its first radar map of Venus in 1968.)

Continued on Page 8

Student

Continued from Page 1

37 degrees centigrade, and the saline is about room temperature, or 26 degrees centigrade. We also know the exact volume of saline injected. These figures, together with the meter readings, give us a temperature deflection curve from which we calculate the flow in liters per minute." Gold explained that the pulmonary circulatory system is closed — that is, all the blood that is pumped through the body via the general circulatory system is pumped to the lungs for oxygenation through the pulmonary system. Because of this fact, a rate of flow for the pulmonary system, technically easier to obtain, must represent the total cardiac output.

Pre-operative and post-operative determinations of rate of blood flow help the physician follow change in the patient's condition. "Such trends," Gold said, "are as valuable, if not more so, than absolute numbers or norms."

Gold also constructed an analog computer in conjunction with this project which can instantly translate the data from the thermistorcatheter into a number of liters per minute. (This analog computer solves a given mathematical problem by using electrical quantities representing physical quantities, as opposed to a digital computer which deals in discrete numbers.)

His current research, also in collaboration with the hospital staff, is directed at correcting a defect

in the conduction pathway known as "heart block."

"Imagine a telephone system in which someone has cut the wires between the sender and the receiver," Gold said of the condition. "The signal from the sinoatrial node (the natural pacemaker) isn't getting to the lower half of the heart."

In addition to his full schedule of classes, research projects and teaching activities, Gold conducts a weekly seminar, "Bioengineering Perspectives," for other students interested in this growing field. He edits a biweekly newsletter, "Bio Medical Engineering News," which is distributed on campus, and, on Tuesday and Thursday mornings, works in the Advising and Counseling Center in the engineering college. He also maintains an 'A' average.

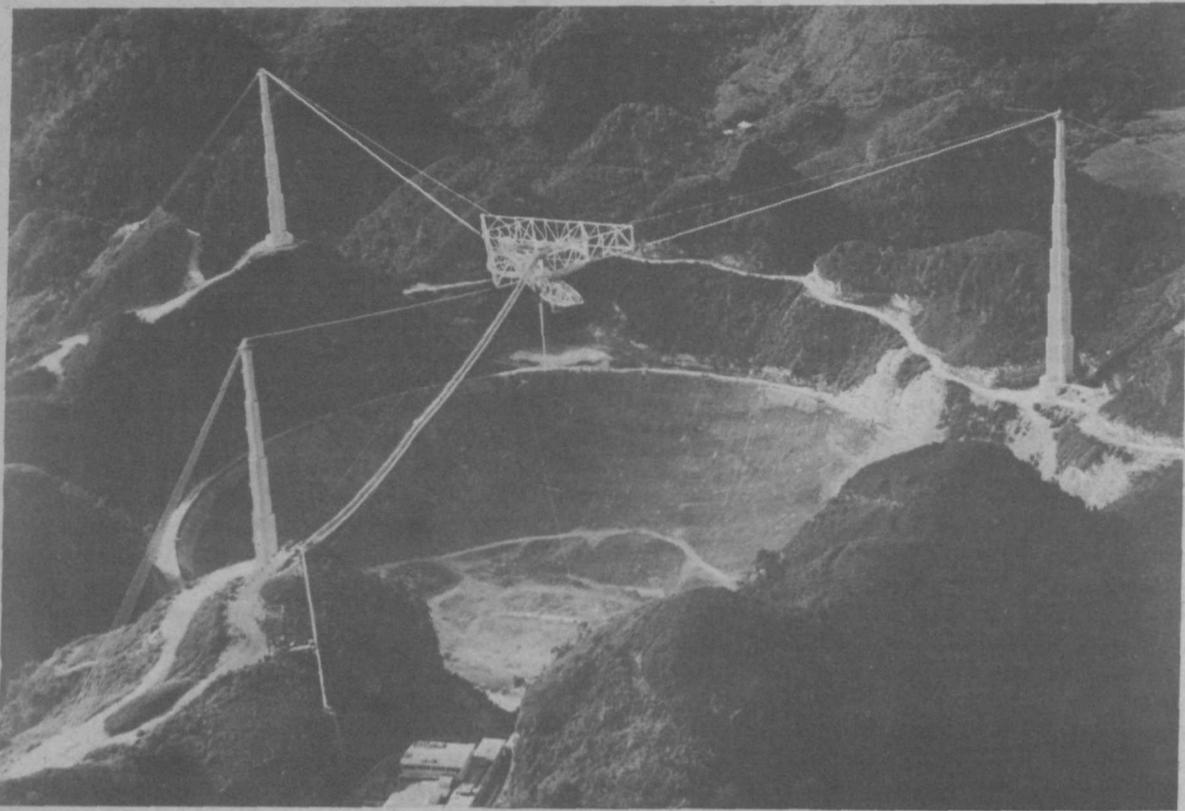
These days, Gold spends some of his time on the campus of the New York State Veterinary College at Cornell, where he is working on an experimental type of support pad for large animal surgery.

A native of Brooklyn, Gold is the son of Mr. and Mrs. Arthur H. Gold of 298 Argyle Road.

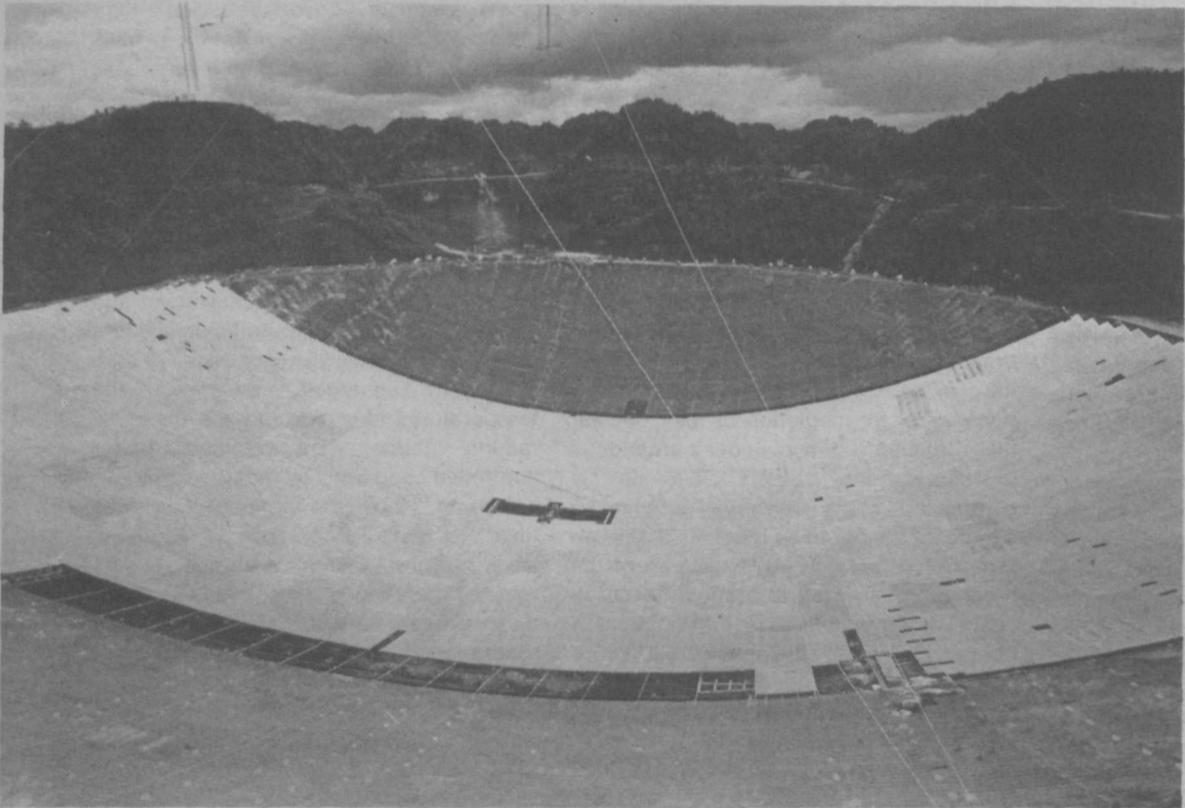


Jeffrey P. Gold, holding model of heart.

Keep Up With Cornell;
Read the Chronicle Thursdays



Nestled in the hills of northern Puerto Rico, the Arecibo Observatory boasts the world's largest radio telescope. The observatory is part of the National Astronomy and Ionosphere Center (NAIC), a national research center operated by Cornell under contract with the National Science Foundation (NSF).



In 1972 the NAIC began a mammoth upgrading of the Arecibo facility. Above, the replacement of the original wire mesh reflector surface with aluminum paneling is nearly half finished.



The rugged terrain of the area makes overland trucking of large objects difficult, so the aluminum panels are assembled in a factory right at the telescope site.

Upgrading Proceeds

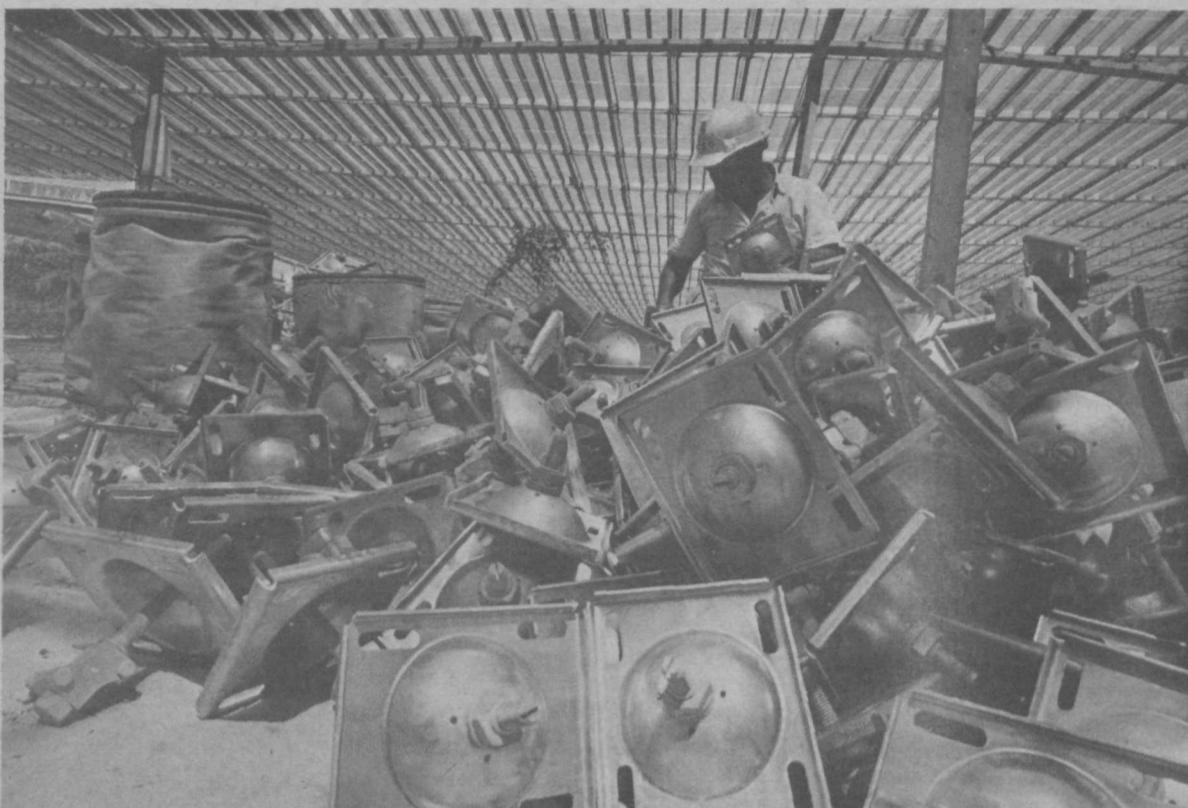


Specially engineered plastic and rubber footpads help workmen install the new aluminum surface.

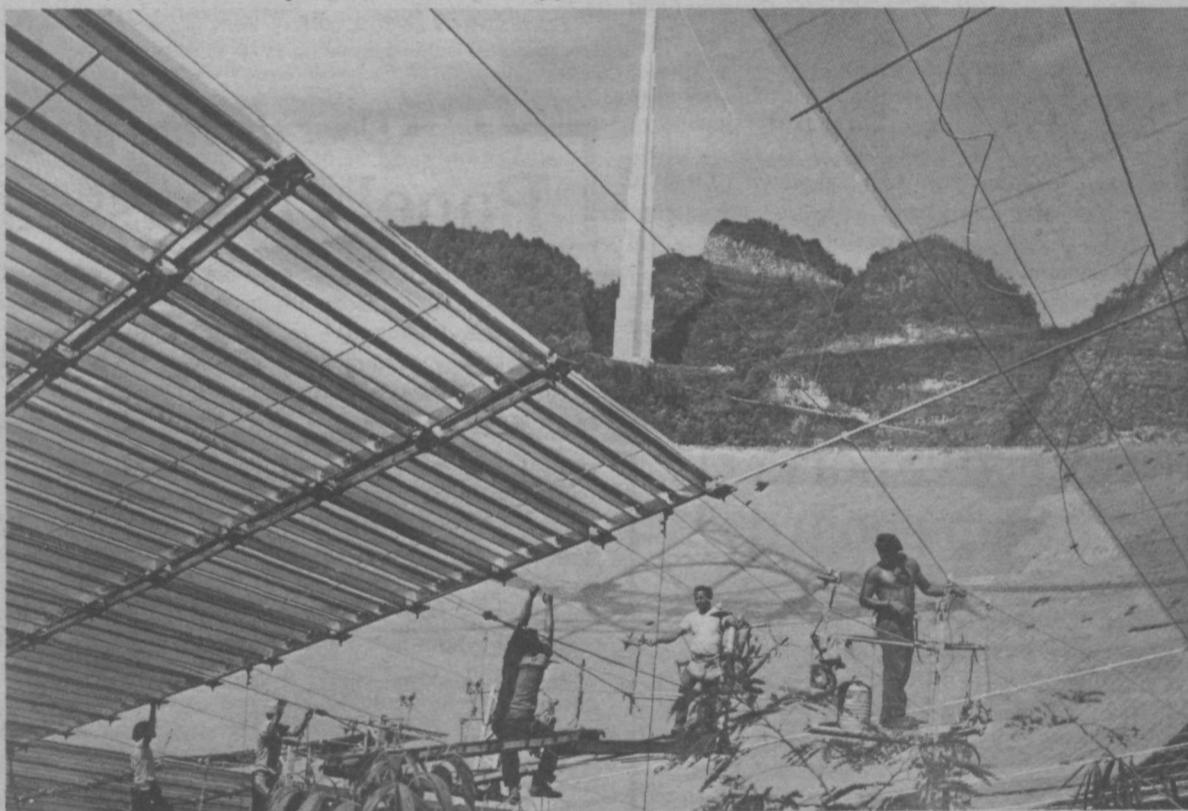
at Arecibo, Danby



tribute their weight when they must walk on the delicate



Standing under the spherical reflector dish, a workman is surrounded by the junction plates which secure the new panels (38,700 of them) to the cable supports and to each other.



Vegetation growing wild under the dish figures significantly in holding down the topsoil in which the cement cable anchors are rooted. The new surface will let in considerably less sunlight — about as much as reaches the surface of the planet Mars.



Another part of the NAIC is the radio telescope at the Danby Observatory not far from the Cornell campus. It too is being upgraded. This spring a vinyl coated nylon cover was blown up over the reflector dish to protect the surface from the winter ice and snow and the dramatic daily changes of temperature.

Helsby Honored As Outstanding Alumnus of ILR

Robert D. Helsby, chairman of the New York State Public Employment Relations Board and a graduate of the New York State School of Industrial and Labor Relations (ILR) at Cornell, will be awarded the 1973 Judge William B. Groat Outstanding Alumni Award at a special luncheon next Thursday in New York City.

The award, made annually to one or more outstanding graduates of the ILR School, is given in recognition of Groat's significant contribution to the establishment of the ILR School in 1945 while he was counsel to the New York State Joint Legislative Committee on Industrial and Labor Conditions.

Born in Denton, Md., in 1918, Helsby has served as chairman of the Public Employment Relations Board since 1967. His career includes service with the U.S. Navy during World War II, 11 years as a faculty member and State University of New York (SUNY) administrator and service as executive deputy industrial commissioner for the New York State Department of Labor.

Helsby is a graduate of SUNY, Oswego, and holds a master of arts degree from Ohio State University and a doctorate from Cornell.

Previous winners of the Groat Alumni Award are Eric Jensen, vice president of industrial relations for the American Car Foundry; Jacob Sheinkman, secretary-treasurer of Amalgamated Clothing Workers, and Christopher Argyris, the James Bryant Conant professor of education and organizational behavior at Harvard University.

Further information about the New York City luncheon is available from James E. Huttar, 197 Ives Hall, telephone 255-6511.

Fall Sports Scoreboard

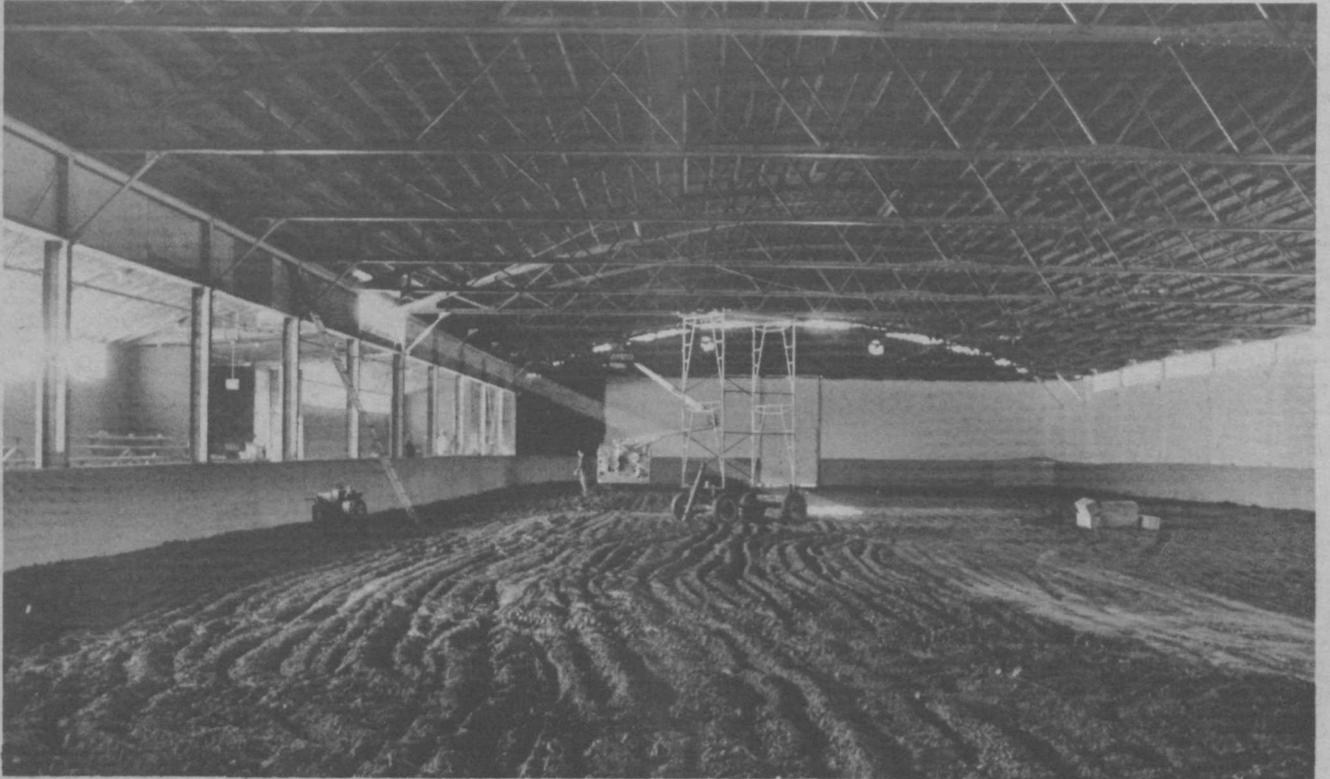
FOOTBALL — Record to date: 2-2-1. Last week's result: Yale 20, Cornell 3. This week's schedule: Nov. 3, Columbia.

LIGHTWEIGHT FOOTBALL — Record to date: 2-1. No game last week. This week's schedule: Nov. 2, Rutgers.

CROSS COUNTRY — Record to date: 4-1. Last week's result: Cornell 21, Yale 38. This week's schedule: Nov. 2, Heptagonals at New York City.

SOCCER — Record to date: 6-1-2. Last week's result: Cornell 1, Yale 0. This week's schedule: Nov. 3, Columbia.

Construction Continues on Riding Hall



EQUESTRIAN ENCLOSURE — Work is proceeding on the John T. Oxley Polo Arena, located on Route 366. The riding hall has been extended 50 feet and is getting a new roof and new wall surfacing.

Does the Idea Make Sense?

Panel Discusses Applied Humanities

The question of whether the idea of applied humanities makes sense seems to be a question that would occur only in the highly fragmented, rapidly changing Euro-American society of today, according to anthropologist Cora A. Dubois, an Andrew Dickson White professor-at-large.

"It is not a question that would have occurred in any of the sophisticated cultures (Asian, particularly Indian) with which I am acquainted," she said during a panel discussion on the question "Does the Idea of Applied Humanities Make Sense?" which took place last week before an audience of some 100 students and faculty in Room 165 of McGraw Hall.

DuBois, who spent the last three weeks of October on campus in her capacity as a professor-at-large, was one of a panel of four moderated by Max Black, the Susan Linn Sage professor of philosophy and humane letters. The other panelists were Robert Ascher, professor of anthropology; Richard N. Boyd, associate professor of philosophy, and Douglas E. Ashford, professor of government.

Approaching the question from a comparative culture point of view, DuBois said that the cultures she has studied are cultures which changed at a relatively slow rate, so that the humanities, that is the product of the artists, literati and intelligentsia, the symbol makers as she called them, were

kept in step with social and technical changes.

By comparison, she said, the rapidly changing Euro-American society of today produces periods of obsolescence "so that those assumptions about life, world-views, life ways, and ethics are confronted with alternatives: a confrontation sort of situation arises."

Cultural fragmentation, she said, is one of the realities of our contemporary life and it is impossible for the humanities to make sense to everyone.

She said, "It looks as if the humanities in our culture are in limbo." The pragmatism, secularism, materialism and emphasis on technology of American society are largely responsible for this, DuBois added.

She concluded, however, that she was still too much of a pragmatic American, and optimist not to wish to apply and to make sense of the humanities.

Ascher responded to the question by playing a cassette tape of popular songs and news broadcasts recorded from radio in 1968. Without speaking a word he wrote on the blackboard identifying the material on the broadcast, implying that he was applying applied humanities and that it was up to the listener to determine if it made sense or not.

Boyd felt that the teach-ins and anti-war movements of the 1960s were valid examples of and showed the value of what he considered applied humanities.

Effect of Energy Crisis on Agriculture Viewed

Because fossil fuels are the main raw material of modern agriculture, the energy crisis may force a reassessment of the kinds and quantities of fuel used in agricultural production, says a Cornell scientist.

"The mechanization of agriculture is costly," David Pimentel says in the current (Nov. 2) issue of *Science*. "United States farming uses more petroleum, about eight billion gallons annually, than any other single U.S. industry."

David Pimentel is a professor of entomology, and ecology and systematics at the New York State College of Agriculture and Life Sciences at Cornell. He and his colleagues recently analyzed the relations of energy consumption to crop production.

They examined corn, in particular, because it requires an energy demand midway between the high energy needs of fruit production and the low energy demands of hay and small grains.

The Cornell ecologist explained that crop production needs energy for machinery, transportation, irrigation, fertilizer and pesticides just to produce the raw product. Large amounts of energy are also consumed as the raw products are transported to be frozen, canned,

dehydrated, ground and baked.

"As fossil fuels decline, the cost of obtaining fuels will increase rapidly," Pimentel said. "If fuel prices increase the anticipated 200 to 500 per cent in the next 25 years, crop production costs will increase significantly."

To reduce energy inputs Pimentel suggested alternatives such as more intensive use of crop rotations, animal manure and "green manures," derived from

legume growth, to reduce the high energy cost of chemical fertilizers and pesticides.

Another suggestion called for substituting some manpower for mechanization.

Larry E. Hurd, a former post-doctoral fellow and Anthony C. Bellotti, Michael J. Forster, Ida N. Okar, Owen D. Sholes and Richard J. Whitman, all Cornell graduate students, were co-authors of this study.

Arecibo

Continued from Page 5

Then in 1972 astronomers achieved a radar triple bounce between the earth and the moon. This experiment opened the way for radar studies of the earth by earth-based scientists working as though they had a radar telescope placed on the moon — 238,000 miles in space. Radar studies performed aboard the Skylab are now amplifying and supplementing this data.

Cornell astronomers observing Saturn in 1972 with the telescope found a level in the planet's atmosphere where temperatures are suitable for life of the kind found

on earth.

The question of other life forms is a recurrent theme in astronomy. Statistically, given the number of other stars like the sun which probably have solar systems quite like this one, it is almost reasonable to assume that some form of life does exist elsewhere in the universe.

An instrument like the Arecibo telescope, with its giant ear serving as a kind of "cosmic listening post," could conceivably pick up a communication from another world. Perhaps the reception of that message will be Arecibo's next contribution to scientific knowledge.

Two Appointed

Nancy A. Elliott

Nancy A. Elliott has been appointed to the new position of assistant director of personnel (compensation) with Cornell's Office of Personnel Services, according to Diedrich K. Willers, director.

Ms. Elliott served as salary administrator for International Nickel Co. in New York City for three years prior to her Cornell appointment.

"Initially, Ms. Elliott will be working with Robert H. Hayes and Associates on the exempt personnel salary study and program implementation," Willers said. "Her assignment will involve a full-time commitment to work with the Hayes consultants and the various committees established to carry on the study."

The exempt classification study began Oct. 1 and completion is expected by March, 1974.

Charles W. Jermy Jr.

Charles W. Jermy Jr. has been appointed special program coordinator in the Division of Summer Session and Extramural Courses.

In the new position, Jermy will help the various colleges and departments develop new programs, improve the marketing of existing programs and provide assistance in operating all programs, according to Martin W. Sampson, dean of the division.

The creation of the new post is part of the division's efforts to expand its operation and to increase the number of individuals who come to Cornell in the summer to participate in academic programs. Primary emphasis is being placed on expansion of the number and types of special programs offered, Sampson said. Last summer there were approximately 40 programs involving more than 2,800 participants.

Departments, faculty and other members of the University community interested in offering workshops or other special programs may contact Jermy in the Summer Session office (105 Day Hall) to discuss their ideas.

Hayes Study of Exempt Employees Begins Job Data Collection Phase

Phase II of the University's exempt professional and administrative salary classification study being conducted under the direction of R.H. Hayes and Associates Inc., is currently in progress, according to Robert F. Risley, vice provost.

The objective of Phase II is to collect basic job content information for use in developing job classification descriptions for all exempt, non-instructional professional and administrative staff within the University, excluding student employees, he said.

To obtain this job information, each employe holding a position being considered within the scope of the study has been requested to complete a 12-page form titled "Position Description Questionnaire." The questionnaires have been distributed to individual staff members by classification study coordinators selected within

each major department, center or operating unit of Cornell.

The study coordinators will also assist in collection of the completed questionnaires and are available to answer specific questions related to the questionnaire's content, Risley said.

Several departments have

identified specific staff positions that will require further clarification as to their inclusion within this compensation and classification system. Upon further review of the scope and content of these positions based upon information in the questionnaire, a determination as to their status will be made by the University Policy Committee.

Additionally, within the statutory colleges the "U" (University Professional) job classification has recently been abolished. Positions formerly included within this classification must be reviewed. This job classification will be administered under the Cornell University Exempt Compensation Program, and the same procedures will be followed in the evaluation of all positions within both the statutory and endowed colleges.

The sequence of events and time schedule for the completion of remaining Phase II activities is:

1. Questionnaires to be forwarded by employes to their immediate job supervisor for review and comments by Friday (Nov. 2);
2. supervisor to return questionnaires to study coordinator by Friday, Nov. 9;
3. questionnaires to be returned by study coordinators to R. H. Hayes and Associates Inc. by Monday, Nov. 12.

Prompt submission of questionnaires at all stages of the study is crucial.

Additional information or questions related to this study should be directed to Nancy Elliott, assistant director of personnel (compensation) and Judy Onken, consultant, R.H. Hayes and Associates, G-20 Uris Hall, 256-7170.

Tom Bantle '74

Complaint on Hockey

Continued from Page 4

they don't have the captive reserve seat holders (or at least their dollars) at every game.

This would allow more of the community to see hockey games. As far as I know no game with the entire rink unreserved has ever been sold out. While this probably would not continue to

be true for games such as Harvard, fans now intimidated by the fact that 70 per cent of the rink is reserved might come to more games.

What about line problems?

As anyone who has ever gone to a hockey game knows, the past leaves little left to be written in the history of mismanaged and aggravating lines. While no one can say for certain, from my three years of experience with the quarterfinal games (comparable in that the entire rink is unreserved), the lines would be no worse than for many of last year's regular games.

Since there would be much less chance of the whole rink selling out, only the faithful few who must have their choice seats would be in line. This is especially true if tickets go on sale two weeks in advance rather than the day before (as last year) when people's schedules are more definite. For most people, it would be just like exchanging coupons for football — no line or a small one.

The present system is a mess; the alternative offers a more equitable and open allocation of tickets.

Serious Risk of Rabies

Ley Warns of Dog-Bite Hazard

The hazard of rabies resulting from a recent small epidemic of dog bites on campus is potentially serious, according to Dr. Allyn B. Ley, director, University Health Services.

Seven persons sustained dog bites within a 10-day period ending last Friday. Health Services and the Safety Division are currently cooperating to minimize what Dr. Ley termed a "public health hazard" created by unlicensed dogs allowed to run loose on campus.

The primary health hazards from dog bites are rabies, "which is 100 per cent fatal" and tetanus, according to Dr. Ley. No treatment currently is available for rabies. Rabies immunization shots, a frequently painful series of 14 to 21 injections in the abdomen, are preventative only, he said. Dr. Ley advised anyone bitten by a dog to seek medical attention as soon as possible at either Gannett Clinic or Sage Infirmary. In addition, the dog should be identified and kept in sight by other persons until the Safety Division can be notified to pick up the animal.

"If the dog is not identified, or is identified but destroyed immediately, serious consideration has to be given to the rabies immunization course," Dr. Ley said. He asked that owners not destroy identified animals.

"Even if the dog has been inoculated for rabies," Dr. Ley said, "it may be a carrier of rabies and should be quarantined and kept under observation for five to seven days."



POTENTIAL HAZARD — These two canines cavorting in the Wee Stinky Glen on campus aren't hurting anyone, but a dog that bites a person should be kept in sight until the Safety Division can pick it up.

Health Services will notify appropriate health and safety agencies of all dog-bite cases reported to that department.

The Safety Division will provide transportation to medical facilities if the dog bite injury is serious enough to require this assistance.

Safety Division director Lowell T. George said the Division would, with the assistance of two student dog wardens, locate and pick up unlicensed campus dogs, effectively immediately. The Division will also pick up and arrange for the confinement of any dog identified as having bitten a person whether or not the dog has been vaccinated for rabies, George said.

The disposition of the dog will depend upon the individual case.

Dr. Ley said no human cases of

rabies have been reported in the United States so far this year, although 23 cases of wild rabid animals have been reported in New York State. Tompkins County Department of Health records show no cases of rabid animals in the county since 1971, when a total of four rabid bats were found in Ithaca, Newfield and Trumansburg.

Elmer E. Meyer Jr., dean of students and assistant vice president for campus affairs, said current dog regulation policies prohibit the animals in campus dining facilities and housing units.

"The question may now be whether it is time for the University Senate Campus Life Committee to raise the issue of regulations concerning dogs anywhere on campus," he said.

Job Opportunities

Continued from Page 4

Steno II, NP-6	Human Development (2/3 time)
Steno II, NP-6	Vet College (perm. p/t)
Steno	Communication Arts (temp. f/t)
Clerk	Agricultural Economics (temp. f/t)
Secretary	Student Activities (temp. p/t)
Steno I, NP-5	Entomology (temp. f/t)
Typist, A-13	CRSR (temp. p/t)
News Writer	Administration (temp. p/t)
Editorial Assistant	NYSSILR (temp. p/t)
Research Specialist (3)	NYSSILR (temp. p/t (1) and temp. f/t)
Extension Associate	Design & Environmental Analysis
Electronic Technician	Lab of Nuclear Studies (temp. f/t)
Analyst	Budget Office (temp. p/t)
Assistant Director, A-23	Financial Aide Office (temp. 3/4 time)

The Senate Page

The Senate Page is the official bulletin of the Cornell University Senate. Publication is supervised by Michael E. Fisher, secretary of the Senate, 133 Day Hall, 256-3715.

NEXT SENATE MEETING: Tuesday, Nov. 6, 7:30 p.m., Kaufmann Aud.

Current Legislative Log

(The full text of any bill introduced in the University Senate is available in the Senators' Study, 124 Day Hall.)

BILL NO. & DATE SUB.	TITLE AND ABSTRACT	SPONSOR	COMMITTEE REFERRED TO
D-99 10/19/73	BYLAW AMENDMENT TO ELIMINATE QUORUM PROBLEMS [This Act provides that a Senator who misses three consecutive Senate meetings shall not have his seat counted for purposes of determining the presence of a quorum.]	C.K. MacKay, A. Henry, R. Barnett, M. Haber, R. Meyer, M. Sharon	Executive Comm.
D-100 10/19/73	AN ACT TO ESTABLISH AN ADVISORY COUNCIL FOR THE GRADUATE SCHOOL [This Act amends SA-182, "Committee Restructuring Act," to provide for the existence of a Graduate School Advisory Council which shall advise creation to the Dean in student-related matters.]	C.K. MacKay, R. Meyer, R. Barnett, A. Henry, M. Haber	Committee on Committees
D-101 - SA-218	SEE SENATE ACTIONS		
D-102 10/24/73	AN ACT TO ESTABLISH A SLIDING SCALE OF TRANSCRIPT FEES [This Act establishes a sliding scale of transcript fees for students having to submit large numbers of transcripts.]	C.K. MacKay, R. Meyer	Committee on Academics
D-103 10/24/73	THE SUBPOENA NOTIFICATION ACT [This act would require prompt notification when an individual's University records are subpoenaed and would mandate that the University seek to delay surrendering the subpoenaed records for a minimum of 48 hours.]	Codes & Judiciary Committee	Codes and Judiciary Committee
D-104 10/25/73	ACADEMIC INTEGRITY ACT [Recommends to the faculty a statement defining Senate and faculty responsibility for academic integrity, and establishes a new Code of Academic Integrity upon faculty adoption of the recommended statement].	Committee on Academics	1. Academics 2. Codes & Judiciary
D-105 10/26/73	THE RECOGNITION OF HUMAN ECOLOGY, NOT HOME ECONOMICS ACT [This Act proposes that the plaque presently adjacent to the main entrance of the Albert R. Mann Library of the Colleges of Agriculture and Home Economics, be changed to read: "Albert R. Mann Library of the Colleges of Agriculture and Human Ecology."]	Jill Gerber	Campus Planning Committee

Senate Calendar

Thursday, November 1
Parking and Traffic Subcommittee, 2:30 p.m., 101 Stone Hall.
Dining Subcommittee Open Hearing ('74-75 Dining Budget), 5:45 p.m., North Room, WSH. Copy of proposed budget available in Senate Office.
 Friday, November 2
Nominations and Elections Committee, 1 p.m., Senate Office.
Public and Community Affairs, 1-2:05 p.m., Senate Office.
Board on Student Health, 2 p.m., Gannett Clinic Conference Room.
 Monday, November 5
Executive Committee Meeting, 4:45 p.m., Senate Office.
Committee on Committees,

4:30 p.m., 320 Uris Hall.
Committee on Academics; 3:30 p.m., Loft II, WSH.
 Tuesday, November 6
Admissions and Financial Aids Subcommittee, 6:30 p.m., First Floor G.S.
Educational Innovation Subcommittee, 4:30 p.m., Senate Office.
Counseling and Advising Subcommittee, 4 p.m., 202 Uris Hall.
 Wednesday, November 7
Cornell University Senate Meeting, 7:30 p.m., Kaufmann Auditorium.
Codes and Judiciary Committee, 4:30 p.m., Senate Office.

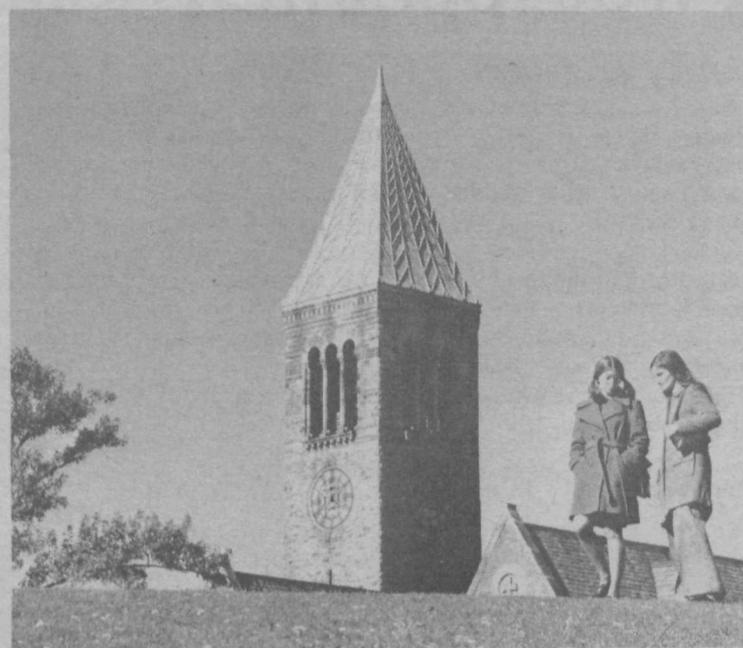
Proposed Agenda

November 6, 1973
 Kaufmann Auditorium
 7:30 p.m.
 Attention: Graduate Students
 — There will be a graduate caucus at 7:15 p.m. in Room 156, Goldwin Smith.
 1. Question Time
 2. Announcements.
 3. Minutes.
 4. Agenda.
 5. D-37-c — Capital Projects Approval Procedures (30,3).
 6. D-80-a — Constitution of Cornell University Student Travel

Chronicle

All items for publication in the Cornell Chronicle must be submitted to the Chronicle office, 110 Day Hall, by noon on the Monday preceding publication.

November (No Comment)



Letter to the Speaker of the House

The following letter has been sent to Carl Albert, speaker of the U.S. House of Representatives, and to every member of the House Judiciary Committee, by Raymond J. Minella, speaker of the Cornell University Senate, pursuant to SA-218.

Cornell University Senate

DAY HALL
 CORNELL UNIVERSITY
 ITHACA, NEW YORK 14850
 TELEPHONE 607/256-3715

October 30, 1973

The Honorable Carl Albert,
 Speaker of the House of Representatives
 House of Representatives
 Washington, D.C. 20515

Dear Sir:

On Tuesday, October 23, 1973, the Cornell University Senate, representing the 25,000 faculty, students, and employees of Cornell University, approved the following resolution by a vote of 47-5:

"Believing it in the best interests of the United States and the American people, the Cornell University Senate respectfully urges the members of the House of Representatives to begin impeachment proceedings against Richard M. Nixon.

The University Senate, further urges members of the community to communicate with their representatives in this regard, and to partake in community activities directed to the end of obtaining impeachment."

Godspeed.

Respectfully yours,

Raymond J. Minella
 Speaker

RJM/1ha

Senate Actions — Oct. 23, 1973

(Complete texts of all University Senate actions are available in the Senators' Study, 124 Day Hall.)

SA NO.	TITLE AND ABSTRACT	SPONSOR	ACTION TAKEN
SA-214 [D-55-a]	OPERATING RULE FOR COMMITTEES [This bill provides that a committee shall report a bill out, favorably, or unfavorably, within 45 Senate Days of the date of assignment to committee, or, in the case of committee and subcommittee consideration, sixty Senate Days, or explain inaction.]	C.K. MacKay	ADOPTED
SA-215	COMMITTEE ON COMMITTEES NOMINATION FOR VACANCY ON THE URB (C.O.C. nomination to fill vacancy on University Review Board).	Committee on Committees	ADOPTED
SA-216 [D-85]	BILL TO ESTABLISH UNIFORM PARKING AND TRAFFIC SIGNS [Bill] to establish uniform parking and traffic signage.	Parking and Traffic Subcommittee	ADOPTED AS AMENDED
SA-217 [D-15-b]	THE PHYSICAL EDUCATION ACT OF 1973 [A bill to recommend the abolition of the Physical Education requirement and to place this recommendation on the agenda of the University Council of Representatives].	Charles K. MacKay	ADOPTED AS AMENDED
SA-218 [D-101]	SENSE-OF-THE-BODY RESOLUTION ON IMPEACHMENT OF THE PRESIDENT [Believing it in the best interest of the United States, the University Senate calls upon the House of Representatives to begin impeachment proceedings against Richard M. Nixon].	List of Sponsors available in the Senate Office	ADOPTED

Barton Blotter

Bomb Threat, Fire, More Thefts

Thirteen reports of thefts were received during the past week by the University Safety Division, according to morning reports issued from Barton Hall headquarters.

In addition, there was a bomb threat Thursday at Uris Hall, a minor fire in sawdust caused by a carelessly dropped cigaret in the rifle range at Barton Hall Saturday, a malicious fire in a stairwell at Founders Hall Wednesday, and two instances of malicious mischief involving damage done to automobiles.

Thefts include a chair and drapes from Balch lounge, \$30 in cash from a desk on the third floor of Johnson Art Museum, a wallet containing \$5 and papers from North Baker Hall, a battery-operated calculator from a room in Sperry Hall, two

chairs from a lounge in Risley Hall, a wallet containing \$30 and papers from a lounge in McGraw Hall.

Also, a purse containing \$100 to \$120 from a room in Kimball Hall, a bicycle from the southwest side of University Halls 4, a wall clock from a room in Clark Hall, an unindorsed paycheck from an unsecured locker in Teagle Hall, \$30 in coins from a soft drink machine on the second floor of Barton Hall, some \$156 in money and merchandise from a candy machine in North Campus Dorm 10, a purse containing \$4 and papers from the game room in Willard Straight Hall, a wallet containing \$13 and papers from an unsecured office in Ives Conference Center and a purse containing \$15 and papers from the Ivy Room in Willard Straight Hall.

Notes on Traffic Bureau, Bus Stop

The University Traffic Bureau will be closed today through Tuesday, according to Lance Haus, director of the Office of Transportation. The bureau will be moving to 203-7 Rand Hall from its offices in Barton Hall.

Effective Monday, the campus bus stop on the east side of East Ave. at the corner of Campus Rd. (directly in front of the entrance to Statler Hall) will be discontinued. It will be merged with the bus stop 350 feet to the north, on the east side of East Ave. This action is being taken in the interest of safety for bus riders, passenger vehicles and pedestrians in the area, according to William Crissey, manager of the Campus Bus Service.

It's Illegal Nevertheless

POSSIBLE MISDEMEANOR — It may be hunting season, but it is still prohibited to bring firearms, like the shotgun in the rear window of this truck, on campus.

Career Calendar

Sign-ups are now being taken at the Career Center for informational meetings with representatives from the following schools:

Nov. 7 — Thunderbird Graduate School of International Management.

Nov. 5 — Columbia University Graduate School of Business.

Nov. 7 — School of Irish Studies, Dublin.

Nov. 8 — Colgate University M.A. T. Program.

Nov. 12 & 13 — Stanford University Graduate School of Business.

Nov. 13 — Northwestern University Graduate & Professional Schools Minority Recruitment.

Nov. 14 — Northwestern University School of Law; Northwestern University Graduate School of Management; New York University Graduate School of Business.

Nov. 15 — Harvard University Graduate School of Business.

Navy recruiters will be at Barton Hall during the week of Nov. 5.

The deadline for White House Fellows has been extended from Nov. 15 to Dec. 15.

The screening of entries for the 1974 Newspaper Fund Summer Internships begins Nov. 1. Apply before Dec. 1. Application forms are available at the Career Center.

A special walk-in administration of the Federal Service Entrance Exam will be held in Room 143 Plant Science on Saturday, Nov. 10 at 8:30 a.m. No advance registration is necessary, but application forms, available at the Career Center, must be completed in advance.

Action/Peace Corps, Vista — will be interviewing on campus the week of Nov. 12. Sign up at the Career Center.

National Science Foundation Graduate Fellowship application deadline is Nov. 26. Application forms can be obtained at the Career Center.

GRE penalty date for the Dec. 8 exam is Nov. 20.

A representative from the Fletcher School of Law and Diplomacy, Tufts University, will be at the Career Center Nov. 15 and 16 to talk about the Latin American Teaching Fellowships. Mr. Porter is interested in talking to M.B.A.s and Ph.D.s regarding teaching at a Latin American university or participating in the internship program which combines teaching and working at a multi-national corporation. Sign up in advance.

United Way Report

At the three-quarters mark in the United Way campaign, Cornell has raised \$132,573, or about 65 per cent of its goal. The leading division in terms of dollars, with 99 per cent of its \$20,000 goal reported, is emeritus professors. The average pledge in this division is \$170.

Another leader is Division 15, with 89 per cent of last year's \$13,054 gift reported. Several smaller divisions and teams have already exceeded last year's gifts. Among them are Division 9, led by Bill Gerich of Student Unions, with over \$1,200 reported compared to last year's \$764, and team 39, the Psychology Department, with \$1,513 reported as compared with \$1,109 in 1972. Team leader is Carol Kannus.

More than 2,000 pledges are still to be returned. The deadline for this year's campaign is Nov. 10. Cornell chairmen are Dana Goodrich, Robert Spalding, John Spencer and Monty Harris.



Bulletin Board

New Chinese History Seminar Offered

A new member of the History Department, Professor Sherman Cochran, will offer a seminar during the spring semester entitled "Self and Society in China Since the 17th Century." It will concentrate on the relationship between the individual and society in Chinese history from the beginning of the last imperial dynasty to the Cultural Revolution of the late 1960s. Members of the seminar will examine the lives of individual Chinese on the one hand and the structure of the society in which they lived on the other, with the aim of discovering how Chinese have reconciled the goals of personal satisfaction and social cooperation.

The seminar (History 693) will meet on Mondays from 3:35 to 5:30 p.m. It is a four-hour course open to juniors and seniors, as well as graduate students, who have completed a survey course in modern Chinese history (History 394 or its equivalent) or who secure the consent of the instructor.

Moot Court Competition Next Week

The final round of arguments in the Law School's second-year student Moot Court competition will be held at 8:15 p.m. Friday, Nov. 9, in the Moot Court Room of Myron Taylor Hall.

The finalists of the week-long competition will argue the case of *Mappe v. The People of the State of Hansum*, a fictional murder and assault case. The setting for the case is before the United States Supreme Court. Among the major issues to be argued are the defendant's rights involving Miranda warnings, unlawful arrest, voluntariness of certain admissions and double jeopardy. Each side of the case will be presented by one team of two second-year law students.

A public cocktail hour is scheduled following the arguments.

NSF Student Grants Available

The Office of Academic Funding has received the guide for preparing proposals to the National Science Foundation's (NSF) Student-Oriented Programs. These include the Students' Science Training (SST) for high-ability secondary school students, Undergraduate Research Participation (URP) for undergraduates interested in science and Student-Originated Studies (SOS) for interdisciplinary research projects by teams of undergraduates, graduates or both.

Although not new, the programs have undergone substantial changes in their operation and proposal requirements. For example, the URP program, which originates within a department and not with an individual student, will this year be limited to studies relating to the energy problem or the management of renewable natural resources. The SOS program is aimed at problems of a local nature which have immediate relevance to the community, are concerned with the biological, physical or social environment, and pose yet-unanswered questions of a scientific or technological nature about which the student group can collect meaningful data.

The deadline for receipt of proposals at NSF is Dec. 7, 1973. Further information on all of the above programs is available in the Office of Academic Funding, 123 Day Hall. Students interested in the SOS program should contact John Crowley in that office.

'Women and Law' Workshop Set

The Cornell University Women's Law Coalition and United Sisters will hold a "Women and Law" recruitment and information workshop for area women from 7:30 to 9 p.m. Wednesday in the Women's Lounge, Myron Taylor Hall. The workshop is free to any interested persons.

The workshop is designed to encourage women applicants to law school and to present the law school experience, according to Beth Saltzman, president of United Sisters and a senior in the College of Arts and Sciences.

Saltzman said several women law students will speak at the workshop about their varying personal experiences both in applying to law schools and in attending Cornell Law School. The speakers represent different marital and educational backgrounds including single, married, married with children and women with previous work or graduate experience. Open discussion will follow the presentations, Saltzman said.

The two sponsoring groups collaborated last year in presenting a similar law students' workshop for area women.

Glee Club to Present Fall Concert

The Cornell University Glee Club, under the direction of Thomas A. Sokol, professor of music, will present a fall concert at 8:15 p.m. Sunday in Sage Chapel.

The concert will feature pieces by Smetana, Schutz, Szadek, Biebl, Wolf and Copeland. A performance by the Cornell University Glee Club Hangovers, a small group in the Glee Club, will also be featured on the program.

Tickets are on sale at Willard Straight Hall, Lincoln Hall, McNeil Music store and Mayer's Smoke Shop.

Calendar

November 1-11

Thursday, November 1

9:30 a.m.-3:15 p.m. Red Cross Blood Drive. Barton Hall. Sponsored by the Cornell ROTC Brigade.

11:15 a.m. Liquid Crystals Lecture Series: Prof. P. G. deGennes, Universite Paris-Sud, Orsay, France. Baker 200.

12:15 p.m. Cornell Catholic Community — Masses for All Saints Day. Anabel Taylor Chapel; Anabel Taylor Auditorium at 5:15 p.m. and 7:15 p.m.

12:15 p.m. Lecture: "The Triple Gems." The Honorable U Nu. Last of a series of four. 102 West Ave.

4 p.m. Dept. of Natural Resources Fall Seminar Series: Drs. D. S. Robson and Cavell Brownie (biometrics). "Estimating Survival Rates in Animal Populations From Returns of Tagged Members." Conference Room, Third Floor Fernow Hall.

4:15 p.m. Society for the Humanities Lecture: Myles Burnyeat, Dept. of Philosophy, University College; visiting professor, Harvard University. "Protagoras and Some Self-Refutation Arguments in Later Greek Philosophy." Ives 110.

4:30 p.m. Food Science Seminar: Greater Accuracy in Predicting New Product Performance Through Mathematical Modeling." Dr. Paul A. Buck, assoc. prof., Dept. of Food Science, Cornell. 204 Stocking Hall. Coffee at 4:15 p.m.

4:30 p.m. Bioengineering Seminar Series: Special topics in bioengineering. Room B-14 Hollister Hall. Film and discussion. All interested students are welcome.

6 p.m. "Table Francaise" — Ici on parle francais. Ivy Room, Willard Straight Hall.

6 p.m. Christian Science Organization Testimony Meeting. Founders Room, Anabel Taylor Hall. Visitors are welcome.

7 & 10 p.m. Lecture and film: *The Kennedy Assassination Conspiracy*. Uris Auditorium. Sponsored by University Unions Program Board.

7:30 p.m. Israeli Folk Dancing. One World Room, Anabel Taylor Hall.

8 p.m. Cornell Duplicate Bridge Club regular Thursday meeting. Elmhirst Room, Willard Straight Hall.

8 p.m. Cornell Linguistics Circle lecture: "Does Deep Structure Exist?" Prof. John Bowers, Cornell. Room 106 Morrill Hall.

8 p.m. North Campus Union Free Film Schedule: *The Joyless Street*, directed by G. W. Pabst, with Asta Nidlsen, Greta Garbo; and *Wild Orchids*, directed by Sidney Franklin, with Greta Garbo, Lewis Stone, Nils Asther. (Both silent.)

8 p.m. Lecture: Jack Chen, senior research associate, Cornell China Program, and member of the editorial staff of Peking Review will speak on "China's Tenth Party Congress and Beyond." Ives 120. Sponsored by the Committee of Concerned Asian Scholars.

8:15 p.m. *University Theatre Series: *Old Times* by Harold Pinter. Willard Straight Theatre.

Friday, November 2

9:30 a.m.-3:15 p.m. Red Cross Blood Drive. Barton Hall. Sponsored by the Cornell ROTC Brigade.

Noon. Open meeting. Women's Studies Program Advisory Group. 431 White Hall. Bring your lunch, coffee provided.

4 p.m. Western Societies Program Seminar on Center-Periphery Relations: Davydd Greenwood, anthropology, will speak on "Continuities and Discontinuities in Basque Ethnic Identification in the Light of Altering Center-Periphery Relations." 153 Uris Hall.

5:30 p.m. Cornell Catholic Community — Prayer Session (All Souls Day). Room 218, Anabel Taylor Hall.

6 p.m. Shabbat Service. Founders Room, Anabel Taylor Hall.

7:30 p.m. *Lightweight Football — Rutgers. Schoellkopf Field.

7:30 p.m. Lecture: Russell Means will speak on "The American Indian Movement." Memorial Room, Willard Straight Hall. Sponsored by the Native American Society and the Young Socialist Alliance.

8 p.m. Meeting of the Cornell Astronomical Society in Fuertes Observatory. Guest speaker Prof. J. A. Burns.

8:15 p.m. *Bailey Hall Concert: Virtuosi Di Roma Chamber Orchestra. Works of Corelli and Vivaldi. Sponsored by the Music Dept. and the Faculty Comm. on Music.

8:15 p.m. *University Theatre Series: *Old Times* by Harold Pinter. Willard Straight Theatre.

8:30 p.m. Irvine Lecture Series: "Federal Appellate Justice: Averting the Flood by Lessening the Flow." Honorable Henry J. Friendly, circuit judge, U.S. Court of Appeals for the 2nd Circuit. Auditorium/Courtroom of Myron Taylor Hall. A question-and-answer period will follow the lecture.

Saturday, November 3

9:30 a.m. Shabbat Service. Edwards Room, Anabel Taylor Hall.

10 a.m. *Varsity Soccer — Columbia. Schoellkopf Field.

1:30 p.m. *Varsity Football — Columbia. Schoellkopf Field

5-7:30 p.m. *Steaks Ltd. Statler Student Cafeteria. A project of students of the School of Hotel Administration.

6-8 p.m. *Steaks Royale. Statler Main Dining Room.

6 p.m. *Chinese Dinner. One World Room, Anabel Taylor Hall. Sponsored by the Chinese Students' Assoc.

8 p.m. *Cornell Concert Commission presents Sly and The Family Stone. Barton Hall.

8:15 p.m. *University Theatre Series: *Old Times* by Harold Pinter. Willard Straight Theatre.

9:30 p.m. Risley Free Film Series: *The Palm Beach Story* (1942). Directed by Preston Sturges. Starring Claudette Colbert, Joel McCrea, Mary Astor, Rudy Vallee and William Demarest. Risley Theatre.

Sunday, November 4

9:30 a.m. Episcopal Church at Cornell. Anabel Taylor Hall Chapel. All are welcome. Students, faculty and families.

10 a.m. Friends (Quaker) Meeting for Worship and First Day School. Anabel Taylor Forum. Discussion following worship. All are welcome.

10:30 a.m. Ruhani Satsang, Sat-Guru Kirpal Singh's Divine Science of the Soul. Loft II, Willard Straight Hall.

11 a.m. Sage Chapel Convocation: The Rev. Myron B. Bloy, executive director, The Church Society for College Work, Cambridge, Mass.

7:30 p.m. Women and Film. Ms. Susan Rice, N.Y.C. producer, director, philosopher and critic, will show and discuss three women's films (*Betty Tells Her Story*, *Diane*, and *Opera Mouffe*). Ives 110. Co-sponsored by United Sisters, Women and the Arts, and Women's Studies.

7 p.m. Table Tennis Competition. Beginners welcome. Barton Hall. Sponsored by the Cornell Table Tennis Club.

7 p.m. Film/lecture: Susan Rice, film critic, discussing three women's films. Ives 110. Sponsored by United Sisters and Woman and the Arts.

8:15 p.m. *Music Dept. Concert: Cornell University Glee Club, Thomas A. Sokol, conductor. Works of Szadek, Schutz, Wolk, Copland, Bieble, and others. Sage Chapel.

Cornell Catholic Community presents "Abortion," sermon by Fr. David Callan, at all Masses in Anabel Taylor Hall.

Monday, November 5

4:30 p.m. Jewish Thought Seminar. Anabel Taylor Hall.

4:30 p.m. "Civilization" film series with Sir Kenneth Clark. "The Light of Experience." 17th century. Bourgeois Democracy in Holland, Hals, Rembrandt, Vermeer, Rationalism, Descartes, Wren.

7:30 p.m. Jewish Identity. Anabel Taylor Hall.

7:45 p.m. Ornithology Seminar: "The Map Component in Pigeon Homing." Dr. William T. Keeton. Laboratory of Ornithology, Sapsucker Woods Rd.

8 p.m. Cornell Catholic Community — Pre-Cana Seminar. Founders Room, Anabel Taylor Hall.

8:30 p.m. Cornell Ski Club meeting. Memorial Room, Willard Straight Hall.

Tuesday, November 6

4:30 p.m. Microbiology Seminar: "On the Role of HCN in Diseases of Cyanogenic Plants." Dr. William E. Fry, Dept. of Plant Pathology. Room 124, Stocking Hall. Refreshments at 4:15.

7:30 p.m. "Senior Search Series": "Sensible Senior Strategy." Planning your job-hunting campaign with Allen W. Perry, placement counselor from Agr. College Career Development Program. Emerson 135.

7:30 p.m. Cornell University Senate meeting. Kaufmann Auditorium.

8 p.m. Continuing Freshman Orientation Program. Session III: "Your College Degree: Genuine or Counterfeit Currency?" Panel: Carson Carr, DeWitt Junior High School; David Cullings, Career Center; Patricia Haines, Women's Studies; Larry Parker, grad. student; Walter Snickenberger, Admissions and Financial Aid. Noyes Center third floor lounge.

8 p.m. Cornell Catholic Community — Pre-Cana Seminar. Founders Room, Anabel Taylor Hall.

8:15 p.m. Music Dept. Concert: Sage Chapel Choir. 76th Anniversary Concert. Donald R. M. Paterson, director.

Wednesday, November 7

4 p.m. Willard Straight Hall Board Meeting. Loft II, Willard Straight Hall.

7 p.m. Hebrew Conversation — Beginners. Founders Room, Anabel Taylor Hall.

7:30 Women in Law, a career counseling workshop for all women interested in the field of law. Women's Lounge of Myron Taylor Hall. Co-sponsored by United Sisters and the Women's Law Coalition.

7:45 p.m. Hebrew Conversation — Intermediate. Founders Room, Anabel Taylor Hall.

8 p.m. Fundamental Football for Fans. Moakley House. Sponsored by the Fifth Down Club.

8:30 p.m. Hebrew Conversation — Advanced. Founders Room, Anabel Taylor Hall.

9 p.m. Cornell Ukrainian Student Hromada meeting. International Living Center Main Lounge.

Thursday, November 8

4 p.m. Dept. of Natural Resources Fall Seminar Series: "Anthropological Approaches to Human Ecology, and Vice Versa." Prof. Bruce Wilkins, natural resources. Conference Room, third floor, Fernow Hall.

4:15 p.m. Society for the Humanities lecture: C. J. Rawson, professor of English, University of Warwick; visiting professor, University of Pennsylvania. "Swift, Baudelaire, Eliot: City Poets." Kaufmann Auditorium. Goldwin Smith Hall.

4:30 p.m. Food Science Seminar: "Fiber: The Forgotten Nutrient." Dr. James Scala, director of nutrition, T. J. Lipton, Inc., Englewood Cliffs, N.J. 204 Stocking Hall, coffee at 4:15 p.m.

4:30 p.m. Bioengineering Seminar Series: Special topics in

bioengineering. Film and discussion. All interested students are welcome. Room B-14, Hollister Hall.

6 p.m. "Table Francaise" — Ici on parle francais. Ivy Room, Willard Straight Hall.

6 p.m. Christian Science Organization Testimony Meeting. Visitors are welcome. Founders Room, Anabel Taylor Hall.

7:30 p.m. Israeli Folk Dancing. One World Room, Anabel Taylor Hall.

8 p.m. Cornell Duplicate Bridge Club regular game. Elmhirst Room.

8 p.m. North Campus Union Film Schedule: *Here's Your Life*, directed by Jan Troell. Multi-purpose Room, North Campus Union.

8 p.m. Cornell Linguistics Circle lecture: "Explanation in Diachronic Phonology." Prof. Noel Corbett, York University. 106 Morrill Hall.

8:15 p.m. *Drummond Studio Series. Cornell University Theatre production of Paul Zindel's *The Effect of Gamma Rays on Man-in-the-Moon Marigolds*.

8:15 p.m. Music Dept. Concert — Open Dress Rehearsal: Brecht's *The Roundheads and the Pointedheads*. Barnes Hall.

Friday, November 9

Noon. Cornell Women's Studies Program Sandwich Seminar: "The Masculine Mystique." Prof. Judith Long Laws, sociology/psychology. 431 White Hall. Open to the public. Bring your lunch, coffee provided.

6 p.m. Shabbat Service. Founders Room, Anabel Taylor Hall.

8:15 p.m. Music Dept. Concert: American Premiere of Brecht's *The Roundheads and the Pointedheads*. Music by Hanns Eisler. Barnes Hall. To be repeated Nov. 10.

8:15 p.m. *Drummond Studio Series: Cornell University Theatre production of Paul Zindel's *The Effect of Gamma Rays on Man-in-the-Moon Marigolds*.

Saturday, November 10

9:30 a.m. Shabbat Service. Edwards Room, Anabel Taylor Hall.

10 a.m. *Varsity Soccer — Brown. Schoellkopf Field.

1:30 p.m. *Varsity Football — Brown. Schoellkopf Field.

7:30 p.m. India Night. Anabel Taylor Auditorium. Sponsored by Cornell India Association.

8:15 p.m. *Drummond Studio Series: Cornell University Theatre production of Paul Zindel's *The Effect of Gamma Rays on Man-in-the-Moon Marigolds*.

8:15 p.m. Music Dept. Concert: American Premiere of Brecht's *The Roundheads and the Pointedheads*. Barnes Hall. Repeat of Nov. 9.

9:30 p.m. Risley Free Film Series: *Topper* (1937), with Cary Grant, Constance Bennett, Roland Young and Billie Burke. Risley Theatre.

Sunday, November 11

9:30 a.m. Episcopal Church at Cornell. Anabel Taylor Chapel. All are welcome. Students, faculty and families.

10 a.m. Friends (Quaker) Meeting for Worship and First Day School. Anabel Taylor Forum. Discussion following worship. All are welcome.

10:30 a.m. Ruhani Satsang, Sat-Guru Kirpal Singh's Divine Science of the Soul, Loft II, Willard Straight Hall.

11 a.m. Sage Chapel Convocation: Erwin D. Canham, editor-in-chief, The Christian Science Monitor, Boston, Mass.

Noon. *Alphabet Soup: A different kind of car rallye. Starts from Cornell "B" parking lot (off route 366). Sponsored by Cornell University Sports Car Club.

4 p.m. Music Dept. Concert: Cornell Chorus, Thomas A. Sokol, conductor. Works of Berlioz, D'Indy, Hindemith, Fine and Schutz. Sage Chapel.

7 p.m. Table Tennis Competition. Beginners welcome. Barton Hall. Sponsored by Cornell Table Tennis Club.

8:15 p.m. *Drummond Studio Series. Cornell University Theatre production of Paul Zindel's *The Effect of Gamma Rays on Man-in-the-Moon Marigolds*.

Exhibits

Herbert F. Johnson Museum of Art: Tall Buildings — open to Nov. 11; Seymour Lipton, Sculpture — open to Nov. 4; Contemporary Prints from the Permanent Collection — open to Dec. 21; Asian Art, a Collector's Selection — open to Nov. 25; Permanent Collection; Indonesian Photographs — open from Nov. 7-Dec. 9.

Franklin Gallery: Student Exhibition of Silk-Screen Prints — open to Nov. 9; Stanley Bowman, photographs — open from Nov. 10-21.

History of Science Collections: Recent Acquisitions (changed monthly). 215 Olin Library.

Sibley Gallery: Dept. of Art Faculty Show — open to Nov. 2. Olin and Uris Libraries: Opening Nov. 8, "The Men of '14: Ezra Pound, T.S. Eliot, James Joyce, Wyndham Lewis."

ANNOUNCEMENTS

The deadline on entries for intramural swimming is Monday, Nov. 5, at 2 p.m. in the Intramural Office, located in the Grumman Squash Courts building.

The deadline on entries for intramural basketball is Monday, Nov. 12 at 2 p.m. in the Intramural Office, located in the Grumman Squash Courts Building.

*Admission charged:

Attendance at all events is limited to the approved seating capacity of the hall in which they are presented.

All items for the Cornell Chronicle Calendar must be submitted to the Office of Central Reservations, Willard Straight Hall (either through the mails or by leaving them at the Straight desk) at least 10 days prior to publication of the Chronicle. The Calendar is prepared for the Chronicle by the Office of Central Reservations.