

4 percent raises included

Board approves \$125 million budget

An operating budget of \$125,157,845 for the 1972 - 73 fiscal year was adopted July 28 by the Board of Trustees. This included a general fund budget of \$107,125,000.

In addition to the general fund budget, the board also approved a \$7,904,376 budget for the Agricultural Experiment Station and \$10,128,469 for the Cooperative Extension Service. These included state appropriations for \$6,059,000 for the Experiment Station and \$5,220,000 for the Cooperative Extension Service.

In presenting the budget, Roger Wilkinson, vice president for business and finance, pointed out that the general fund budget for the past year was reduced at mid-year by a cut in state appropriations of \$1,306,360.

This means, he explained, that the general fund budget for the coming year,

1972 - 73, will be approximately \$7,184,360 more than was actually expended during the past fiscal year.

The state appropriation to MSU's general fund this year totals \$70,839,000 and provides for 66 percent of the total general fund budget, Wilkinson reported. This represents an increase of \$6,827,360 over the reduced appropriation for the past year.

Wilkinson estimated income from student fees at \$30,361,000 in the coming year, which would provide for 28 percent of the total budget. Other general fund revenue totaling \$5,225,000 provides 6 percent of the budget. The latter includes overhead, interest income and departmental revenues.

Some 77 percent of the general fund budget, \$82,873,596, has been allocated for the coming year for payment of

personal services such as salaries, wages and fringe benefits.

Included is a 4 percent salary and wage adjustment for all employe groups. Over and above this, the administration has reported, 138 women faculty will receive salary adjustments totaling \$118,685, effective July 1, 1972, as a result of a major review of possible inequities in salary levels between men and women.

Also in the 1972 - 73 budget is an additional allocation of \$493,000 to cover increased cost of fringe benefits. These include expansion of benefits for regular part-time employes, new long-term disability insurance paid by the university for all regular employes effective Jan. 1, 1973, and also the improved Social Security program recently passed by Congress.

The budget also contains an increased

allocation of \$1,383,000 appropriated by the legislature for medical programs.

Other increases over last year include: \$743,308 to academic units for minor program improvement; \$319,000 in the nonacademic programs continuation, and \$150,000, financial aids.

Wilkinson pointed out that major maintenance and alterations and improvements were curtailed during the past two years due to reductions in state allocations. These items have been restored in next year's budget and total \$655,420.

Wilkinson also noted that in addition to the approved budget the university will expend some \$60 million for restricted gifts and grants and auxiliary services. These include the housing program and other self-supporting university operations.

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'Human liberation' is coordinator's goal

Josephine Wharton doesn't label herself as a member of the women's liberation movement, but rather a member of the "human's liberation movement."

"I believe that everybody is a somebody and should be proud of whatever he or she is. I also believe that people have human rights and should not be dominated," she says.

Mrs. Wharton began on Aug. 1 in the newly created position of coordinator for women and minority training programs. The position, which was approved by the Board of Trustees at its July meeting, is in the Office of Equal Opportunity Programs (EOP) with a liaison with the Personnel Office.

She comes to the position after serving for two years as assistant to the EOP director.

In her new position, Mrs. Wharton will plan, organize and direct individual and group training sessions for women and minority employes. This will be accomplished with the assistance of

supporting personnel and advisory counseling.

"The campus is a logical and effective location for such training. There are many resources here," she says.

The programs she is planning will be primarily on-the-job training geared to "training the whole person."

"Everyone should have the opportunity of realizing his qualifications and be given the chance to contribute to our world."

Mrs. Wharton explains that the training programs will have another advantage of raising the economic life style of the persons involved and making it possible for "a person to feel like a person."

She says that another thing she hopes to accomplish is to eliminate the feelings of a person being "just a secretary."

"I want both the secretary and her employer to realize what a tremendous addition she is to the operation of the department or office where she works."

She adds that a secretary should not degrade making the coffee, but should look at this service as a way of making people more comfortable.

Mrs. Wharton is in the process of circulating questionnaires in the hopes of identifying people with expertise and concern for assisting her operation.

"I hope to have a cooperative response from the whole University community."

She is also in the process of selecting a supporting staff that will include faculty, students, members of minorities and the various campus groups.

Mrs. Wharton, a mother of three and grandmother of seven, has been with MSU since 1959.

Being involved with training programs is not new to Mrs. Wharton. In 1968, when she was office assistant in the College of Education, she served as interviewer and training consultant for MSU's first special training program for disadvantaged minorities.

While at the University she has served as a member and officer of many campus organizations, including the Faculty Women's Association Board, the Administrative-Professional Association Board, the Black Faculty and Administrators Club and the Business Women's Club. In addition, she served as a member of the recent Women's Steering Committee.

Prior to coming to the University, she was employed with the Michigan Department of State, Title Division; the state Land Office Board; the Department of State, License Division; the Office of Auditor General; the Michigan Social Welfare Department; the Christian Student Foundation of Peoples Church Interdenominational Program for students and MSU's Ford Foundation project.

Fringe benefits approved for part-time employes

An administration proposal to provide fringe benefits on a proportionate basis to regular part-time employes of the University has been approved by the Board of Trustees.

The principal result of the new policy will be to permit eligible employes to participate in the University's hospitalization and retirement program.

For purposes of eligibility in the hospitalization and retirement programs, part-time employes are defined as those working one-half time or more and with five years of continuous employment.

They will be eligible for optional entry into the retirement program to which the University will contribute 6 percent of salary and the employe 3 percent. The University also will contribute up to one-half of the health insurance premiums which it provides to regular full-time salaried employe.

In addition, all part-time employes working half-time or more, who are not now receiving them, will be eligible for proportionate benefits for sick leave, vacation, holidays, personal and funeral leave as well as jury and military duty time off. Temporary employes (defined as those working full time for periods of nine months or less) will be eligible to accumulate sick and holiday leave, and vacation credits after six months of employment. They will carry their credits with them if they move into regular employment.

The new fringe benefit policy resulted from a study ordered by President Wharton in an effort to provide greater equity to the university's part-time and temporary employes.

Many of the affected employes are women who choose to work or teach on a part-time rather than a full-time basis. Heretofore, they have not been eligible for major benefits such as retirement and health insurance even though some have been employed 15 years or more.

It is expected that about 100 part-time employes have at least five years of service work half-time or more and will become eligible for the major fringe benefits. Hospitalization participation would be effective Sept. 1, and retirement plan eligibility on Jan. 1, 1973.



Josephine Wharton

Science notes

One second of life equals \$40 billion

To prolong life, or delay aging, has long been a dream of humankind. (Good food, shelter, health and heredity, of course, all help.)

But what is a second of life worth, in dollars?

In a sense, it is worth 40 billion dollars according to the latest research findings.

Humankind has long argued about whether time has a reality of its own or is merely an invention of the mind.

Now, for the first time, the dilemma of flying clocks seems closer to being resolved. If resolved, a second of time may have, for some, a drastically new meaning. Also, it may carry with it a price tag that varies more than the stock market.

The flying clock paradox, tested for the first time by J.C. Hafele of the Caterpillar Tractor Co. in Peoria, Ill. and Richard E. Keating of the U.S. Naval Observatory, became less of a mystery with the 1972

publication, in Science magazine, of their great clock experiment.

It must have been a curious sight, last year, when the two physicists boarded the plane with four atomic clocks — each large enough to require a separate airline ticket and seat.

They baby - sat the clocks in a flight around the world, easterly, and another flight around the world, westerly. The two trips in opposite directions — one in the direction of the earth's easterly rotation and the other against the earth's rotation — could reveal whether time was lost or gained, depending upon relative velocities.

This was the initial test of the flying clock paradox proposed by the late Einstein.

Result?

Time seems to be a dimension.

Adjusted figures showed that when the clocks went with the earth's rotation

their velocity in relation to an imaginary observer in space increased and the clocks slowed down. Time stretched out. Aging slowed.

But when the clocks went against the earth's motion, thereby slowing in relative velocity, their time sped up and "aging increased."

Still, such problems as gravity effects, and clock error, make the results inconclusive.

What if later investigations verify the results?

"Time will then be known to have an existence, or properties, independent of physical mechanisms," said Richard Schlegel, MSU physicist and author, when asked about the results.

Many scientists have thought of time as an invention of man. Schlegel and others have suggested experiments similar to the initial one of the two physicists so that scientific results could be gathered to test the time theories.

"The results of the clock experiment, if proven valid," said Schlegel, "would place time as the controller of all physical phenomena.

"In that case, time is mistress and not servant of nature."

When asked what a jet flight designed to save a second of life — or reduce aging by one second — would cost at today's passenger fares, Schlegel smiled, and scribbled a few figures on a nearby blackboard in his office. Then he walked over to his desk calculator and punched several keys.

"Forty billion dollars," he said, after the machine had stopped clicking and whirring. And then his eyes sort of sparkled, and he added: "The jet flight, allowing for refueling, would take about 140,000 years."

Anyone for a one - year flight to save seven - millionths of a second of life?

— PHILLIP E. MILLER

Harrison named faculty grievance officer

Michael J. Harrison, professor of physics, has been named the University's first faculty grievance officer.

The appointment, effective Aug. 1, was approved July 28 by the Board of Trustees.

The position of faculty grievance officer was provided for as part of the Interim Faculty Grievance Procedure which was approved by the Board of Trustees in April.

Harrison, selected and recommended to the administration by the Faculty Affairs and Faculty Compensation Committee (FAFCC), will receive a salary of \$27,850.

His office will be independent of existing university administrative structures, and he will be responsible for resolving grievances and assuring that all hearings are conducted with the appropriate due process.

Harrison will also be responsible for recommending changes in the existing

grievance procedures for the faculty to the FAFCC.

A member of MSU's faculty since 1961, Harrison was first appointed assistant professor of physics and then promoted to associate professor in 1963. For one year he served an additional assignment in Lyman Briggs College and in 1968 was named professor of physics.

Prior to joining the faculty, he served as a physicist at the Air Force Cambridge Research Center, M.I.T. Lincoln Laboratory, and Westinghouse Research Laboratories. From 1959 to 1961 he was a research fellow in the Department of Mathematical Physics at the University of Birmingham, England, and then was a member of the RCA Laboratories technical staff in Princeton, N.J. during the summers, 1961 - 1963.

Harrison was a Fulbright fellow and Hendrich V. Loon fellow in theoretical physics at the University of Leiden, Holland from 1954 - 55; and a National Science Foundation fellow from 1957 - 59. He has also served as a consultant to the United Kingdom Atomic Energy Authority, RCA Laboratories, United Aircraft Corporation, and MSU's Thailand Project in Bangkok.

He directed the University's science development program from 1966 to 1968 and was selected by the American Council of Education (ACE) to serve as

a fellow in the 1970 - 71 Academic Administration Internship Program. He is currently a member of the MSU Task Force on Lifelong Education.

Harrison received his bachelor's and master's degrees from Harvard University and the Ph.D degree from the University of Chicago.

He has authored numerous papers for professional journals and is a member of the American Physical Society, the American Institute of Physics, Sigma Xi (science honorary), and the American Association for the Advancement of Science.



Michael Harrison

Achievements

Two geographers — CLARENCE W. MINKEL and ROBERT N. THOMAS — will be conducting summer teaching - research institutes in Colombia and Ecuador. Minkel, professor of geography and associate dean of the graduate school, will conduct an institute at Tunja, Colombia, and Thomas, associate professor, will direct a program at Quito, Ecuador.

Mary Denison dies

Funeral services were conducted Wednesday for Mary K. Denison, who died Aug. 6 in a Lansing hospital. Mrs. Denison, 62, was the wife of James H. Denison, who stepped down in 1969 after 22 years as assistant to former Pres. John A. Hannah and director of University relations.

Mrs. Denison was active in civic and volunteer activities. She was the first woman member of the vestry of All Saints Episcopal Church and the first president of the Lansing College Women's Volunteer Service.

Recently enshrined in the United Savings — Helms Hall of Fame was CLARENCE "BIGGIE" MUNN, director emeritus of athletics.

JAMES H. NELSON, professor of administration and higher education, has been elected chairman of the Council of Universities and Colleges of the American Association of Junior Colleges (AAJC). He is also a director of the AAJC.

The director of the African Studies Center, ALFRED OPUBOR, is among 20 scholars named to participate in a July UNESCO workshop in Paris to study ways of integrating communications research and development planning.

LEONARD RALL, professor of economics, was cited as "Faculty Member of the Year" by the graduation class of the Advanced Management Program, which provides a two - year course for Detroit area middle management and senior business executives.

LOUIS ROMANO, professor of administration and higher education, is a member of the board of directors of the Michigan Association of Middle School Educators.

THOMAS B. SCULLION, associate professor and in the Office of Health Services Education and Research, presided at a session of the National Conference on Social Welfare.

JULIAN W. SMITH, professor of administration and higher education, was reelected to the executive committee of the National Rifle Association.

On other campuses

CMU TO PROPANE. Central Michigan University has converted four service vehicles to propane fuel in an effort to reduce emissions of carbon monoxide. The conversion cost about \$300 per vehicle, said a CMU spokesman, but it is expected to increase engine life, cut maintenance costs and reduce emissions.

* * *

NO PAY DATA AT U - M. The University of Michigan Board of Regents approved a recommendation by President Robben Fleming that there be no public release of salary information on U - M faculty and staff. A request for public disclosure had been made by the editor of The Michigan Daily.

* * *

HIGH PRICES NEAR CAMPUS. A professor of business at the University of Wisconsin took a recent survey of food prices in Madison and discovered that grocery stores near the campus charged higher prices than those in other areas. Working from a list of 32 grocery items, William A. Strang sent students on shopping trips throughout Madison, and the average bill on State Street (near the campus) was up to 17 percent higher than those in outlying stores. He said that part of the price difference may reflect higher operating expenses in the campus area.

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Around the campus: A weekly review

Post office branch in Union

The Abbott Street branch of the East Lansing Post Office, located across the street from the East Lansing City Hall, will move into the Union Building, effective Sept. 11.

The Union post office, to be located on the second floor, will offer the same services offered by the Abbott Street branch. These include weighing packages, and selling stamps and money orders. In addition, the more than 300 postal boxes will be transferred to the Union.

Three law schools idea vetoed

Governor Milliken Wednesday strongly endorsed establishment of a new College of Law at MSU.

President Wharton said that the governor's pledge to include support for the law college in Milliken's 1973-74 budget recommendation is welcome news. "We sincerely hope that the state legislature will follow up the recommendation of its own joint committee favoring establishment of the law school at MSU," Wharton said.

The new college came closer to reality when Milliken vetoed a section of the higher education appropriations bill that called for a study of creating three new law schools in Michigan, one of them here.

Milliken noted that "MSU is a logical choice for the new law school because of its geographic location and its proximity to the State Capitol with many public service opportunities."

After five months of study, the legislative joint committee recommended in March that a third state-supported law school be located at MSU. And it recommended an appropriation of \$796,114 in fiscal 1972-73 to open the college by this September.

Wharton noted that more than two years of study and planning has gone into the law school proposal, and he added: "We are prepared to launch the new college immediately following formal action by the governor and the state legislature."

Researchers face animal shortage

MSU physiologist W. Richard Dukelow has warned of a growing shortage of nonhuman primates — such as monkeys and gorillas — which threatens future studies of physiology and human disease.

"Recent years have found increased use of nonhuman primates in many research areas to the point where decimation of native populations and even near-extinction of some species has occurred," Dukelow reported to fellow scientists recently in Munich, Germany.

"Disregarding supply of nonhuman primates for the pet and circus trade and vaccine production," said Dukelow, "and even allowing for the tremendous death loss which occurs in the capture, holding and transportation of nonhuman primates, over 250,000 animals are used annually in biomedical research throughout the world."

Of these animals, less than one percent are born and raised in captivity, said Dukelow, who heads the MSU Endocrine Research Unit.

"In recent years more and more governments are restricting the exportation of their nonhuman primate populations for any use. The list of 'endangered species' grows longer with each passing month."

"The resultant shortage of animals has caused prices to rise for both research and zoo animals, and an increase in the black market supply of others," said the MSU scientists.

"Because of this, there is a great deal of interest and activity relating to the breeding of nonhuman primates in captivity."

Astronomers to meet here

MSU will play host to the 138th meeting of the American Astronomical Society (AAS) next Tuesday through Friday (Aug. 15-18).

The public will be able to view exhibits on astronomy education and hear a lecture by Allan R. Sandage of Hale Observatories at Santa Barbara, Calif. His topic will be "On the Expansion of the Universe and the Edge of the World."

The public lecture, in honor of the late astronomer Henry Norris Russell, will be at 8:30 p.m. Wednesday (Aug. 16) in 108B Wells Hall on campus. There will be no admission charge.

During the AAS meeting of some 400 astronomers, featured speakers will include David Buhl from the National Radio Astronomy Observatory at Charlottesville, Va., who will speak on molecules in space, and S. Chandrasekhar from the Laboratory for Astrophysics and Space Research at Chicago, Ill., who will discuss the influence of general relativity on star configurations.

Also featured will be Stephen E. Strom of the State University of New York at Stony Brook, N.Y., who will speak about early stages of star evolution, and Dimitri M. Mihalas from the National Center of Atmospheric Research at Boulder, Colo., who will report on recent progress in the interpretation of star spectra.

Exhibits and demonstrations of astronomy-teaching innovations will be open Friday and Saturday (Aug. 18-19) in rooms 140 and 141 of West Akers Hall.

And here's today's weather

MSU faculty, staff and students setting out on summer vacations or quickie weekend trips, can stop for weather news on their way off campus.

A lobby display by the central (east) door of the Natural Science Building shows each day's weather for the United States, and the prognostications for the following day. Daily maps usually are up by 10 a.m. throughout the school year.

The service is made available from the weather facsimile machine which is actually a teaching and research tool for specialized geography courses. No actual forecasting is done, but facsimiles of official forecasts are provided.

For nonexperts, the brown and white facsimiles show additions of red and blue marks showing highs and lows, and the warm, cold and stationary fronts. The red-blue marks are made by Jay R. Harman, climatologist and assistant professor of geography.

The display also includes a facsimile of the weather map of windflow patterns at about 18,000 feet, the upper atmospheric level at which the wind steers the earth's surface weather.

The maps originate at the Detroit regional office for each section of Michigan. The Lansing branch of the U.S. Weather Service is allowed, Harman said, to amend the Detroit forecast for local conditions, within 6 to 8 hours of receiving the map. Then, the facsimiles are reproduced, on a machine in the Natural Science Building, on a continuous roll of electrically sensitive paper. Each map has the date and (Greenwich) time.

Recent maps can be borrowed by faculty and students for classroom and research purposes. The archived facsimiles may be examined by faculty in the facsimile machine room, but cannot be loaned out, Harman said.

Grant to medical schools

A federal grant of \$2,175,000 has been given to MSU, the University of Michigan and Wayne State University for a cooperative venture among their medical schools.

The new grant, the first federal funding of its kind, will allow the three universities to recruit a common adjunct faculty of primary care (general practitioners, pediatricians, obstetricians and internists) M.D. preceptors who will instruct medical students in offices, clinics and community hospitals where they practice.

It is anticipated that by 1974-75, about 200 preceptors will be teaching about 430 students annually.

MSU's College of Human Medicine will be responsible for training the preceptors in educational techniques and for evaluation of the program.

The University's College of Osteopathic Medicine will continue its use of D. O. preceptors rather than participate in the new program.

Clinic opened for migrant workers

Students of the MSU College of Human Medicine, in cooperation with the United Migrants for Opportunity, Inc., (UMOI) have established a screening clinic this summer for migrant farm workers.

Manpower for the clinic, which has handled 20-25 patients each Monday evening since it began operation on July 3 in the Stockbridge Presbyterian Church is provided by UMOI, MSU medical and social work students and MSU student volunteers.

'Financial Report' wins award

A special citation for editorial and design excellence has been awarded to the Department of Information Services by the American College Public Relations Association.

The award, announced at the group's annual meeting, was presented for MSU's "Financial Report 1970-71."

The text was written by Gail Morris, formerly associate news editor in the Department of Information Services. The publication was designed by Dorris Birchfield and edited by Marjorie Overhouse, both staff members of the University Editor's Office. Photo illustrations were produced by the MSU photographic laboratory.

Band clinic opens next week

More than 2,000 teen-age band members from 23 Michigan high schools will polish their music and marching skills for the fall football season in the ninth annual Marching Band Clinic here Aug. 14-Sept. 2.

About 700 musicians will participate in each of three weeklong sessions. They will be housed on the campus and will practice six to eight hours each day under supervision of their own directors.

The high school band directors will get counsel from Band Director Kenneth Bloomquist and Assistant Director Dave Catron. Twirlers, drum majors and business managers will get help from MSU bandmen; Dan Williams, Flint, featured twirler; Jon Nichols, Okemos, percussion specialist, and Aurelio D'Arcangelis, Flint, band management expert.

Each session will conclude with a public performance at 10 a.m. Saturday on Old College Field.

The Marching Band Clinic is sponsored by the MSU Department of Music and Continuing Education Service.

UC Quarterly solicits women's views

University women are being invited to speak out, in print, whether their views relate to Women's Liberation or women in higher education.

The winter (1973) issue of University College Quarterly, published at MSU, will be devoted entirely to women, according to David D. Anderson, editor, and professor of American Thought and Language (ATL).

"We are inviting contributions," Anderson said, "from faculty and staff women here and elsewhere. We feel that an entire issue should be assigned to exploration of women's views about education and liberation."

To date, two articles by MSU faculty members have been accepted, he said. One author discusses women in higher education; the other presents a woman biologist's view of the Women's Liberation movement.

Traditionally, the 36-page quarterly contains essays and poems.

The Board recap

Women's reorganization proposal postponed

Action on a reorganization proposal for improving the status of women at the University was postponed by the Board of Trustees July 28 until its September meeting.

The postponement "for more study" resulted from some trustee dissatisfaction with the administration's proposal for restructuring the Equal Opportunities Programs (EOP) into a new Department of Human Relations, headed by an assistant vice president and director, and including an Office of Women's Affairs and an Office of Minority Affairs, each headed by an associate director.

The Women's Steering Committee in its 59 - page report sought a Women's Center whose director would hold rank similar to that of an MSU vice president.

Trustee Patricia Carrigan said that she agreed with the steering committee's recommendation which called for the director's vice presidency rank.

She also said that many of the recommendations of the steering committee were not included in the administration's proposals.

Robert Perrin, vice president for University relations, called the administration's proposal "probably the most significant package of action steps to be developed in answer to the concerns of women at MSU," and he said "it places MSU ahead of any university in this country in terms of the steps that are being proposed and taken."

He said that charges made at the July 27 informal session - that MSU is "guilty of discrimination" - simply are not true. "To the best of our knowledge, this University is in complete compliance with every law, executive order, and federal and state directive with regard to our responsibilities as employers and as a public institution. If it is not, we should have specifics so that corrective actions can be taken."

In the informal session, Mary Kay Scullion, coordinator of the Women's Steering Committee, said "the last time that MSU attempted to deal with discrimination and affirmative action in the EOP, the attempt failed."

She also labeled the administration's response as "blatantly hostile, condescending and substantially irrelevant."

Elaine Frank, administrative assistant in the College of Natural Science, presented a petition with 58 signatures to the board at its informal session stating that "the Report of the Women's Steering Committee does not represent the majority of long - term women employed on campus" and that the points of view in the report "do not necessarily reflect the interests and aspirations of MSU women employees."

The petition also applauded the administration on "the choice of issues on which it has or is taking positive action, and strongly supports its decisions on those it has declined."

Also at the informal session, Joann Collins, counselor, financial aids, delivered the minority report of the Women's Steering Committee supporting using the existing structure of EOP and not the establishment of a women's center.

ON CAMPUS HOUSING RATES

The Board approved a \$6 per month increase in married housing units by a 6 - 2 vote. Trustees Carrigan and Clair A. White opposed the recommendation.

Effective Oct. 1, married housing rates for a 1 - bedroom furnished apartment will increase from \$109 to \$115 per month, and for a 2 - bedroom furnished apartment for \$115 to \$121 per month.

The trustees voted unanimously to hold base rates in residence halls at the present rate of \$380 a person per term for a double room.

Residence hall rates were increased by \$20 per term last year, while married housing rates remained the same because of the federal wage - price guidelines.

ADMINISTRATIVE - PROFESSIONAL STUDY

The Board approved, by a 6 - 2 vote, hiring Robert H. Hayes and Associates, Inc., of Chicago, to study the Administrative - Professional employees classification structure and develop a recommended uniform salary program.

Trustees Carrigan and Warren M. Huff voted against the motion. They asked for more information on the firm.

SCHOOL OF CRIMINAL JUSTICE

Trustee Huff presented a motion and won the support of the Board to reevaluate the amount of money allotted the School for Criminal Justice.

Trustees Carrigan and Don Stevens opposed the motion on the grounds of "slighting other departments."

The proposal came following a report on the criminal justice school at the informal board session.

A.F. Brandstatter, director of the school, reported that because of the increasing growth in the criminal justice area, many students have been turned away.

He reported that approximately 300 students were turned away this past year.

PAY LIST RELEASE

The Board approved release of the faculty salary list and voted to keep the pay list public information. The motion was passed 6 - 2. Trustees Frank Merriman and Kenneth Thompson opposed the motion because "faculty have a right to some privacy."

PERSONNEL ACTIONS

The Board approved 33 appointments, 8 academic promotions, 13 leaves, 24 transfers and changes in assignments, 13 resignations and 4 retirements.

Eileen R. Van Tassell was reappointed as assistant professor of natural sciences. The reappointment follows two years of appeals by Miss Van Tassell following a 1970 recommendation by a Department of Natural Science committee that she not be reappointed.

OTHER ITEMS

The Board approved establishing the Married Students Union as a major governing group on campus. In addition, criteria was approved for using University collection procedures for student governing groups and student organizations.

Gifts, grants and scholarship funds of \$5,625,227 were accepted by the board. More than \$1.8 million of the amount is for various health - related projects.

Contracts were awarded for \$146,850 for alterations to the Kresge Art Center; \$84,890 for the expansion of parking facilities at Fee Hall; and \$48,106 for the reroofing and gutter repair of the Judging Pavillion.

Many of the administration's 21 recommendations on the status of women have been put into effect with the Board approval of Mrs. Josephine Wharton as coordinator for training programs for women and minorities; fringe benefits for part-time (nonstudent) employes; and the administrative - professional classification study. (See related stories in this edition of the News - Bulletin.)

Also, effective immediately, women will be eligible on an equal basis with men to compete for positions in the MSU Marching Band.

4-H Bonanza set at MSU



Photo by Bill Mitcham

Meeting for a news conference on the 4 - H Bonanza are (from left) Walker Cisler, chairman of the board of Detroit Edison; President Wharton; and Trustee Frank Merriman, Board of Trustees.

A monumental event to increase the awareness and support of Michigan 4 - H programs has been set for Oct. 13 - 14 at MSU.

Called "4 - H Bonanza," the event will culminate in an auction - exhibition in Jenison Fieldhouse on the 14th.

The triumvirate chairmen of the gala event are President Wharton; Benson Ford, vice - president of Ford Motor Company; and Elton Smith, president of the Michigan Farm Bureau.

The first event of its kind in the nation, Bonanza will feature the sale of all types of Michigan products (including a horse valued in excess of \$50,000) and entertainment by such nationally known celebrities as Art Linkletter.

The Michigan 4 - H Foundation is sponsoring the unique event and hopes to raise \$250,000 for Michigan 4 - H programs, including those for the underprivileged and minority youngsters.

In addition to financial assistance to 4 - H programs throughout Michigan, one of the chief purposes of Bonanza is to create an awareness of 4 - H, the 4 - H Foundation, the Cooperative Extension Service, MSU, and the opportunities they all provide. The Michigan 4 - H program, which has been an intricate part of the Cooperative Extension Service at MSU since 1914, currently provides opportunities for over 200,000 Michigan youth.

"We also hope to create an atmosphere of total involvement of

people from all segments of our Michigan population, including agriculture, industry, and MSU, in mutual support of 4 - H," says Ralph Kirch, the executive director of the Michigan 4 - H Foundation.

Included in the list of programs proposed for sponsorship is the MSU 4 - H volunteer program. Initiated in 1969, the volunteer program employs two MSU students as coordinators and over 280 MSU volunteers. They provide practical learning experiences for Lansing's inner - city youth in such areas as food and nutrition, language, mechanics, and sewing.

Other programs to benefit from the 4 - H Bonanza include leadership training conferences, a state parks program, a mobile environmental laboratory, the International Farm Youth Exchange, a mobile home youth program, specialized training scholarships, and community resource development projects.

In addition to the triumvirate chairmanship, several other key leaders throughout Michigan and MSU have accepted chairmanships associated with the event. Included are: Frank Merriman, vice - chairman of the MSU Board of Trustees, chairman of the agriculture committee; Walker Cisler, chairman of the Board of Detroit Edison, chairman of the banquet committee; and John Doneth, MSU professor of agriculture economics, co-chairman of the sale committee.

- COLLEEN SEELEY

Uniform salary program for A-Ps is goal of study begun on campus

Are administrative - professional employes properly classified in their job positions? Are their job descriptions up-to-date? Are A - P's in the proper salary levels?

These are among questions to be answered following the completion of a six-month study of the A - P classification system on campus. The study was begun yesterday by the consulting firm of Robert H. Hayes and Associates, Inc., of Chicago.

The Board of Trustees approved the study at its July meeting.

Keith Grotz, assistant vice president for personnel and employe relations, said the study was needed after it became apparent that there were certain A - P misclassifications.

"The study is in answer to questions raised by the A - P Association, certain members of the administrative structure and the personnel staff," he said.

Two members of the consulting firm, including Hayes, president of the company, will work with full-time members of the University staff and committees established by the A - P Association, the administrative and full-time staff groups.

"By involving our own people internally, the study will provide good training and supervisory for our own people for continuing the review on a regular basis," Grotz said.

A new office, Compensation and Evaluation Services, has been established under Employe Compensation and Staff Benefits to coordinate with the study. William Thompson, new to the University, will head this division.

Thompson will be working full-time with the consultants along with Gerald O'Connor, Personnel Center director; William D. Prescott, senior personnel specialist; and Joan M. Smith of the Counseling Center. Prescott and Mrs. Smith have been assigned full-time to Compensation and Evaluation Services.

Throughout the study, the team will be reviewing the approximate 400 to 450 separate jobs covered by the A - P classification. This includes more than 640 employes.

In addition, the top four classifications of the clerical - technical grades will be examined to determine if these positions should be classified in the A - P system. There are 267 employes in these four C - T classifications.

Grotz stressed that although the study will result in job reclassifications, there will be no salary cuts for individuals involved.

"But in some cases, the reevaluations and reclassifications will result in pay increases," he said.

The study will cover approximately 11 areas. These include: Updating job descriptions, a complete salary evaluation system, job grading, review of the A - P system, developing a new title structure, evaluation of the merit increase and promotion system, and establishing a competitive pricing system.

The study will be done in eight phases. Many of the phases will be undertaken in parallel with each other rather than in sequence.

— SANDRA DALKA

Eight phases included in six-month study

MANAGEMENT AND EMPLOYEE CONTACTS

The work to be done in this phase is aimed at identification of the major problems created by the University's current salary practices. This phase will include face-to-face contacts with the administration and with a sampling of A - P employes. The sampling will include representatives of both minority and female employes.

REVALIDATION OF BASIC JOB CONTENT INFORMATION

The purpose of this phase is to review and update existing job descriptions

before they are used for salary evaluation purposes. In addition, job descriptions will be prepared where none have formerly existed.

Employes and supervisors will be involved by filling out questionnaires and reviewing and revising current job descriptions.

DEVELOPMENT OR REVISION OF JOB DESCRIPTIONS

This phase will require the writing or revision of approximately 400 - 500 A - P descriptions and perhaps 50 - 100 top level C - T descriptions. The job questionnaires will be the basic source of information for the writing or revision of the job descriptions.

DEVELOPMENT OF THE SALARY PROGRAM

Based on information obtained through interviews with both academic and non-academic management, interviews with a stratified sample of current employes and job questionnaires, the study team will prepare its recommended salary program.

The salary program will include point-count basis, the method of establishing ranges, the title structure, career paths and the merit increase systems.

At this point, the study findings and recommendations will be presented to the administration.

IMPLEMENTATION OF THE SALARY SYSTEM

Once the basic concepts of the recommended salary program are approved, the study team will begin implementation of this program. Salary review committees will be established at this point to act as advisors to evaluate and establish salary ranges. These committees will be made up of line people plus representation of the personnel function.

The end result of this phase will be the establishment of point values for each A - P job. The study team will then establish revised grades which fit the data.

ESTABLISHMENT OF SALARY CURVES AND GRADE RANGES

Once the classification grades have been established, the study team will construct the required salary curve and make recommendations for equalizing discrepancies between grades. The curve will be priced against competitive job rates, and competitive salary information will be developed which is specific to the actual classification being evaluated.

UPDATE OF EDP SYSTEMS TO INCLUDE THE NEW PROGRAMS

The study team will work with the University EDP staff to incorporate the new salary, title, merit increase and other salary-related data into the existing data systems.

FINAL ANALYSIS AND PREPARATION OF FINAL REPORTS

Final conclusions will be presented to the University through oral and written reports.

Another end product of the study will be a set of manuals for the ongoing administration of the program.

— FRAN MURRAY

Prehistoric tools found in Michigan by University archaeological crew

Flint projectiles and chipped-stone knives from about 1500 B.C., and pottery fragments from about 1035 A.D. according to Carbon-14 testing, are among early Michigan Indian artifacts found at Charlevoix by an MSU archaeological crew.

Charles E. Cleland, associate professor of anthropology, and curator of anthropology at the MSU Museum, was principal investigator of the archaeological dig. William A. Lovis Jr., graduate research assistant at the museum, and a Woodrow Wilson Fellow which completing his doctoral studies in anthropology at MSU, was field director.

Assisting with the salvage excavation were seven field personnel including several MSU graduates. The project was financed by about 50 private donors, mostly from Charlevoix.

Test excavation had been made in 1971 after a few artifacts were found in 1970 when commercial builders began work on some condominiums near the Pine River Channel at Charlevoix. The builders agreed to hold up operations in 1972 from May 1 to June 15 to allow the

archaeological crew to fully explore the site.

Artifacts were found from three prehistoric Indian occupations.

From the Late Archaic period, about 1500 B.C., the tool inventory included rather large chipped-stone knives and scrapers, as well as long thin leaf-shaped flint projectiles made of very high grades of flint. Occasional traces also were uncovered of red ochre, a mineral pigment used as paint by the early inhabitants.

Evidences of Middle Woodland (400 to 600 A.D.) and Late Woodland (600 to 1000 A.D.) occupations were found mixed into a thick black soil zone. Pottery fragments of the Middle Woodland people indicated they represented pottery groups common to the northern Great Lakes area, known to archaeologists as the Laurel Culture, and groups common to occupations through southern Michigan and Illinois, known as the Havana Culture.

The Pine River Channel site is one of the few prehistoric places in the entire Great Lakes area that contains materials of both Laurel and Havana traditions.

Pottery fragments from the 11th Century, identified by Carbon-14 tests, included remains of very large and intricately decorated pottery rims. Three or four chipped and ground stone axes and adzes, numerous hide scraper and stone drills also were found from the same Indian occupation.

Flint projectiles and arrowheads were the most common tools recovered, with over 45 coming from one 10 by 10 foot square, and seven from one stone-ringed fireplace alone.

Fire pits, food pits and house posts were noted across the whole area excavated, about 2,550 square feet.

Floral and faunal remains were salvaged by a flotation method in which soil is placed on fine window screen and immersed in water, until only the floral and faunal items remain on the screen and the soil sinks.

Some 300,000 to 400,000 items were obtained for cataloging and analysis. A final report on the findings will take two or three years to prepare.

Early speculation is that the Charlevoix site was a hunting and flint-working camp over a long period of time.



WKAR: A student experiment celebrates 50th anniversary

It all started with some enterprising electrical engineering students at Michigan Agricultural College.

This "new" thing called "radio" interested them. They began to experiment with the technical aspects. They were successful.

The year was 1918. The students continued their efforts using the letters 8YG for their station.

In 1922, their experiments came to fruition when the station received a broadcast license from the Department of Commerce. The call letters WKAR were randomly assigned to the station by the government.

On August 18, WKAR-AM celebrates its 50th anniversary.

Richard D. Estell, station manager, says that the early days of WKAR were far different than today's operation.

"The radio station began with 300 watts and broadcasts consisted of weather and agricultural reports. The program schedule was quite erratic, and programs came on at different times throughout the day," he said.

Today the AM station broadcasts on 10,000 watts with programming from sunrise to sunset. In addition to music, programming consists of in-depth public affairs, women's programs and agricultural presentations.

The biggest change in radio broadcasting on campus came in 1948 with the addition of WKAR-FM. Broadcast over 125,000 watts, the FM station offers serious music, fine arts programs and news presentation for 18 hours each day.

"We think we have an excellent balance of programs now with the two stations," Estell said.

Many of the programs on the two stations come from National Public

Radio (NPR) with which the stations are affiliated. Estell, who has been with the stations since 1955, serves as president of NPR.

The radio broadcasting studios occupy four floors in the Auditorium Building. The transmitter for the FM operation is located in Okemos with shared facilities with the campus television station, soon to be WKAR, channel 23, and the AM transmitter is located south of campus at the end of Farm Lane.

The stations serve an audience within an approximate 60-mile radius of the transmitters.

The radio broadcasting operation has a staff of 25 full-time persons and between 25 and 35 students.

In addition to broadcasting, the radio stations are involved in a tape network which serves 100 commercial and non-commercial radio stations throughout the state. The station makes tapes of various programs which it sends to the various stations for broadcast.

According to Estell, the future of WKAR will include a special service to the blind.

The station hopes to purchase a new transmitter that will provide a "sub channel" which will be heard only on special receivers.

Blind people in the area will have these receivers and be able to hear specialized programming for their needs.

"This would include such things as daily readings of portions of the State Journal and various national magazines and programs such as bringing up a sighted child, how to shop and how to do housework," he said.

Estell said that the program will be coordinated with the Library for the Blind with advisory help from blind people and agencies serving them.

He added that he hopes that this special programming, which will be the first of its type in Michigan, will eventually be available throughout the state with MSU as its base.

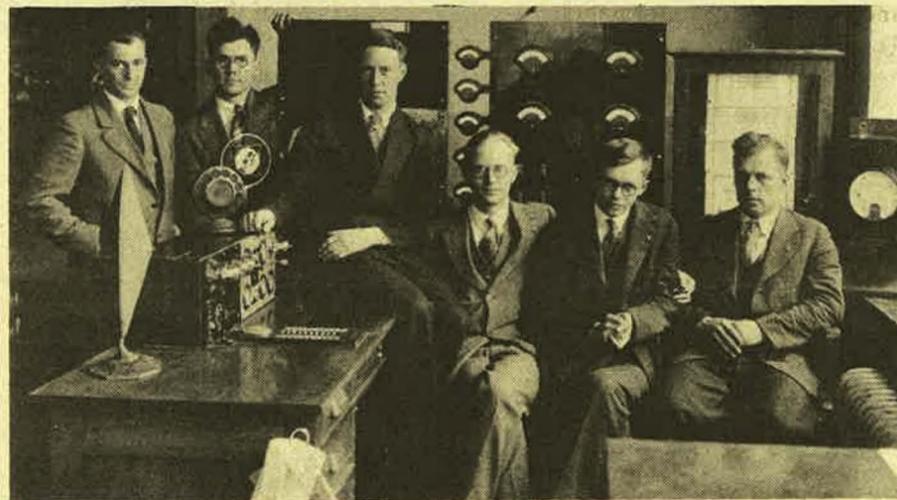
Estell is in the process of applying for funds from the Department of Health, Education and Welfare to finance the venture.

On the day of the golden anniversary of the radio station, special programs will be broadcasted. Features will include WKAR history, oldtime music, oldtime farm and agricultural reports and reviews on the 50-year coverage of sports events.

— SANDRA DALKA



Live music flows from the second floor of the Home Economics Building during a radio broadcast in the early 40's (above). WKAR was launched by a group of enterprising electrical engineering students (below).



Verifying that 1 plus 1 makes 2

One plus one equals two.

"Take away the fancy equations and the technical jargon and that is where we are in high - energy physics," says Gerald A. Smith. He heads the first MSU team of physicists - close behind the first in the world - to investigate nature with the world's most powerful particle accelerator.

The accelerator at the National Accelerator Laboratory (NAL) at Batavia, Ill., is like a bottle of a trillion genies tugging protons around a mile - in - diameter race track called "the ring."

It is a 10 - minute automobile drive around the ring. About the only evidence of the concrete - shrouded accelerator is the frosting of green weeds and gouged - up earth which covers the unique catacomb.

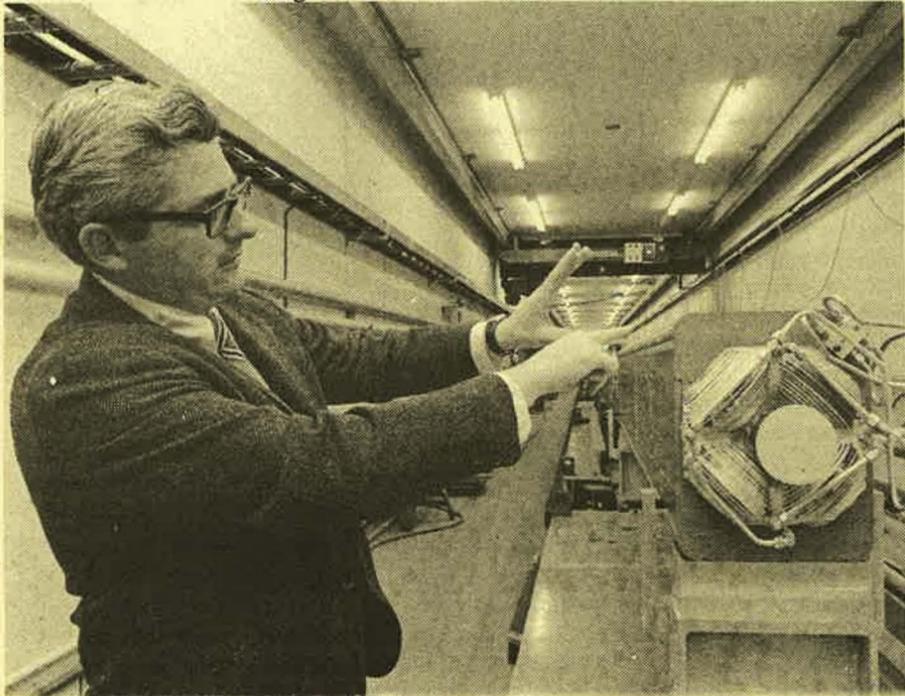


Photo by Dick Wesley

Physicist Smith explains a proton beam at the world's most powerful particle accelerator at the National Accelerator Laboratory.

High voltage poles, insulators and wires hum just north of the ring. Huge umbilical cords of electrical wire feed the machine with 345,000 volts.

* * *

WHAT ARE THE scientists after?

"Nature leads us about by the nose," one high - energy physicist said.

"It's true we don't know where we are headed," says Smith. "If we did we wouldn't need the experiments."

Their search has proved to be similar to the alchemists' quest to change lead to gold.

"Previous attempts with proton collision experiments like ours," says Smith, "were like trying to pick up a grain of sand with a boxing glove. The 200 billion electron volts (the present maximum of the accelerator) may be all we need."

MSU's Smith, Z. Ming Ma, R. J. Sprafka, B. Y. Oh, D. H. Parker, James Mountz, John Mountz and Paul Zeman use the giant accelerator's pulsating proton ray to strike into protons of ordinary matter. With the higher energies now at hand they hope to learn more about nature's ultra - design of the atom.

* * *

THE "ONE PLUS one equals two" mathematics comes in after they get their raw data which they are still gathering.

To see evidence of the particle collisions they use a 30 - inch bubble chamber full of liquid hydrogen. Much as salt trails in beer, the particles leave trails of bubbles in the supersaturated liquid.

Protons of the beam stike protons of the cold hydrogen. Fragments of the particle collisions fly through the chamber. Energy from incoming protons - at collision - converts to new matter. And the brief evidence is the bubble trails.

For a permanent record, the physicists use automatic cameras to take pictures of the events.

The newly created particles could be antimatter or ordinary matter.

The physicists study the different trails of bubbles to measure particle mass and charge. For instance, the more massive particles of positive charge are not deflected by the magnet field at the bubble chamber as much as less massive particles of identical charge.

Calculus is handy for tracing back the curved, jagged or spirial pathways of the particles to learn more about them.

But no matter how great the shower of new particles from a proton - proton collision the end product of the collision has to total up to two positive charges, so that one plus one equals two.

— PHILLIP E. MILLER

BULLETINS

MSU NEWS-BULLETIN The August 24 issue of the MSU News-Bulletin will be the final one for summer term. The first issue for fall term will appear on Thursday, September 21. Notices of events occurring between August 24 and September 21 should be sent to Patricia Grauer, 109 Agriculture Hall, 3-8819, by Tuesday, August 22.

C-T EMPLOYEES The annual meeting for election of officers and board members of the MSU Clerical-Technical Employees Association will be held at 8 p.m., Tuesday, August 15, in 104B Wells. New memberships will be accepted at the meeting. At 7 p.m. C. Keith Groty, assistant vice-president for personnel and employee relations, will discuss objectives and goals of the university, and there will be time for questions and answers.

CENTRAL STENO For three weeks beginning Monday, August 14, Central Stenographic will be undergoing extensive remodeling, being done in conjunction with reorganization of the department and the implementation of a billing system. During this time the staff will be assigned to temporary duties outside the department or will be on vacation. Because normal departmental operations will be curtailed, persons should refrain from sending any work to Central Steno that is not critical. Regular operations will be resumed at the completion of the remodeling.

FINAL GRADES Grade cards will be delivered to departmental offices on Aug. 21 for basic courses, and for all other courses on Aug. 24. The cards should be checked immediately to determine if there is a card for each student. The University's grading systems are printed on the face of each grade card, and more detailed information is given on pages 87-89 of the 1972 Summer Term Schedule of Courses and Academic Handbook. Final grades are due back in the Office of the Registrar, 150 Hannah Administration Bldg., 5-9596, 36 hours after the final examination is given. For the convenience of the academic departments, the Registrar's Office will make pickups from departmental offices each morning after 9 a.m., and each afternoon after 2 p.m., beginning Thursday, Aug. 31. The final pickup will be made starting at 8 a.m., Wednesday, Sept. 6. Otherwise, grades should be delivered to 150 Hannah Administration Bldg. no later than 11 a.m., Sept. 6. It is important that these deadlines be met by all departments.

LECTURE-CONCERT Friday, September 1 is the last day that season tickets will be on sale for the two major subscription series for 1972-73: the University Series ("A") and the Lively Arts Series ("B"). For the coming season, the University Series offers such attractions as Rudolf Nureyev and the National Ballet of Canada, Zubin Mehta and the Israel Philharmonic, pianist Alicia de Larrocha and the Vienna Choirboys. Leading attractions on the Lively Arts Series include Andre Previn and the London Symphony, Beverly Sills, Duke Ellington and the Broadway musical, "Applause," with Patrice Munsel in the leading role. A selection of reserved seating is available in the \$18 and \$17 price ranges. Master Charge and BankAmericard are accepted. Contact the Union Ticket Office, 8:15 a.m. - 4:30 p.m., weekdays, 5-3361.

PURCHASING DEPT. As of Wednesday, August 16, the combination of a new telephone system and departmental reorganization necessitates a change in all Purchasing Dept. telephone numbers. The new numbers are listed below:

Robert D. Angell, Purchasing Agent
355-0357 Department Office 390 Administration Building
353-4460 Adams, Claude E., Assistant Purchasing Agent
353-5400 Allen, Macy J., Buyers Assistant
353-9600 Angell, Robert D., Purchasing Agent
353-5400 Bendall, Erwin W., Assistant Purchasing Agent
355-0357 Civils, Portia R., Clerk Typist
353-4460 Gruhn, Virginia L., Buyers Assistant
353-5400 Kelsey, Forrest, Assistant Purchasing Agent
353-5390 Lindberg, Sandi G., Expediting Assistant
353-5400 Livingston, Nancy, Clerk Typist
353-4460 Markey, Delores, Buyers Assistant
353-4460 Merritt, Donald R., Assistant Purchasing Agent
355-0357 Miller, Linda, Clerk Typist
353-9600 Mulqueen, Kay M., Buyers Assistant
355-0357 Newman, Pam, Clerk Typist
353-4460 Richards, William B., Assistant Purchasing Agent
353-9600 Ryder, Gail E., Assistant Purchasing Agent
355-0357 Schwartz, Effie, Principal Clerk
353-9600 Skidmore, Lynn, Office Assistant
353-5400 Strother, Max R., Assistant Purchasing Agent
353-5390 Wiseman, William, Expediter
353-5400 Witthohn, Debby, Buyers Assistant

SEMINARS

MONDAY, AUGUST 14, 1972

Photoperiodism and the timing of ovulation in the domestic fowl. **Trevor R. Morris**, U. of Reading, Reading, England, 3 p.m., 224 Anthony (Poultry Science, Office of Research & Development, and Institute of International Agriculture).

TUESDAY, AUGUST 22, 1972

A subsequence principle in probability theory. **S.D. Chatterji**, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland, 4:10 p.m., 405A Wells (Statistics and Probability).

EXHIBITIONS

Museum

Second floor—New to the Museum is "Aardvark to Wolverine," an exhibit of a variety of mounted specimens, including a three-month-old giraffe, a pudu, a vampire bat, a lemur, a tapir, and a seal. Habitats range from high mountains to jungle.

Kresge Art Center

Entrance Gallery (through Sept. 17): Paintings and prints of the faculty.

North Gallery (through Sept. 17): Works from the permanent collection.

Hidden Lake Gardens Tipton, Michigan

On display in beds and containers are 314 varieties of annual flowers, including 153 petunia varieties. Tuberous begonias are outstanding now in the Temperate House display. Woodlands, water and wildlife are year around features. Open daily 8 a.m. until sundown.

CONFERENCES

Aug. 12 Michigan Labor Press Assn.
Aug. 14-18 Institute of Manufacturing IBM
Aug. 14-Sept. 2 Marching Band Clinic
Aug. 15-24 Basic Fire & Casualty Insurance Inst.
Aug. 17-18 Workshop for Volunteer Program Coordinators
Aug. 18-19 Michigan Jaycees State Summer Meeting
Aug. 20-25 Shopping Center Management

Aug. 20-Sept. 1 Shopping Center Management Training

All conferences will be held in Kellogg Center unless otherwise noted.

Students and faculty members are welcome to attend these continuing education programs. Those who are interested should make arrangements in advance with the Office of University Conferences, 5-4590.

FRIDAY, AUGUST 11, 1972

- 8 p.m. "The Last Question"—This science fiction spectacular in the sky theatre explores the theory of entropy, which maintains that the life-giving energy of the stars is being drained. Written by noted author Isaac Asimov, "The Last Question" will be shown for three weekends in August. Admission at door. Abrams Planetarium.
- 9 p.m. Public ice skating until 10:30 p.m. Ice Arena.

SATURDAY, AUGUST 12, 1972

- 2:30 p.m. "The Last Question" (see August 11). Abrams Planetarium.
- 3:30 p.m. Public ice skating until 5 p.m. Ice Arena.
- 8 p.m. "The Last Question" (see August 11). Abrams Planetarium.
- 9 p.m. Public ice skating until 10:30 p.m. Ice Arena.

SUNDAY, AUGUST 13, 1972

- 3:30 p.m. Public ice skating until 5 p.m. Ice Arena.
- 4 p.m. "The Last Question" (see August 11). Abrams Planetarium.

TUESDAY, AUGUST 15, 1972

- 8 p.m. Folkdancing—Instruction is followed by dancing at 9 p.m. 327 M.A.C.

WEDNESDAY, AUGUST 16, 1972

- 7:30 p.m. Films on Japan—"Akiko (A Japanese Girl)" and "The Language of Japan" will be shown as part of the Asian Studies Center weekly film series on Japan. The films are furnished by the Consulate General of Japan in Chicago, and are being presented as part of a preview and selection process in preparation for Japan Week next fall. Wilson Auditorium.

- 8:30 p.m. Astronomy lecture—Allan Sandage of Hale Observatories will deliver the Henry Norris Russell Lecture to the 138th meeting of the American Astronomical Society. He will speak on "The Expansion of the Universe and the Edge of the World." There is no charge for admission. 108B Wells.

FRIDAY, AUGUST 18, 1972

- 8 p.m. "The Last Question" (see August 11). Abrams Planetarium.
- 9 p.m. Public ice skating until 10:30 p.m. Ice Arena.

SATURDAY, AUGUST 19, 1972

- 2:30 p.m. "The Last Question" (see August 11). Abrams Planetarium.
- 3:30 p.m. Public ice skating until 5 p.m. Ice Arena.
- 8 p.m. "The Last Question" (see August 11). Abrams Planetarium.
- 9 p.m. Public ice skating until 10:30 p.m. Ice Arena.

SUNDAY, AUGUST 20, 1972

- 3:30 p.m. Public ice skating until 5 p.m. Ice Arena.
- 4 p.m. "The Last Question" (see August 11). This is the last showing. Abrams Planetarium.

TUESDAY, AUGUST 22, 1972

- 8 p.m. Folkdancing—Instruction is followed by dancing at 9 p.m. 327 M.A.C.

WEDNESDAY, AUGUST 23, 1972

- 7:30 p.m. Films on Japan—"Modern Architecture" and "Ikebana" will be shown as part of the Asian Studies Center weekly film series on Japan. Wilson Auditorium.

BULLETINS

BOARD MATERIAL Material for consideration at the September 15 Board of Trustees meeting is due in the office of the executive vice president or the provost by Friday, August 18.

BULLETIN FORMS Forms are currently available for submission of information for seminars, bulletins, exhibitions, conferences and the calendar of events. For forms, contact Patricia Grauer, 109 Agriculture Hall, 3-8819.

DEAN'S OFFICE MOVED The Dean's office of the College of Communication Arts has been moved to 113 Auditorium, which will be the mailing address for Herbert J. Oyer, dean; Lawrence E. Sarbaugh, assistant dean; and Gordon L. Thomas, assistant dean. The phone number for the office is 5-3410.

ASTRONOMY The Astronomy Department will be holding a public open night at the MSU Observatory on Saturday, August 19, from 9-11 p.m. Children under 13 should be accompanied by an adult with at least one adult for each three children.

HAWAIIAN LUAU An Hawaiian luau will be held for members and guests of the University Club on Saturday, August 26. Cocktails will be served from 6 to 7 p.m., and the feast will begin at 7:30 p.m. Cost is \$6.50 per person. Reservations, which are limited to 400, are now being taken.

ASTRONOMY The 138th meeting of the American Astronomical Society will be in West Akers Hall from Tuesday, August 15 to Saturday, August 19, sponsored by the Department of Astronomy.

GRAD ASS'T. FORMS Graduate Assistant Appointment Recommendation Forms to be effective fall term must be received in the Budget Office, 432 Administration Bldg., by Tuesday, August 15.

TWO-WAY RADIOS Any department which has a two-way radio license, whether in use or not, should contact William Winter at WKAR, 5-6540. The information is required by the Federal Communications Commission.

INTERIM HOUSING Between-term housing for foreign students new to the university and students living in residence halls summer term will be available at East Holmes Hall. Students may check in starting at 9 a.m. Friday, Sept. 1, at the East Holmes reception desk. Fall term halls will open at 9 a.m., Wednesday, Sept. 13.

HALL ASSIGNMENT The Assignment Office, 190W Holmes Hall, will be open from 8 a.m. to 5 p.m. on Saturday, Sept. 16, and Sunday, Sept. 17. Students not knowing their assigned halls or wanting to make application should be directed to this office or call 5-7460.

Information on MSU events may be submitted for possible inclusion in the bulletins to Patricia Grauer, Dept. of Information Services, 109 Agriculture Hall, (517) 353-8819. Deadline for submitting information is noon Tuesday preceding the Thursday publication. The calendar of events will cover a 9-day period, Friday through Saturday.