Les Brown, Ahmad Jamal Featured for JP Weekend

Les Brown and his "Band of Renown," and Ahmad Jamal, jazz musician, will be the featured entertainers of the annual Junior Prom from Wellesley, scheduled for November 4 and 5.

Brown and his group will perform at the Friday night formal dance, to be held in the Statler Hotel Imperial Ballroom. Jamal will appear at the informal dance-Jazz concert Saturday evening.

Ticket options for the affair will be available starting during the second week of October for $2, according to Max Snodderly, junior class president and chairman of the Junior Prom committee.

The MIT Magnet Laboratory will produce extremely strong, continuous magnetic fields in the search for new knowledge about matter and energy.

The results: K. N. T.

ural 39 33 63

Suburban 7 17 27

Another question asked of each freshman was the political allegiance of his parents. Again the results in table form:

K. N. T.

y 20 10 12

Voters were also asked to indicate "the most important issue of the campaign." Fifty-nine mentioned religion, ten Nixon backers and five Kennedy men. The Nixon men were content to simply state their view, while the latter five all penciled notations on their ballots depicting the fact. 66 "voters" mentioned foreign policy, 41 of these being for Nixon, and 29 for Kennedy. Conservatism versus liberalism was mentioned fourteen times, with Kennedy on top among these voters, nine to five. Sixteen of the people polled thought domestic issues such as civil rights were most important, thirteen Nixon men and three Kennedy men. The remaining freshmen regarded personality, economic policy, defense, U. S. prestige, experience, and qualifications as most important.

The Tech readers are cautioned against drawing any definite conclusions concerning the outcome of the election in November.

Six MIT students participating in the "Crossroads of Africa" program spent the summer in four West African countries.

MIT is building the world's most powerful magnet under a $9,502,000 contract announced this summer by Institute President Julius A. Stratton and Lt. Gen. Bernard A. Shreiber, Commander of the Air Research and Development Command.

Created as a national research center, the MIT Magnet Laboratory will produce extremely strong, continuous magnetic fields in the search for new knowledge about matter and energy.

There is a vital need for new basic information in this advanced and important segment of scientific study," President Stratton said. "By means of this field, the nation will have in the MIT installation the most advanced scientific instrument of this type for exploration of the properties of matter."

Groups from foreign research institutions in the U. S. and visiting scientists from other nations are expected to use the installation.

New Magnet To Build World's Largest Magnet For Air Force

$9.5 Million To Build World's Largest Magnet For Air Force

Complete in 1964

Construction of the laboratory is expected to start about mid-1961, on a site next to the MIT nuclear reactor on Albany Street. Overall construction cost is figured at $5,078,000. The remaining amount of the contract, $3,424,000 is to be used for staffing and preliminary research.

The laboratory is expected to be in full operation by 1964 with an anticipated annual research budget of $5,000,000 a year.

Professor Francis Bitter, a pioneer in development of magnets and in the study of high fields, magnetic phenomena, is resigning his position as Associate Dean of Science in order to assume responsibility for the design and construction of the new laboratory. He will also be chairman of the laboratory's policy committee and will assume new duties as Professor of Geophysics to study the magnetization of the sun and planets and determine the role of magnetic phenomena in the evolution of the solar system.

Lax to Head Lab

Director of the Magnet Laboratory, Benjamin Lax, head of the division of Solid State Physics at Lincoln Laboratory, was appointed to the position.

Pressing Need Cited

An official Institute release declared "A pressing need exists for extremely high continuous magnetic fields. Some 20 years ago Professor Bitter developed a 1000,000 gauss field and constructed a power station of 1.7 million watts required for its operation. Recently, the laboratory at Lincoln Laboratory and at the existing MIT Magnet Laboratory indicates that fields about a quarter million gauss could be generated with a reasonable effort."

The impetus for creating the new laboratory arose from the need for intensive scientific research in solid state physics and high field magnets at Lincoln Laboratory. From this research, Dr. Lax said that the need for more extensive, elaborate, and sophisticated installation for extending these fruit-
What would YOU do as an engineer at Pratt & Whitney Aircraft?

Regardless of your specialty, you would work in a favorable engineering atmosphere.

Back in 1925, when Pratt & Whitney Aircraft was designing and developing the first of its family of history-making powerplants, an attitude was born—a recognition that engineering excellence was the key to success.

That attitude, that recognition of the prime importance of technical superiority, is still predominant at P&WA today.

The field, of course, is broader now, the challenge greater. No longer are the company's requirements confined to graduates with degrees in mechanical and aeronautical engineering. Pratt & Whitney Aircraft today is concerned with the development of all forms of flight propulsion systems for the aerospace medium—air breathing, rocket, nuclear and other advanced types. Some are entirely new in concept. To carry out analytical, design, experimental work involving for P&WA engineers is this on-site data recording center which can provide automatically recorded and computed data simultaneously with the testing of an engine. This equipment is capable of recording 1,200 different values per second.

Specifically, what would you do—your own engineering talent provides the best answer. And Pratt & Whitney Aircraft provides the atmosphere in which that talent can flourish.

Development testing of liquid hydrogen-fueled rockets is carried out in specially built test stands like this at Pratt & Whitney Aircraft's Florida Research and Development Center. Every phase of an experimental engine test may be controlled by engineers from a remote blockhouse (inset), with closed-circuit television providing a means for visual observation.

At P&WA's Connecticut Aircraft Nuclear Engine Laboratory (CANEL) many technical talents are focused on the development of nuclear propulsion systems for future air and space vehicles. With this live mock-up of a reactor, nuclear scientists and engineers can determine critical mass, material reactivity coefficients, control effectiveness and other reactor parameters.

Representative of electronic aids functioning for P&W engineers is this on-site data recording center which can provide automatically recorded and computed data simultaneously with the testing of an engine. This equipment is capable of recording 1,200 different values per second.

Studies of solar energy collection and liquid and vapor power cycles typify P&W's research in advanced space auxiliary power systems. Analytical and Experimental Engineers work together in such programs to establish and test basic concepts.

World's foremost designer and builder of flight propulsion systems

PRATT & WHITNEY AIRCRAFT
Division of United Aircraft Corporation

CONNECTICUT OPERATIONS — East Hartford
FLORIDA RESEARCH AND DEVELOPMENT CENTER — Palm Beach County, Florida

For further information regarding an engineering career at Pratt & Whitney Aircraft, consult your college placement officer or write to Mr. R. P. Asinger, Engineering Department, Pratt & Whitney Aircraft, East Hartford 8, Connecticut.
No WTBS-FM Yet

Sigwart '63, Severely Injured In Amateur Rocket Experiment

Charles D. Sigwart, '63, was seriously injured September 2 when a solid propellant mixture he was handling exploded, destroying his home lab and breaking windows throughout the house. Sigwart was a student in Aeronautical Engineering and a resident of East Campus. His left hand and part of his right hand were torn away in the blast, and he has lost the sight of his left eye; doctors are trying to save the sight of his right eye, which was badly burned, but the prospects seem dim.

Sigwart, from Phoenix, Arizona, apparently was packing his solid propellant, a mixture of zinc sulphide and sulfur, into the rocket body when the explosion occurred. Friends said that Sigwart was quite experienced in the handling of the type of material he was using. He was a member of the Explorer Scout Rocket Club and active in the Amateur Rocket Research Organization.

After the blast, Sigwart was led from the house by a child playing across the street and was aided by neighbors. After Sigwart left the house, a second explosion occurred, starting a small fire.

Sigwart was alone at the time of the explosion, his mother being in the hospital and his father out of town. His father was at his bedside when he regained consciousness a day later and some hope was voiced for the preservation of his right eye.

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2000 Learn About 704

More than half the students who enter the Institute next term will be enrolled in digital computer programming before they leave, Dr. Philip Morse, Director of the Computation Center, said today.

Over 2000 students and faculty members from MIT and neighboring colleges learned to program the 704 in the three years since its installation in 1957. This year thirty percent of the entering freshmen applied for a course in introductory programming. The new 709 which will outstrip its predecessor, the 704, in program capacity, will offer even more students the opportunity to learn programming.

Magnet Lab In 1964

(Continued from Page 1)

ful techniques not only in the solid state area but others as well was clearly recognized. The Air Force realized the importance and potentiality of the program and has enthusiastically supported the work.

Electrons in the presence of a magnetic field behave differently in solids than, for example, in ionized gases. The frequency of precession about the field is often much higher than it is for the same electron in a gas. Furthermore, this frequency can change if the direction of the magnetic field is changed relative to the crystalline axes of the solid.

By measuring these frequencies using microscopes and infrared radiation, scientists are able to unlock the complexities of the electrical and magnetic properties of many materials.

All-Tech Dance Tonight

The annual all-Tech Acquaintance Dance is being held tonight in Morsos Hall of Walker Memorial from eight to twelve o'clock. This dance is sponsored annually by the Technology Catholic Club for the entire student body. Girls have been invited from all the schools in the greater Boston area.

Admission will be $1.25, tickets available at the door.

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Duca Shows Work

Sculptor-researcher Alfred Duca and his newest work, the Crucifixion, cast at the MIT foundry by the form vaporization technique.

OUR NEW LOCATION

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COMPLETE LINES OF:

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And, of course, the

ORIGINAL DUFFER

To all our regular customers and incoming students we will allow a ten percent discount upon presentation of your MIT Registration Certificates. This is for a limited time only.

Crimson Men's Shop
24 Boylston Street Harvard Square
Thoughts On Residence

With Rush Week safely past for another year, but still fresh in the minds of all concerned, perhaps now is an ideal time for some long-range thought on this perennial blight, with an eye, in general, to where our residence system is headed.

There can be no doubt that Rush Week as it now exists is most undesirable. The shortness of the time available brings great pressure to bear on both the new men and the fraternities, certainly not conducive to making the important decisions that are made at this time. It also means that if houses choose to put up a facade of one sort or another, an incoming freshman has very little chance of penetrating it. The freshmen at this time are as poorly qualified as they ever will be to make decisions regarding their living group. Without benefit of experience or even of orientation, they arrive with a wide variety of preconceived notions concerning fraternity life, most of them totally erroneous. Having Rush Week and pledging at the beginning of a man's MIT career means that the term when he is a fraternity pledge and his term of adjustment to MIT are one and the same. The demands placed on the man at either time are abnormal; to combine the two is asking a great deal of our freshmen.

Such an arrangement, we feel, would go a long way toward alleviating the problems raised by our present system. Giving the freshmen all year to make their decision as to permanent living arrangement would have the contract beyond the reach, but, given the possibilities of bad splits while there is still time to do something about them.

North played low on West's spade opening; East put up the A. Declarer unthinkingly played the 4, and with this innocent-looking mistake lost all hope of making the contract. East wisely returned a heart to dummy's A. Declarer took 2 spades to the KQ, and then played the A to diamonds. Great was his gloom when the suit failed to split. He discarded 3 of the board's diamonds on the AK of clubs and the K of hearts, but was left with still another small diamond in dummy which was eventually lost to West's J.

An opening heart lead would have placed the contract beyond South's reach, but, given the spade lead, South could have made the hand. A little reflection would have told him that the spade 4 would become a much-needed entry to the board's hand if the diamond suit split 4-0, whereas if it split 3-1 or 2-2, he would need only two spade tricks anyway. Therefore he should play the K or Q of spades at trick 1. East can return a heart again (or anything else he cares to), after which South takes the K, J, and 2 small spades, discarding a heart and a club from his own hand. A small diamond to South's A then reveals the bad split, but, thanks to proper planning, declarer still has a fighting chance. 3 of the board's small diamonds are pitched on the heart K and the club AK. On these last two cards West is squeezed. He must hang on to all his diamonds to prevent North's suit from running, and in order to do this he must discard all his hearts. South's heart 4 then sets up for the discard of the board's last small diamond and South is home with the contract.

I said, I've got a quiz Monday at 9 A.M."

KIBITZER

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<th>North</th>
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Contract: 5 NT by South; opening lead: spade 10.

In the opinion of The Tech, it is clearly indicated that at least enough of this be put into undergraduate dormitories to insure that all students can be housed in the dormitory system for the entire duration of the first year. The residence system which we envision, then, would consist of dormitories housing all freshmen (and upperclassmen choosing to live there), the new women's dorm having the coeds, and the fraternities housing all upperclassmen who choose to live there. Rush Week would be held in September as usual, but would be for sophomores.

The hand shown above, played last spring at the MIT Bridge Club, illustrates the necessity of thinking ahead and considering the possibilities of bad splits while there is still time to do something about them.

The hand shown above, played last spring at the MIT Bridge Club, illustrates the necessity of thinking ahead and considering the possibilities of bad splits while there is still time to do something about them.
Dramashop Plans
Stagecraft Class

Dramashop will offer a stagecrafting workshop tomorrow from two to four backstage at the Little Theater. There will be instruction in lighting, flat designing, and special techniques of construction for theater problems.

Dramashop will begin its fall term with a series of one act plays to be presented in the Little Theater on October 7. A meeting for people interested in working in this series will be held Thursday evening at the Little Theater.

Several Elizabethan and Restoration comedies are also being considered for future full length productions.

LSC Classic Series opens tonight with "La Strada" starring Giulietta Masina and Anthony Quinn. I am planning to see this story of a feeble-minded girl and a circus strong man for the fourth time.

LSC Entertainment Series premieres tomorrow with "Anatomy of a Murder". There is much anatomy and murder. Unbelievably, the book is hot killed. I liked the movie.
Soccer Defenses Remain Unknown, Says Batterman

The MIT soccer team will carry a strong forward, a good goalie and an untested defense into its first game next Saturday, according to coach Charles Batterman. Deprived by graduation of the services of four of six men named last year to the All-New England team, the squad will be seeking to improve on last season's five victories.

Two All-Stars Return

Outside left Cord Ohlenbusch, '62 and goalie Georgio Emo, '62 return from the list of New England all-stars. Captain Arthur Marques, '61, inside right, Phil Robinson, '61 and halfback Dirk Berghager, '62 are expected to contribute to the team's overall strength.

Runners Lack Depth

With prospects for improving on last season's 4-7 mark dimmed by a lack of depth, coach Art Farnham's cross country team will face Bates, Boston College, Brandeis and Tufts in a Franklin Park meet next Friday.

George Withrow, '61 and Tom Goddard, '63 will pace the harriers with help expected from such men as Captain Herb Wegener, '61, Roger Hinrichs, '63, Steve Banks, '62, Paul Roberts, '61 and Herb Grievs, '61.

Tech Yachtsmen Back From Tour

Pete Gray, '61 and Don Nelson, '61 the members of the MIT varsity sailing squad among a group of six men who went to England and Scotland this past summer to race against the last British teams reported mixed success. Along with three men from Princeton and one from Dartmouth, the sailors representing the Intercollegiate Yacht Racing Association of North America toured England, sailing in matches for two major trophies and barnstorming against teams put up by various yacht clubs.

The yachtsmen were out to avenge the first British victory last year since 1954. They raced in a great variety of boats and under widely varying conditions, far different from local waters. In the five weeks Gray and Nelson were in England, they won about two-thirds of the local races but lost in the competition for the Lipton Cup on the Welsh River and the British-American Cup in Chichester Harbour.

Four MIT faculty members spent the summer in India conducting a management seminar.

IM Football Begins Tomorrow

Eight games tomorrow will kick off the month-long intramural football season on Briggs Field with eight more contests scheduled for Sunday. Game times both days will be 1:30 and 3:30 p.m., according to IM football manager Tom Gerrity, '63.

A total of 27 teams will compete in the eight leagues comprising the "A" and "B" divisions. In general a higher caliber game is played in the "A" division, since the teams are chosen from among the previous season's standouts. Seventeen teams have been named to the "A" division, and are divided into three leagues of four and one of five entries. Each of the four "B" leagues will contain five teams.

Playoffs for the intramural championship, pitting the league winners in a single elimination tournament, will begin the weekend following the completion of the regular season.

Defending the "A" division crown will be Beta Theta Pi. Lambda Chi Alpha holds the "B" title.

Swim Team Tryout Rally

Undergraduates intending to try out for either the freshman or varsity swimming team are urged to attend the pre-season swimming rally in the conference room of the du Pont Athletic Center, Wednesday, September 28, at 5 p.m.

16 Games Slated

Eight games tomorrow will kick off the month-long intramural football season on Briggs Field with eight more contests scheduled for Sunday. Game times both days will be 1:30 and 3:30 p.m., according to IM football manager Tom Gerrity, '63.

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