The Tech

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VOL. LXXIX NO. 16 CAMBRIDGE, MASSACHUSETTS, TUESDAY, APRIL 28, 1959 5 CENTS

NDEA Resolution Tabled Indefinitely

Inscomm's Executive Committee brought out a resolution to disapprove of the loyalty oath restriction of the National Defense Education Act at Thursday's Inscomm meeting. The motion was indefinitel tabled after about fifteen minutes discussion.

The act has recently been the spotlight because of a requirement that any student receiving aid from it must sign a loyalty oath and a statement that he does not belong to any "organization that believes in or teaches the overthrow of the United States Government by force or violence or by any illegal or unconstitutional methods." Last week, Amherst College returned a grant it had received because of the restriction.

Discussion Brief

In the discussion by the Institute Committee it was brought out that some members of Inscomm felt that the U.S. Government had the right to require a loyalty oath of those people to whom it gives grants of this tpe. Other members pointed out that it seemed that the restriction was a useless one, since persons who were disloyal would probably have no qualms about signing the oath.

NSA Congress Delegates Named To Attend Summer Conference

MIT's delegates to the National Student Congress at the University of Illinois this summer were chosen after nearly an hour of discussion on NSA — the National Student Association — of which MIT is a member.

Dick Kaplan '60, Chairman of the Athletic Association, directed questions at Gene Rouff '61, NSA Coordinator, who referred the questions to George Henry '59, a member of the National Executive Committee of the NSA.

After the discussion, Kaplan proposed a resolution urging MIT's delegates to the Congress to extend every effort to help improve NSA's efforts at representing students in the United States.

Delegates Elected

Elected to represent Tech this August were: Chris Sprague '60, Gene Ruoff '61, Jim deSola '60, Linda Greiner '60. Alternates and observers are: John Disbrow '61, Dick McDowell '60, Farley Fisher '60, Paul Thompson '60, Frank Tapparo '60, Dick Greenspan '60, and Gene Zoba '60.

Since there is a possibility that some of those elected will be sent to the Congress by the NSA as discussion leaders, some of those named as observers and alternates may be delegates.

MIT has four votes at the Congress, and last year sent four delegates and three alternates to the Congress at Ohio-Wesleyan College in Delaware, Ohio. Preceding the Congress itself are special conferences — the Student Body President's Conference, and the Student Editorial Affairs Conference.

East Campus Day Is Wet and Noisy; East Wins Games

Showers of multi-colored, plump, water balloons once again marked the spring festivity known as East Campus Day; which graced last Saturday afternoon and evening.

This year, for the first time, organized non-ballooning activities were set up, but they didn't have the basic call the wet plop of a water balloon seems to have for the residents of East Campus. The scheduled baseball game was won by default by the Bemis Parallel, which also won the tug-of-war, with 45 against 20. The Hayden Parallel at least won the croquet match, though a disgruntled Bemis partisan attributed the win to heavier raincoats and steel helmets which protected the West Parallel players from the deluge.

Expert sources estimate 10,000 balloons were used, mostly in the frequent skirmishes between the supporters of the two parallels.

East Campus Judcomm posted strict injunctions against throwing water balloons from the buildings, from which height they can cause serious injury. In response, every member save one received the wrath of East Campusites in their chosen weapon, water balloons.

As last year, a Hi-Fi fight of amazing intensity was fought. Observers at Briggs Field and Kendall Station reported hearing the stentorian blasts.

Last year Dean Fassett was drenched by part of the barrage, and for his protection this year he was presented with an army helmet with his name engraved in gold on its front. It was reported he was "touched".

A poll by interested parties, including Judcomm, indicated approximately 25,000 balloons had been sold to East Campus residents. One entrepreneur bought out two wholesalers in Boston and Cambridge. Note: There are still 15,000 balloons waiting to be thrown.

Institute Committee Refuses Third Voting Seat to IFC

The Institute Committee turned down the Inter - Fraternity Conference's bid for a third voting seat on Inscomm at their Thursday night meeting. The motion, introduced several weeks ago by IFC Chairman Joe Verdeber '60, was defeated after more than an hour of discussion.

Verdeber, speaking for the proposed motion, asked for the third seat because he felt that "although all fraternities belong to the IFC, all interest groups within the IFC cannot be effectively represented on the Institute Committee by two men . . . the Chairman can speak for the IFC as a whole, but at least two more men are necessary to speak for the interest groups within the IFC itself."

Explaining his vote against the motion, Joe Vittek '62, Freshman Class President, said: "I did not feel that a satisfactory means of choosing a representative for the interest groups within the IFC had been found. Although I am in favor of the minority groups being represented through another IFC representative, there was no provision in the motion which assured these minorities of being permitted to adequately voice their opinions."

Vittek was referring to an amendment proposed to the motion which was defeated. The amendment would have made a third representative's acceptance contingent upon a plan of election which would insure that the interest groups were being heard.

Steve Corman '60, President of the NRSA, put forth another amendment which was also defeated. This amendment called for the NRSA being given a second voting seat on the Institute Committee. Corman proposed the amendment because he felt that "the NRSA is as varied, if not more so, than the IFC . . . and if representation is to be by interest groups, the NRSA which includes commuters, apartment dwellers, and married students, should have at least one more vote."

Philosophy of Representation To Be Studied

Later in the meeting, Frank Tapparo '60, Baker House president, put forth a motion that Inscomm set up an ad hoc committee to study the philosophy of representation on the Committee. Passed on a roll call vote, the motion was put into effect immediately. Chairman of the newly-formed committee is Frank Tapparo; members are Joe Verdeber '60, Tom Farquhar '60, Steve Corman '60, Marla Moody '61, and Joe Vittek '62.

Apparently well informed sources have disclosed to student government leaders that a plot is being formed by a group of students to create a disturbance in the main buildings on Friday night before Open House.

The exact nature of the plans are not known. However, it is feared that some of the exhibits which will be set up at that time may be defaced or damaged should the rumored action be carried out.

In his closing words at the last Institute Committee meeting, UAP Chris Sprague '60 told the student leaders of the reports and asked them "to do everything in their power to prevent such an occurrence."

This Friday will be May 1st, traditional date for student mayhem.

Open House Co-Chairman Linda Greiner '60 commented that "anything like this could virtually ruin the public opinion of MIT. It could bring disgrace to the entire student body and to the community."

Both student leaders and the Dean's Office have warned that any "pranking" will be treated very harshly. It is expected that the Security Force will post extra duty personnel to protect the valuable equipment which will be in the building that night.

White Tie and Tails Requisite

Assembly's Ball waltzes to the music of Marchard. MIT's only formal was held April 24 in Walker Memorial.

MIT Hosts Mock Summit Meet

Berlin Crisis Faced By Delegates

A mock summit meeting, designed to represent the coming May 11th Foreign Minister's Conference, was held here over the weekend. MIT, Harvard, Yale, and Dartmouth participated.

Sponsored by MIT's department of Political Science, the meeting dealt with the Berlin crisis. The first session began Friday afternoon after over two weeks of primary communication between the delegates.

Policy governing the conference was based on newspaper reports in the *New York Times* which have been appearing in connection with the actual conference to be held next month.

The conference was made to resemble the world at large by placing "home delegations" in building 14 to formulate new plans as decisions were made at the actual talks in building 52. A "newspaper" was distributed to the delegates carrying an account of the assasination of the Shah of Iran. This move was injected by the umpires to give the "home delegations" material for immediate action and decisions.

Phi Kappa Becomes Phi Kappa Theta

The Phi Kappa Fraternity will become the Phi Kappa Theta Fraternity tonight at midnight.

The new name is the result of the consolidation of the Phi Kappa and Theta Kappa Phi fraternities. The union of the two was approved by both fraternities at their convention at Columbus, Ohio, in September, 1958.

All members of both of the fraternities, of any status, automatically become members of the new Phi Kappa Theta Fraternity.

TECH OPEN HOUSE

Open House planning swings into the final stages this week as MIT gets ready for the expected crowds of 20 to 30 thousand people. Watch for The Tech's special Open House issue this Friday.

Tau Beta Pi Pledges Members; First Woman's Badge Awarded

Saturday night Tau Beta Pi, national engineering society, completed its spring pledging with the initiation of 37 new members and marked the first awarding of a Woman's Badge by the MIT chapter. Election of new members is based on high scholastic ability, seniors being chosen from the top one-fifth of their class, and juniors from the top one-eighth. Final selection, however, is made on the basis of exemplary character, personal integrity, and unselfish activity, as demonstrated by participation in campus affairs and extra-curricular activities.

Those initiated from the Class of 1959 were: Robert A. Blum, 6B; Joel E. Brown, 6A; Michael Brunschwig, 6; Stephen P. Denker, 6A; R. V. Fiuza de Oliveira, 13A; Herman Heidekiang, 3; David M. Jenkins, 10; Birchard L. Kortegaard, 6; John P. Leahy, 15A; Robert D. McAuliffe, 1; John W. Norris, Jr., 15A; Richard L. Sampson, 1; William L. White, 15; Howard H. Zabusky, 10.

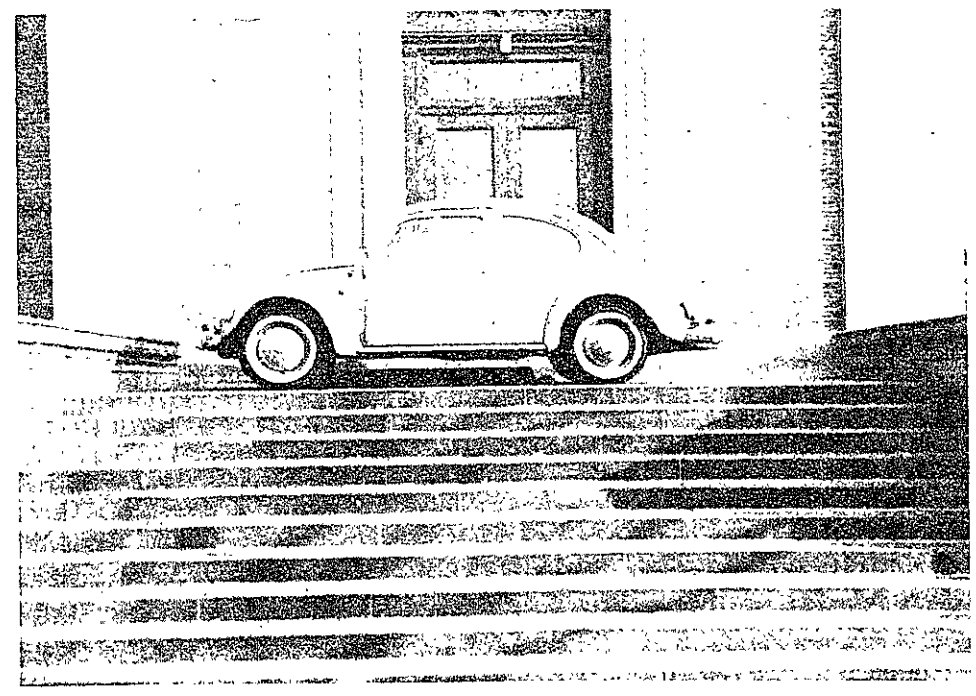
Those elected from the Class of 1960 were: Thomas L. Albee, Jr., 13A; Jon A. Aldrich, 6B; John N. Brusseau, 6; Evenson M. Burtis, 13A; Duane L. Christensen, 15; Charles R. Conn, 2B; Richard deNeufville, 1; Rollyn G. Graham, 16; Timothy P. Hart, 6B; Howard D. Hershberger, 4A; Kai F. Johansen, 2; Fred R. Leonetti, 6; Phillip Lyons, 13A; Graeme Mann, 13A; Roger G. Mark, 6; William A. Martin, 6B; Michael Modell, 10; Michael A. Pilla, 6A; Milton D. Reed, 3; Kenneth F. Reinschmidt, 1; David H. Staelin, 6; Richard A. Strauss, 10; Terry A. Welch, 6.

The Woman's Badge of Tau Beta Pi, awarded to an outstanding woman engineering student, was given to Miss Sheila Evans, '60, Course 16.

In the Pledge Competition, David Jenkins won the Essay Contest with his theme on Education, while the prize for the best-made Bent went to Ken Reinschmidt.

The initiation proceedings closed with a dinner-dance at Nick's Restaurant in Boston. Prof. Harold E. Edgerton being the featured speaker.

Waiting in Line for Commons



East Campus Day revelers kidnapped this Volkswagen and "hid" it on the steps of Walker Memorial. Loren Batchman captured the incongruity on film.

Disregard of Responsibility

With only one dissenting vote and ten minutes of debate Institute Committee has "tabled indefinitely" a motion to express disapproval of the Loyalty Oath rider in the 1958 National Defense Act.

This newspaper stands solidly opposed to the oath provision; however our interest now lies not with the bill but rather with the way in which the representatives of the student body and of student opinion treated this motion of expression on the issue.

Inscomm chose to take the worst course of action possible. An expression of sentiment one way or the other would have shown that the body had, at least, intelligently considered this issue which is now of vital concern to the academic community. That such concern is warranted is shown by the strong statements of Harvard, Yale and Princeton authorities who oppose the rider.

Tabling the motion could logically follow only from a plea for more information or time for consideration; no mention was made of either. We are then forced to interpret the tabling as an expression either of lack of interest or a feeling that Inscomm has no responsibility for student expression on such matters.

Since the MIT administration has chosen not to comment on the oath, pressure for such comment might be brought to bear from the students — as represented by Institute Committee. In our country today there is a distinct lack of student expression on national and international affairs. This should not be; our academic institutions should harbor some of the most fruitful and respected thought on these matters. Student opinion can be, and often is, a powerful influence both to our own Administration and the country.

To unthinkingly pass over such a vital area of student responsibility is a disturbing mistake for Student Government to make. We strongly urge reconsideration of the motion at the next Inscomm meeting.

We stand firmly behind passage of the motion; our editorial page of previous issues gives our reasons. We think that student expression on important "outside" issues is a responsibility of Institute Committee — an important one. To disinterestedly pass over this phase of student life is nothing but a shoddy way of doing business.

The Shattering Image

The idea that a group of MIT students could plan or even think seriously of planning an affair which would detract from the view of the school which the public will receive at Open House this weekend is extremely repugnant to us. In fact it is almost unbelievable; but we have learned from experience that the nature of many MIT students is far different than one would expect to find in the confines of an Institution of higher learning. It was not above a few of them to confiscate the International Week flags which had been too trustingly left in the halls by the International Week Committee, just as it is not above them to steal posters from the bulletin boards.

Yet the sources from which we have learned of the plot are extremely reliable ones; and they are worried. So we must believe that the plans, at least, are not a hoax. And once again our vision of the MIT "man" is shattered.

Open House is a student run affair. It will attract thousands of visitors to our doors and halls; it is the finest public relations program which the Institute could offer for the Boston area.

We stand staunchly behind the Dean's office or the Student Judicial Committee (whichever would handle the disciplinary measures should the event actually occur) for their plans of harsh treatment for anyone involved in an act which would not only deface or destroy an Open House exhibit but also do the same for the reputation of MIT to its closest neighbors.

Rites of Spring?

Once again the gentlemen of East Campus have distinguished themselves and their House by their annual demonstration of mature entertainment: East Campus Day. As an excuse to let off steam and relieve frustrations, it was probably successful for those individuals who are fond of generally assaulting their neighbors. Perhaps the East Campus House Committee has nothing better to do with its money than to clean up water-soaked halls and repair damage; in that case we suggest that it might better return its funds to the students. If one-half the effort and time spent on this approved rioting were expended on some more reasonable activity, East Campus would have the most successful social season of its history. How long must reason bow to immature rioting?

letters

Truth or Consequences

To the Editor:

I enjoyed very much your fantastic science-fiction story published in *"The Tech"* of April 17th, under the title "On the Red Front," and certainly already sold to some big publishing house under the title of "1973". It is without doubt the most ridiculous, irrational, childish, ineffective piece of propaganda ever to appear in the fight against communism.

This fight, Mr. P. E. B. Jr., cannot be made in a negative way, as a destructive criticism, with the illusory literature your article is full of: it does no good to frighten people, whether Americans or not, with immature readings of the future, with vague advices such as "unless YOU do *something* about it NOW". It is needless to remind you that the "Free World" *is* doing "something" about it, but that very often it finds impediments to its actions because the decisions it makes depend on the approval of several countries of diversified interests while Communist Russia, by a regime of force, constitutes a solid, united block, whose decisions are *the* word.

Such an historical fact as the Suez affair is one of the reasons Russia nowadays has a solid grip and an open field for propaganda in the Middle East: had the U.S. behaved differently during the Canal crisis and Russia today would still be out of the Orient gates. You seem to be astonished by all that was said in this idealistic Owellish conference but I am sure that if you had been better informed about what is going on in the world your fictional story would have been kept in your drawer.

Communism is not a sickness that one catches by merely saying the word, hearing or writing about it. If France, in 1939, was overconfident of the strength and security of its Ligne Maginot, leading therefore its citizens to disaster, and suffering, by the German invasion, the United States today seem underconfident in their amazing existing power, building up a country of paranoic politicians, who blindly scorn the Cape Canaveral attempts and threaten the average man-in-the-street more than any Communist agitator could ever dream of.

What Russia is doing to the "poor" Indians, the United States is doing to itself and to the South American countries: undermining the mind of the ignorants with the "horrors" and "miseries" of Russia. Had you consulted any book or any person who has come from a regular life in the so-called underdeveloped countries, you would have found that the "ignorants" see no actual difference between American Imperialism and Russian Communism. What matters to the "poor" is one of these two gives them more bread or rice, because poor Indians as well as poor Brazilians, for instance, cannot suffer much more than they are suffering now and the machinery of world politicizing is as much as Greek for them.

Hungarians, Tibetans fought for ideals, for liberty and equality and they fought alone because the supposedly "Free" World was too busy trying to preserve fraternity on this side of the fence. So Hungary and Tibet failed, and the Russian Big Bear took the blame. But what of Fidel Castro, "man of the people," etc., etc. who is now almost as much of a dictator as Batista was? What of the integration problem in the South of this country? What of the "independence" De Gaulle has promised to Algeria, probably to be given in your fatal year of 1973? Would you consider these "communist lies"?

The countless diplomatic victories (Hungary, China, Berlin) of Communist Russia are not entirely due to its inner ability: a very important part of it is due to the backing up, the compromising, the uncertainty of men such as P. M. Macmillan. And what should we say of a country I personally consider the most powerful in the world, as the U. S. A., that kept an ill man like Mr. Dulles in the top and key position of the "Free World", for a matter of pure sentimentality? War and world history are not matters of heart, of romanticism; neither are they matters of demagogy and revolting, blind, inaccurate, misleading propaganda as your piece of patriotic literature. They require responsibility and knowledge of facts, not fantasy!

What the Free World needs are Americans, yes, but Americans of intelligence such as the top ten percent of the students at this Institute, such as the healthy, clear-minded youth who laughs, with me, at such ridiculous statements as yours, let's do "something", like saying "let's go gang!".

The world doesn't need prophets of your calibre, full of "somethings", "and-all-that", or "maybes": give us facts, intelligent reports, accurate expositions of the problems, and logical solutions, if you want anybody to read you consistently. Or else do not talk about what you don't know.

Jean Pierre Frankenhuis '61

The Tech

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OPEN HOUSE ISSUE

THE TECH proudly announces that it will publish a special Open House Issue which will go on sale Friday, May 1, at the usual price. It will contain stories on some of the outstanding displays of Open House, and will contain much information pertaining to this bi-annual affair.

Heavy Crews Lose Three Races; Lights Bow to Harvard, Middies

Three Engineer heavyweight crews made their 1959 debuts in intercollegiate competition and all placed third behind Harvard and Syracuse in Saturday's regatta on the Charles River. BU finished fourth in the three races.

The Cantabs pulled out early and led all the way to their varsity win. MIT, in second place 1½ lengths down at the Harvard Bridge, yielded to a powerful Syracuse challenge and finished five lengths behind the Crimson, three astern of the Orangemen. MIT was timed in 9:31.4, nearly 18 seconds off the winning time and 30 seconds slower than last year's mark.

Second at the bridge, the Beaver junior varsity faltered in the final 3-4 mile and wound up third, four lengths off the pace. Syracuse, making its bid late in the race, finished nine seconds behind Harvard's 9:25.0 clocking.

The Engineer frosh, disturbed by a 12-mph wind at their side, bowed in the final mile to the Orangemen and finished third, five lengths behind Harvard. Wednesday they trounced Andover by four lengths.

Lights Improved

MIT's varsity lightweights showed some improvement over last week but bowed to Harvard and Navy in a triangular regatta at Annapolis Saturday. Crews of all three schools were hampered by strong winds and rough water, which swamped the Navy shell as it returned to the boathouse.

In the feature battle the Engineers finished three lengths behind the Cantabs and one astern of the midshipmen. Harvard covered the 1 5-16 mile (Henley distance) route in 8:25.0. Tech came through with a tiem of 8:37.0.

In the JV scrap, the beavers ended third behind both the regular JV and also the third varsity of the middies.

Stroking an unusually low 28, the Engineer freshmen finished three lengths behind the strong Navy eight with a time of 8:34.

Sailors First Twice; Take Geiger Trophy, Dinghy Eliminations

Ideal weather conditions prevailed as the MIT sailors enjoyed a victorious week-end winning the Geiger Trophy Saturday on the Charles, and the New England Dinghy Championship Eliminations Sunday on the Thames River at New London to qualify for the finals two weeks hence.

In the Geiger Trophy Races, the Techmen's 94 points topped Harvard by seven with BU and Coast Guard trailing. Skipper Dennis Posey '59 and crew Gary Hirschberg '61 captured the honors in the Firefly division. Bill Long '59 steered the Beaver 110 entry, and George Kirk '60 and Will Johnson '59 were at the helms of the dinghies.

Sunday, Posey and Bill Widnall '59 won their divisions as MIT was 16 points ahead of Yale.

Golfers Win Match; Rosenfeld Leads Way Shooting Brilliant 68

Bob Rosenfeld '59, varsity golf team captain and number one man, fired a sizzling three-under-par 68 Saturday afternoon at the Oakley Country Club to lead his teammates to a 5-2 victory over Springfield, one of the Engineers' two opponents in the triangular event. Against the third team, Colby, the Beavers lost 6-1.

Other Tech winners against Springfield were Bob Larson '60, Jim Hurley '59, J. W. K. Hibbard '60, and Art Hatch '61. Although only Rosenfeld was able to defeat his Colby opponent, Hurley, Larson, and John Nelson '61 extended their matches to extra holes before losing.

The Beaver golfers will match shots with Bowdoin and Army Saturday in a home match at Oakle Country Club.

Stickmen Stopped By Wildcats 6-4; End Victory Skein

A mighty MIT lacrosse machine rolled to a stop last Saturday on Briggs Field as it lost a heartbreaker, 6-4, to its strongest opponent of the season, UNH. The visitors' greater depth at midfield proved the difference in the second half when they gained their margin of victory.

At 6:03 of the first quarter, Charlie Fitzgerald '59 drove in, faked and shot the first score of the game. The Wildcats came back to tie the count, but Paul Ekberg '59 put the Engineers out in front again on a beautiful pass from Chuck Conn '60 at 12:07.

The visitors struck for three unanswered tallies in the first four minutes of the second quarter. However, the Beavers came back and tied the score before six more minutes had elapsed. Ekberg took another toss from Conn for the third goal with UNH a man down and then he passed out to Nat Florian '60 in front for the fourth.

Using four midfields rather than the three that Tech must use, the victors had the strength to run the MIT lacrossemen into the ground after the intermission. Pratt scored at 7:22 after man fine saves by Engineer goalie, Phil Frink '60, and the Wildcats dropped back on defense covering very closely, outrunning and outscrapping a tiring Beaver squad. UNH added an insurance mark at 6:38 of the last quarter.

The loss sank the hopes of many for an undefeated season. Coach Ben Martin's powerful aggregation will roll into action again tomorrow against Middlebury here at 3:00 p.m.

Baseball Team Downs Bates 4-1 Beard Pitches Nine Innings To Win

The varsity baseball team thumped Bates 4-1 in a well played contest at Briggs Field last Saturday afternoon. The Engineer nine collected only six singles in the game, but were helped by pitching lapses by Bates.

The visitors scored in the bottom of the third inning to gain an early 1-0 lead. In the top of the fourth, the deficit was erased without an MIT hit. Five walks by the Bobcat hurler gave the Engineers two easy runs. In the next frame, as Hal Parmalee '60 singled, stole second, and scored on a clean blow by Warren Goodnow '59. The Techmen notched their final marker in the sixth inning on base hits by Neil Fitzpatrick '60, Jack Pogarian '59, and Joe Schutzman '61.

Al Beard '59, whose record is now 1-1, went the full nine innings to receive credit for the victory. This afternoon, the Engineer diamondmen resume action against Tufts here.

Six Varsity Teams Compete Here Sat.

Varsity competition in six sports will be held on Briggs Field and the Charles River this Saturday afternoon during the Open House at the Institute. Students, their parents, and visitors will have the opportunity to see MIT in action in track, baseball, lacrosse, and tennis on Briggs Field, and the heavyweight and lightweight crews will be racing on the Charles River. In addition to the varsity encounters, Tech will be rpresented by freshman teams here in crew, lacrosse and track.

Cindermen Second In Triangular Meet; Top New Hampshire

Making their first home appearance of the out-door season last Saturday, the varsity track team placed second in a triangular meet with Tufts University and the University of New Hampshire at Briggs Field. The final score: Tufts, 65½; MIT 54½, UNH 45. The frosh were downed by the Tufts yearlings in a dual contest 68-55.

Joe Davis '61 and Jim Long '60 were high pointmen for Tech with 9 points each. Davis tied for first in the high jump, while placing second and third in the high and low hurdles, respectively. Long was the victor in the javelin throw while copping third spots in the shotput and discus throw.

Other Beaver winners were Don Morrison '61 in the broad jump, Bill Nicholson '60 in the hammer throw, and Art Warner '60, a tie for first in the high jump. Also outstanding was Brian White '61 who finished fast in the mile to take third in 4:40 and later was second by a few steps in a 2:03 880.

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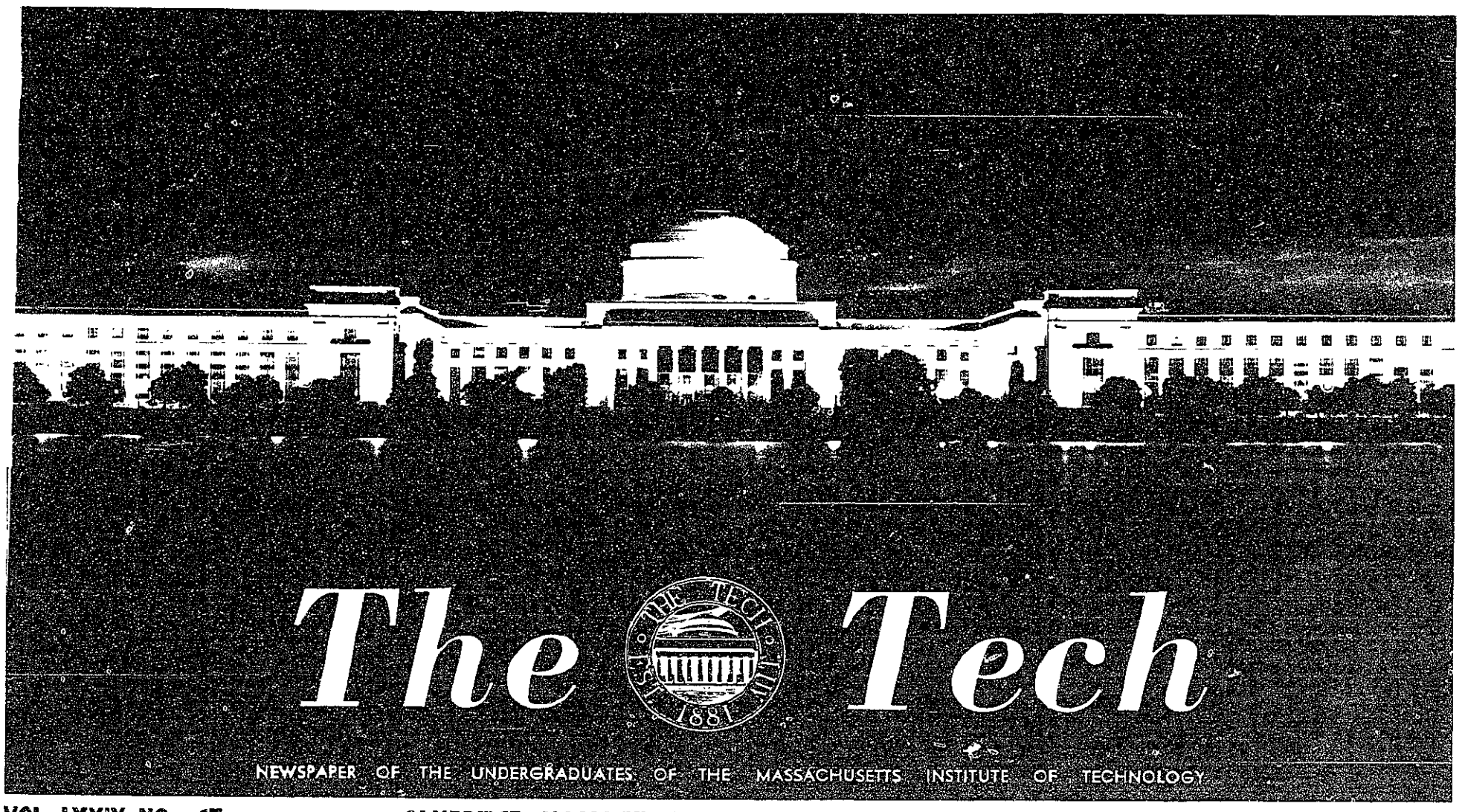

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VOL. LXXIX NO. 17 CAMBRIDGE, MASSACHUSETTS, FRIDAY, MAY 1, 1959 5 CENTS

OPEN HOUSE 1959; 25,000 Are Expected

Open House 1959 swings into action tomorrow at noon as the expected crowds of 20 to 30 thousand visitors begin to arrive. On hand to greet the visitors will be more than 1000 MIT students, faculty, and administration, all of whom have been preparing for Open House day for more than three months.

Under the direction of a joint student-faculty-administration committee, all of the Institute's departments and many of its activities will be out to show the public what goes on at MIT that makes it the famed institution that it is.

Visitors are expected from all over New England, and parents of Tech students will be here for the day.

Although many special displays are planned, most of the "exhibits" are simply a showing of what goes on within the Institute's walls every day of the year. Labs will be open, machines and equipment running, and in general, MIT will be as busy as it usually is.

Plans Begun in February

Plans for Open House 1959 began several months ago when the Institute Committee appointed Co-Chairmen for the event, and an Open House Committee of students was formed. A faculty-administration committee was added, and work began.

Each department within the Institute named a representative to the Open House Committee, and followed up with the naming of a student representative. These two (or in the four) people provided the liaison between the central committee and case of some departments three or groups within the departments who were planning for the day.

Most of the work of the Open House Committee itself consisted of coordinating the efforts of the departments, and acting as a clearing house for such problems as two departments wanting the same space at the same time.

With thousands of visitors arriving, and hundreds of displays to be set up, Physical Plant's work schedule for Open House consisted of more than five typewritten pages of instructions.

Student groups have moved their activities into the main buildings and onto Great Court to make it possible for larger numbers of people to see and hear them.

One of the objectives of the MIT Open House is to give non-Institute people a look at the many things the Institute is. To this end, as many facets of MIT life will be brought out. Besides the departmental displays student activities, musical clubs, and athletics are all being featured tomorrow.

Student Co-Chairmen of the Open House are Dave Butterfield '60 and Linda Greiner '60. Members are Bill Strauss '61, Bob Calderone '61, John Sununu '61, Bob Rothstein '60, and Alan Loss '62. Chairman of the faculty committee is Dean Robert Holden.

CAMBRIDGE 39 MASSACHUSETTS
OFFICE OF THE PRESIDENT

May 2, 1959

On behalf of the students and faculty of M.I.T., I wish to welcome you to our twenty-first biennial Open House.

The program that has been planned for you has been arranged largely by a group of undergraduate students with the advice of a faculty committee representing each of our academic departments. It is intended to give you an opportunity to see a few of our newest research facilities and to catch some of the flavor of our educational programs in engineering, science, architecture, the humanities, and industrial management. You will also have a chance to see many exhibits and presentations by some of the student extracurricular activities, including athletics, that are an integral part of our campus life.

Since the purpose of Open House is to provide an opportunity for all our friends and neighbors to come to know us a little better, the program has been designed with many different interests in mind. I hope very much that it will appeal to you and that you will find your visit both pleasant and worth while.

With warmest greetings,

J. A. Stratton
President

Explorer Scouts To Be Guests of APO

Some two thousand Explorer Scouts will have the run of MIT's facilities as a part of the Open House program.

The scouts from Region One (New England and part of New York state) will gather in Kresge Auditorium between eight and ten o'clock Saturday morning. At that time the 1900 scouts and their 400 leaders will begin the New England Explorer Science and Engineering Conference which is sponsored by the MIT chapter of Alpha Phi Omega.

The scouts and scouters will be divided into two groups of a thousand for registration and organization immediately following the kick-off meeting. After head-counting, the two groups will split in the auditorium to hear talks by members of the MIT faculty. Opening invocation for the session will be by Reverend Robert C. Holtzapple, Protestant religious counselor at MIT.

Following an address by the regional director of the New England division of B.S.A. on "The Place of Scouting in Engineering", the explorers will hear talks by Professors Holt Ashley and T. K. Sherwood. Professor Ashley will speak on Aeronautical Engineering and Professor Sherwood will discuss Chemical Engineering. The session will close with a talk by Professor D. H. Frisch concerning "Why Be a Scientist?"

Next item on the Explorer's agenda is a tour of the MIT dormitories. In case of rain, the group will view movies in Rockwell Cage.

Later in the morning the young men will divide further into special interest groups where they will hear talks and join in discussion with MIT professors. Subjects to be discussed are Chemical and Mechanical Engineering, Biology, Physics, Chemistry, Social and Military Science, and College Entrance in general.

Lunch will be served from noon till one o'clock, when the groups begin tours of the MIT labs and Open House exhibits. These tours will be conducted by MIT APO members, who have organized and planned the entire affair.

Explorer Scouting is for the age group 14-18, and is an autonomous branch of the Boy Scouts of America.

All students should obtain an examination schedule now at the Information Office, Room 7-111.

Exams not listed or a conflict in exams, such as two exams in the same morning, must be reported to the Registrar's Office by Tuesday, May 12.

Sloan Fellows Meet At MIT; Conference First of Two Here

Business executives who have studied at the School of Industrial Management will return this spring to MIT for two conferences on "Management in an Era of Dynamic Technology."

The first of the conferences is a convocation of Sloan Fellows, April 29-May 1. The Sloan Fellows are young executives in their thirties who spend a full year at MIT taking advanced work in industrial management. There are now 37 Fellows in residence, and many of the 296 who have participated in the program in previous years are returning for the conference.

"New developments in business and technology occur so rapidly that the former Sloan Fellows and the Senior Executives find it of immense help to return to MIT, to keep themselves in touch with new academic research and to exchange views among themselves," said Dean E. P. Brooks of the School of Industrial Management.

Among the speakers for the convocation will be D. M. Keezer, vice-president and director of the Economics Department, McGraw - Hill Publishing Company, and Dr. Julius Stratton, President of MIT.

Weiner New Institute Professor; Joins Select Group of Four

Norbert Weiner, renowned mathematician at MIT, was appointed an Institute Professor Thursday.

Dr. Weiner, a member of the Department of Mathematics here for forty years, now becomes one of four Institute Professors whose advanced teaching and research are carried on without regard to departmental boundaries.

"This distinguished academic post, which recognizes outstanding achievement and breadth of interest, is one for which Dr. Weiner is undeniably qualified," Dr. Julius A. Stratton said of the appointment.

To Publish Book

Dr. Weiner, who entered Tufts College when he was only 11 years old, and received a Ph.D. from Harvard when he was 18, disclosed that now, at the age of 64, he is about to have a first novel published.

Titled "The Tempter", the novel is a modern adaptation of the Faust-Mephistopheles legend, dealing with the corruption of a scientist.

This will not be the first book for Dr. Weiner, however. He has written science fiction stories and is the author of two autobiographical works, "Ex-Prodigy" and "I am a Mathematician." The former tells of his boyhood in Cambridge, when his father was the first professor of Slavic languages at Harvard, and the latter tells of his mathematical career.

Founder of a Science

Although his work in mathematics covers a wide range of subjects, from the Fourier integral to harmonic analysis and random theory, Professor Weiner is probably best known as the founder of cybernetics, a science concerned with finding common principles in the function of automatic machines and the human nervous system.

Cybernetics explores similarities between the human brain and the elaborate modern computing machines capable of memory association, choice, and decision-making. It seeks to discover to what degree the human nervous system, carrying its stimuli signals to the brain, is a purely mechanical process. But it also opens the question of automation itself—the question of how man-like a machine may become.

Brain Wave Analysis

A leading scientific interest of Dr. Weiner's in recent years has been the introduction of new methods of mathematical analysis of brain waves.

(Continued on page 8)

MIT Opens Grounds; Summer Camp Here

MIT's recreational facilities, almost idle during the summer months, will be used as a summer camp for children of all members of the school community.

Running from June 22 to August 14, the camp will be divided into four quarters and will provide the children between the ages of 6 and 12 with the use of the athletic field, swimming pool, sailing pavilion, the cage and armory, tennis courts, archery and golf ranges, rifle range, and arts and crafts.

The Essence of MIT

To each of the thousands of visitors who will tour the Institute we extend a sincere welcome. We hope that you will enjoy your journey through the vast labyrinthine halls of MIT. We would like to think that you will, in some way, improve yourself through this visit.

Undoubtedly in the back of your mind will be the feeling which comes from a knowledge of the world situation: a feeling of horror at the products of science and technology which now cast the shadow of Armageddon over great masses of the earth's population. Yet you must appreciate the wonder of the developments in medicine, in engineering and other phases of research which daily are making life more pleasant and more enjoyable for those who, except for these innovations, could face nothing but hardship.

Out of this dualism of ideas, you must begin to appreciate the objective ways of science. As man proceeds to conquer nature and learn how to control it, there will inevitably issue forth, along with the benefits, methods which could lead to destruction. This is the way progress has been since the discovery of fire. Science increases man's potential, it has no other goal. The increase can be used for better or for worse; the decision can come only from man himself. It is outside the objective realm of science.

With ever increasing industrialization and the accelerating growth of the body of scientific knowledge, an understanding of technology is a vital and necessary attitude for the leaders of the society of today and tomorrow. MIT, we think, realizes this and has adjusted its education to meet the demands. Walking through the halls, you will not see this. What you will see will make you think that we students are receiving excellent training in the objective area. What you cannot see is *what* the MIT education means to the future of this country and of the world. We would like to speak, for a moment, on this education.

A great number of graduates of this school do not go into pure science or engineering. MIT graduates will be consistently found among the leaders of industry and in other non-scientific walks of life. Indeed, the MIT education is not geared to produce excellent technicians. It is, instead, set up to produce men with a broad understanding of the ways of science along with a feeling for the problems which will face mankind in the next decade. The humanities program here boasts some of the best men in their fields; MIT can compete with any Ivy League school for their professional staff. The Business School is rapidly attaining fame as one of the best in the country. All students are required to take at least 20% of their time in the humanities field; most spend more.

Why does the school demand that this time be taken from the acquisition of scientific knowledge? Because it realizes its responsibility to society in this scientifically oriented world of today. That responsibility is to turn out individuals who have the grasp of what science is, for only with this insight will they be able to make adequate decisions in other fields.

This, of course, is not to discount the MIT graduates who will spend their life adding to the objective body of knowledge. They, too, will add an equally indispensible asset to the world of tomorrow.

In short, MIT is striving to turn out men who will be of the greatest value to the world of the future. In every phase of life a graduate of this school should have the background to succeed, and, in succeeding, advance humanity one more step.

This is the MIT which you, as visitors to our physical plant, cannot see. It is the MIT which many students do not fully understand. It is the MIT which is constantly striving, through its educational system, to fulfill its responsibility to mankind and to the future.

letters

Reasonable, Useful, Dull

To the Editor:

In response to your editorial of April 28, concerning East Campus Day, I would like to remind you that if a person in college spends all his time doing reasonable and useful things, he leads a dull life unbefitting his age. After all, if undergraduate students were all absolutely mature and reasonable creatures, then one of the basic functions of a college education would be gone, and undergraduate schools as such would cease to exist.

With this view, I ask that such occasional bursts of immature action be tolerated, in the same manner that the constant expression of immaturity called *The Tech* is tolerated. As a matter of fact, to continue the analogy, if one-half the effort and time spent on *The Tech* were expended on journalism, then MIT would have a newspaper.

Terry A. Welch '60
East Campus House Chairman

Is it the purpose, however, of a Student Government body to organize such activities and perpetrate them on an entire dormitory, in fact, an entire community, many of whose members dislike being assaulted by noise, water, and other antisocial actions? "Immature" actions, it seems, are to be expected of college students, but must their leaders organize for this cause?

We assure Mr. Welch that all of the time and effort spent on THE TECH is expended on journalism, since we, at least, are aware of the purposes of our organization. We invite Mr. Welch to visit our offices any time; without such experience he should not comment on our use of time. Ed.

half notes

The MIT Concert Band will present a free concert as part of the open house activities tomorrow. The performance will be at 3:30 P.M. in the Great Court. In case of inclement weather it will be given in Kresge Auditorium at the same time. The concert, in a somewhat lighter vein than last month's formal concert, will feature "Flag of Stars" by Gordon Jacobs and Hanson's "Chorale and Alleluia."

The annual "Tech Night at the Pops," sponsored by the Baton Society will take place Sunday night at 8:30. Besides the regular Pops concert, the Pops orchestra will play the traditional "Arise Ye Sons" and "MIT Stein Song." Also featured will be MIT Glee Club, conducted by Klaus Liepmann, and the Logarhythms. Some tickets will be on sale at the door, with prices ranging from $.75 to $3.00.

kibitzer

North-South Vulnerable
West Dealer

N
S — K Q 10 8 7
H — A Q 8 5
D — A 7
C — A 8

W
S — 6 4 3
H — J 9 3
D — 4 2
C — Q J 10 9 7

E
S — J 2
H — K 4
D — 10 9 5 3
C — K 6 5 3 2

S
S — A 9 5
H — 10 7 6 2
D — K Q J 8 6
C — 4

Bidding:			
W	*N*	*E*	*S*
1 Club	Double	2 Clubs	3 Hearts
pass	6 Hearts	pass	pass
pass			

Opening Lead: Queen of Clubs

West's opening club bid was what is known as a psychic bid or a "psyche." By psyching a player tries to fool the opponents at the risk of getting his own partnership into trouble. This type of bid frequently has the effect of keeping the opponents out of their rightful contract by scaring them out of the game, or possibly goading them into an unmakeable contract. Psyches also frequently backfire. South knew his partner's double asked him to bid a major suit if he had one, and South also wished to show his point count. North's six heart bid may have been overly ambitious, but he didn't know his partner's heart suit was so shoddy, and he didn't want to be psyched out of a slam.

As soon as the dummy went down, South realized West had psyched. There were not enough points left in the deck for him to have had a legitimate opening bid, especially with West responding. His lead indicated a long club suit missing the king, and the fact that he had psyched meant he could not hold much else, for he would not have psyched had he held more than about six points. East was therefore marked with the king of hearts. With this knowledge the heart finesse was futile, but another little used play might work.

The ace of clubs took the first trick, and the ace of hearts was taken. The South hand was entered with the ace of spades and a small heart led towards the dummy. Had West played the jack, the queen would have covered to force the king, leaving the ten to pick up the last trump. However, West was able to play the nine. Dummy must then play small, and East is forced to take nothing but low cards with its king. The queen of hearts is then left to pick up the jack. This play will limit the trump loss to one trick in every case except when East has the king, jack, and one or two small hearts. However, if he has all this, the contract is hopeless anyway.

Note that South could not afford to make this unusual play unless he was sure the king of hearts was in East's hand. West's psyche gave him this information.

James R. Chalfant, '60

The Tech

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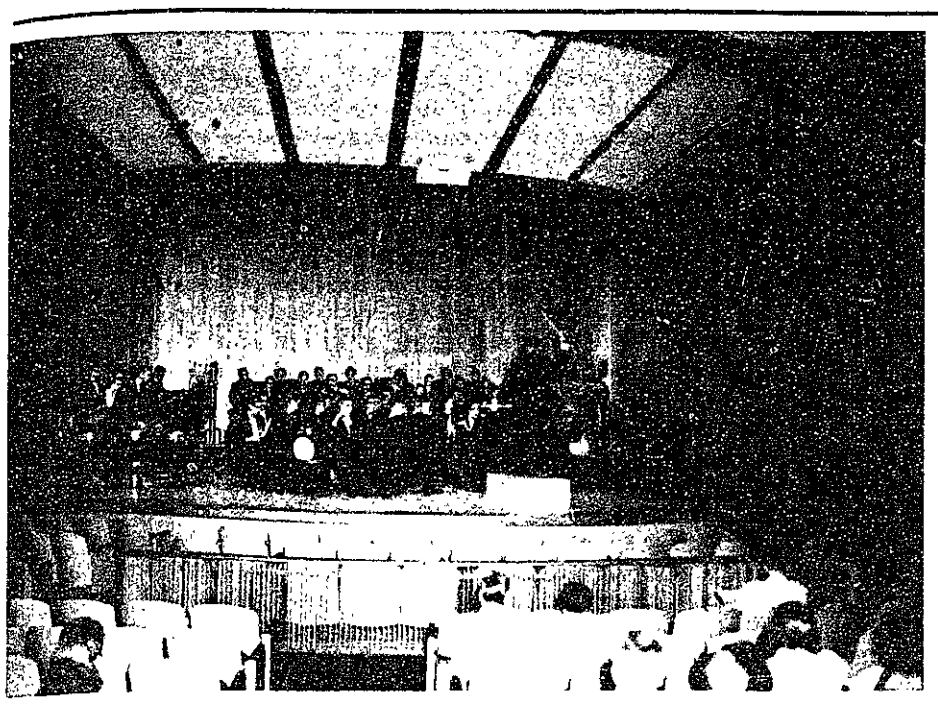


When the drums go bang and the symbols clang . . .

MIT Band To Play Open House Concert 3:30 p.m. On Kresge Auditorium Plaza

When the drums go bang and the cymbals clang, there's nothing like a march. John Corley's MIT Concert Band will play a special outdoor concert 3:30 p.m., May 2, on the Kresge Plaza.

MIT's musicians are a special group: the Engineers have always been distinguished by their musical ability. (And few universities have a library comparable to MIT's fine Music Library, or quite as an appreciative student body.)

In the tradition of the band, Mr. Corley will play only music originally scored for band.

If the weather should prove uncooperative, the concert will be held inside the auditorium.

MIT has often been referred to as a musical community. And the combined musical clubs include as well as the Band, the Glee Club, the Choral Society, Symphony Orchestra, and Woodwind and Brass Ensemble. These organizations give frequent concerts in Boston and the neighboring communities.

Tech Night at the POPS

Sunday, May 3, will bring for music goers an annual favorite of long tradition — Baton Society—sponsored "Tech Night at the Pops". This concert at Symphony Hall, Boston, will feature an evening of fine music by the Boston Pops (its first appearance of the season) and both the MIT Glee Club and the popular Logarhythms.

Under the direction of Klaus Liepmann, the Glee Club will have a program of short entertaining selections which will include: "Arise Ye Sons of MIT", "The Suabian Folk Song", "The Wanderer's Song", and two sea chanteys. The sixty-five member Club has just completed a very successful season of concerts with some of the leading girl's schools in the vicinity and will officially end its series of engagements this Sunday.

The other MIT attraction at the "Pops" is the Logarhythms—a group of eight talented young men who will there present renditions of "Ride the Chariot", "Mosquito", and "Harmonize".

All Aboard

Tech Model Railroad Club

John Pryke and Peter Samson assess damage to the Tech Nickel Plate Railroad. Operation commences again 2:00 p.m. Saturday, May 2 in conjunction with Open House. Departure is scheduled from the new passenger yards in Room 214 and 216 of Building 20-E. The Tech Model Railroad Club's HO gauge layout built on a scale of 7/8 (3.5 mm.) inch to the foot operates five trains at once out of the two train yards on the main line. With the 1000 relay control system, operation is almost automatic at any position on the main line.

Rocket Society Shows Extensive Testing Facilities

The MIT Rocket Research Society, like most MIT activities, will participate in the Open House exercises by opening its facilities (Room 2-025) to the public. The Society is considered to have the most extensive amateur rocket testing facilities in the nation. Among them are a machine shop, an enclosed test stand, and recording instrumentation. Several theses for Bachelor and Masters Degrees have been completed using these facilities. In addition, films of tests conducted by the members will be shown, along with the color film "Vanguard" in Room 2-131 at 1, 2:30, and 4 p.m.

Later that same year, MIT permitted the Society to use a steel test cell which had been used in a former World War II fuels research program. This cell, in which the motors are tested, is constructed of inch thick armor plate and is ten feet square and seven feet high, affording

At the MIT Rocket Research Society test cell in Room 2-025 Anthony Lewis operates the control panel and William Griffin works one of the recording instruments during a rocket test run. The rocket is located in an armored steel test chamber located at the rear of the control board.

ample protection to the members. At the present time, motors of up to 150 pounds thrust can be accommodated on the test stand.

The effectiveness of the safety precautions taken is illustrated by the fact that the Society has never had an injury or a serious accident. The control sequence is entirely automatic, with all equipment being operated electrically. Test firings are generally held on Friday evenings in order not to disturb classes.

Dr. Julius Stratton's Inauguration As MIT's 11th President, June 15

By Sam Balk

Dr. Julius A. Stratton will be inaugurated as the eleventh President of the Massachusetts Institute of Technology on Alumni Day, June 15, 1959, which according to tradition will be the Monday following Commencement on Friday, June 12.

Though Dr. Julius A. Stratton's appointment became effective January 1, 1959, the investive ceremony will be conducted at this time with Dr. James R. Killian, Jr., Chairman of the Corporation, presiding. It will be held on the Great Court at 11 a.m. before an audience of corporation members, faculty, students, and guests.

Following the inauguration there will be a luncheon in tents erected on the lawn. Speakers will include President Nathan M. Pusey of Harvard University; President Lee A. DuBridge of California Institute of Technology; President Charles Odegard of the University of Washington, which Dr. Stratton attended for one year, and Claude Seippel, vice president of the board of Swiss Federal Institute of Technology in Zurich, where he received his doctor of science degree. And a group of forty musicians from the Boston Symphony Orchestra under the direction of Richard Burgin, will provide music for the ceremony.

MIT's President Stratton

As President, Dr. Stratton is charged with the task of administration of the Institute's great scope of activities, which range from the education of undergraduates to the front lines of national defense. And besides these administrative duties, he also has the great responsibility for "keeping a constant eye out" for the maintenance of MIT's position as a world center of science, technology, and culture in the future.

Dr. Stratton is a man eminently qualified for his position. He is a scientist, engineer administrator, and community - minded citizen of the highest calibre. Himself a graduate of MIT, he has degrees in electrical engineering and physics. He was one of the first students in the field that has come to be known as electronics.

Giving much distinguished service to the nation as a scientist, engineer, and scientific administrator, he was one of the first members of the radiation laboratory, established by MIT fourteen months before Pearl Harbor to develop radar. In 1943, Dr. Stratton became expert consultant in the office of the Secretary of War, where he established an advisory committee to the air forces on radar, radar fire control, and radar bombing.

In recognition of his service he was awarded the Medal of Merit by the Secretary of War in 1946, and a Certificate, awarded by the Secretary of the Navy in 1957.

As President, Dr. Stratton succeedes Dr. James R. Killian, a figure of national stature in scientific and engineering administration, who has since been engaged in adjusting the nation to meet the demands of the atomic age by serving in Washington as special assistant to the President of the U. S. on scientific matters.

Dr. Stratton is a firm believer in the concept of "education for utility" which has long been such an important concept at MIT.

The Institute, according to President Stratton, provides a student with "a professional undergraduate education", and if he has chosen his courses wisely, he may upon graduation, be confident that regardless of what field he eventually enters into, "he will be prepared." In his recent address to the student body, President Stratton repeatedly stressed the concept of preparation for a practical, fruitful life of service in a changing world.

As sighted earlier, President Stratton is a distinguished citizen of the community and a man of importance and regard in national life. He is a trustee and member of the Executive Committee of the Boston Museum of Fine Arts. And he is a fellow of the National Academy of Science.

Though President Stratton now lives at 100 Memorial Drive, he and his family will soon move into the familiar President House, official residence of the President of MIT.

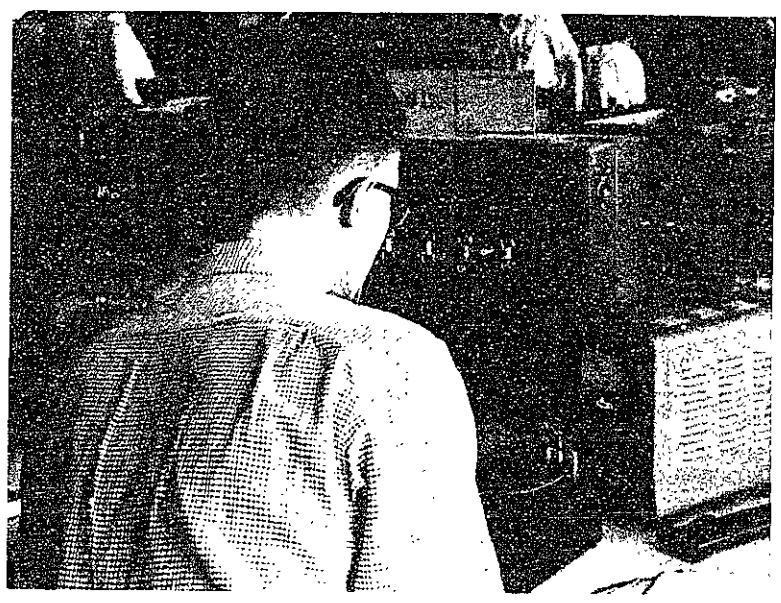
Two other MIT Presidents, besides Dr. Stratton and Dr. Killian, his predecessor, should be mentioned. They are William Barton Rogers, the founder of the Institute, and the late Dr. Carl Taylor Compton, who was President through the thirties and the early and middle forties and did much to expand MIT and bring it to the position it now enjoys.

Electrical Engineering

The department of Electrical Engineering will open its labs to New Englanders for the MIT open-house. Professor Harold E. Edgerton's Stroboscopic Lab and the Student Lab showing the use of radar in tracking and destroying a moving target will be featured. Computors in action will also be a main point of the Course Six displays.

Dr. Edgerton will demonstrate stroboscopic effects, characteristics of Flash Lamps, and the results of high speed photography in room 4-405. A visilution of the speed of light will be shown as well as the uses of deep sea cameras, including one that has taken pictures 25,000 feet under the sea.

Dr. Harold Edgerton, George Clark, and Lloyd Breslan with the photo-luminescence camera. Dr. Edgerton is famous for his shots taken with special cameras miles below the sea.



Students in the Department of Electrical Engineering spend many hours in labs such as this one. Shown above are just a few of the many instruments provided MIT's future scientists.

In the Student Lab in building 32, visitors will be able to track a moving target on radar and control a model gun. Also the use of analog computers in chemical process control will be displayed.

In building 10-397 other computer uses will be demonstrated, including measurements of the switching characteristics of superconductive metal alloys in liquid helium and the high vacuum evaporation of metals. Demonstrations of the learning process and the decision making process on the computer will be given in room 26-248.

Voices Over Light Beam

In the electronics lab 10-250 visitors will be able to see themselves on closed circuit television and actually view what happens inside a tube in their television sets. Also they can watch a human voice being transmitted over a beam of light, and learn of the effects of heat on transistors.

An electric "bug" that follows a flashlight beam will be featured in the Energy Conversion and Control Lab. The new generalized machine which has simplified the teaching of energy conversion will be demonstrated here, too.

In Building 24 members of the High Voltage engineering lab will explain the uses of high energy electrons in the treatment of diseases and will demonstrate the high voltage electrostatic generator.

In the acoustics lab a demonstration of speech analysis and synthesis will be given.

Jets and Fuels

Open house at MIT will see courses 10 and 16 vie in providing excellent demonstrations of missile techniques.

The newly named Department of Astronautics, only one of its kind in existence, will provide demonstrations of missile testing and guidance. The Chemical Engineers will show methods of fuel testing and exhaust analysis together with studies of nuclear burn prevention.

The student subsonic wind tunnel in building 33 will be in operation. Visitors will be allowed to view behavior of missile models in high speed air currents. Experiments will be made illustrating aerodynamical behaviors.

44-foot Missile Shown

A full size model of a missile will be used to show the operation of an inertial guidance system. The model, 44 ft. by 1 ft., will be subjected to external stresses and the resulting correction by the guidance system will be observed. This field, pioneered by Dr. Charles Draper of MIT, has played an immense part in missile development.

Beryllium Nose Cone

The only beryllium nose cone in existence will be on display together with other articles of the Astronautics Dept. The nose cone, important for its combination of light weight and high temperature performance, was made by the Wyman-Gorman Co. The surface of the cone is of a mirror-like finish, necessary for travel in air at high speeds. Also on exhibit will be a cutaway model of the Vanguard satellite, showing its internal structure. The transparent model is a full size model of the original.

There will be a continuous showing of a movie by the North American Co. concerning takeoffs.

Ram Jet Operated

The Chemical Engineering Dept. will provide a simple ram jet burner in full operation. Though of a small size, it will adequately provide the viewer with a vivid idea of burner effects.

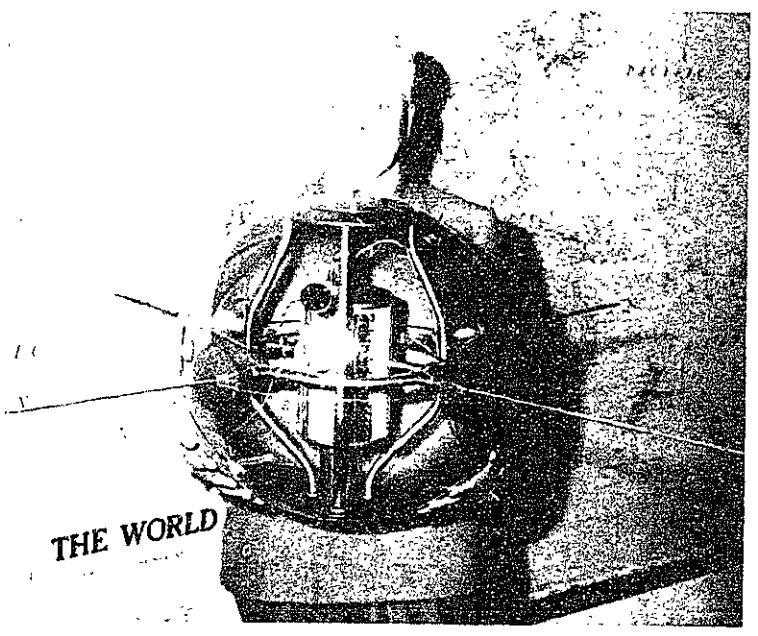
A one inch combustion chamber used in the investigation of fuel combustion temperatures will be in operation. Methods of determining fuel combustion temperatures will be shown and explained.

Methods for studying the air disturbances in the vicinity of jet burner nozzles will be demonstrated with a new method of turbulent jet mixing. The system, recently developed at Tech, uses photoelectric cells in conjunction with traces of smoke to study air turbulances. The method is revolutionary in that it allows study of air disturbances without introducing new ones caused by the measuring devices themselves.

Radiation Burns

Also on exhibit will be samples of a simulant for human skin used in studies of heat radiation burning effects. The simulant has been developed to ease difficulties in studies of the effects of clothing of different types on burns from atomic bombs. The technique represents an advance in research, for it eliminates the need of the skin of a particular type of animal which was heretofore the closest substitute for human skin.

The Chemical Engineering Department will in addition provide a set of samples of earths treated with a process developed in conjunction with the Civil Engineering Dept. The earths have been treated with special polymers and plastics to provide them with the rigidity necessary to support construction in areas with soft soil. The development allows the construction of air strips in place which were before too soft for them.



Prof. Bentley holding a model of an earth satellite. This and other similar models will be part of the Department of Aeronautics and Astronautics display.

Food Science

Course 20 will open the doors of building 16 for MIT Open House, with displays on the first four floors and the food technologians' exhibits will illustrate the work the department has been doing in the last 15 years.

Many pieces of equipment used in the varied areas of food technology will be seen. Included among these are a servo-mechanism capable of rendering five direction control and an automatic radioactivity measuring device.

The basement floor will contain fruit juice concentration machines, fermentation equipment, and an electron accelerator. The fruit juice machines are employed in concentrating juices at high vacuums and low pressures. The electron accelerator has been in use here for the past 15 years providing a million volt electron beam for sterilization and preservation of foods and medicine. The department is a leader in this field which has only recently been publicized.

The Course 20 men will display food fermentation equipment, such as is used in the preparation of liquors, yeasts, amino acids, etc. Visitors will have the opportunity to view a collection of food Tech's slides through the department's microscopes.

Food canning techniques will be exhibited in a display featuring an array of devices used for testing the permeability of odors and water through plastic food coverings.

Radioactive Analysis

Apparatus used in the study of living organism processes will be shown, and the measurement of rat metabolism will be featured. A display of tracer element techniques will show how radioactive Carbon 14 is used in following the transfer of oxygen from air into the bloodstream.

Visitors who wish to get an overall view of the work of food technology students are invited to view a twenty minute color movie shown continuously in room 16-310.

Political Science

Some might find it difficult to believe, but MIT now offers a Ph.D. degree in Political Science. Started a year ago, the program aims to train graduates in six fields of political science: International Relations and Foreign Policy, Political Communications, Defense Policy, Government and science, Political and Economic development, and Political Theory and Comparative Government.

If it sounds like MIT is trying to bite off more than it can chew, one has only to see the tremendous changes and political confusion that were brought about in our contemporary society by the discoveries made in fields of Science and Technology at MIT. And it is precisely the political problems that arise from such changes that the doctor's degree program is primarily concerned with. The program includes provisions for a combination of advanced work in scientific or engineering field with political science.

It all started back in 1951 when the Russians started jamming the Voice of America. The U. S. government then sought the help of MIT scientists and engineers to help from the technical electronic aspect of the jamming. But it quickly became apparent that there was much more to it than just trying to unjam the Voice of America. It became clear — as the study progressed — that any judgment as to what techniques of communica would be most effective had to be based upon some unders ing of what was to be communicated and to whom it was said.

This led to the founding of the Center of International s to cope with the ever-growing problem. From then and the conviction grew that MIT as a center of learning, in na sciences and engineering, must devote more attention t social, political and economic aspects of technological c . . . and hence the doctoral degree in political science.

At present the Center is engaged in four major researc grams. The first is in International Communications. Her barriers to International understanding are studied in F India, the Middle East, and the U. S. The second is the Eco and Political development program. Here the forces which the rate of economic growth, especially in the so-called u developed countries are considered. Case studies of develo in India, Indonesia, and Italy are in progress.

The third program is on the U. S.-Communist Bloc rela Here the focus is on the academic knowledge available fro torical and analytical studies of Russia, China, and Ea Europe about problems the U. S. now faces or is likely t in its relationships with these areas.

The fourth program is American Society in the World Se Launched in mid-1955 this program is examining the rela ship between American institutions and values in a ra changing world.

The bulk of the Center's research projects are finance grants from private foundations, and notably from the foundation, as well as research contracts with various de ments of government.

Thermo - Electric Engine

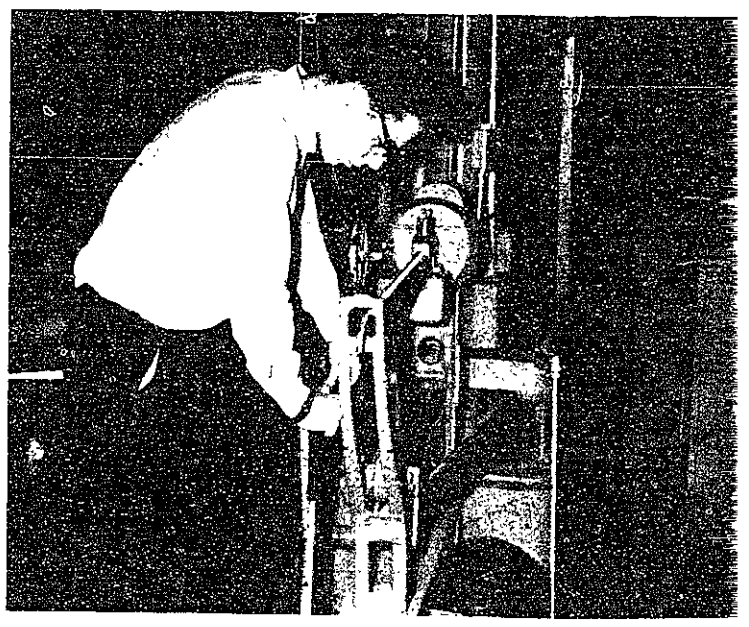
A thermo-electric engine that has been just recently devel here at MIT by Professors Kay and Hatsopulus will be the l light of the Mechanical Engineering Department display MIT open-house. This engine, which was developed last converts heat directly into electrical energy without the us any moving parts.

Almost all the activities of the department will center ar the steam lab. Comparisons between the old and new metho producing power will be the theme of the displays.

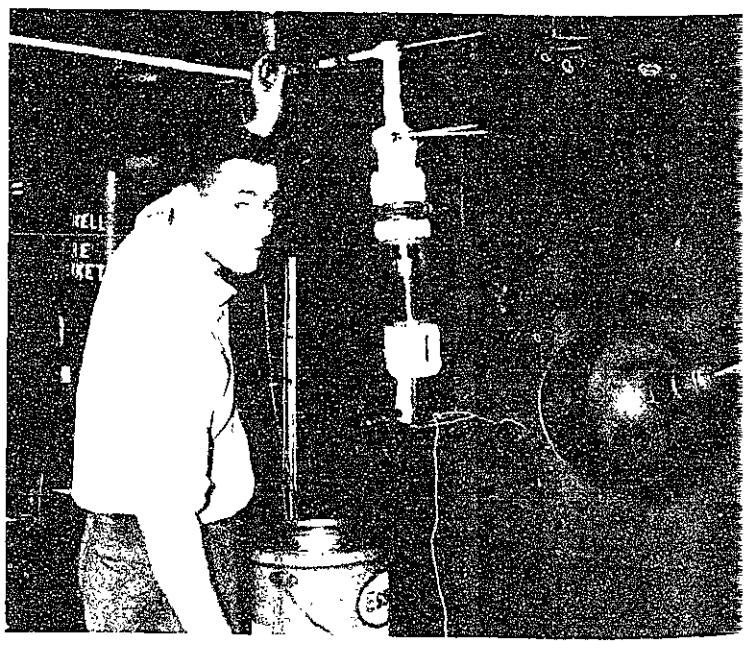
In the lab hot air engines will be on display as well as the Cryoenic engine which uses low temperature helium at -45 A Vortex refrigerator will show how fluid steam can be se ated into hot and cold components. Fluid flow and streamli will be shown through motion pictures.

Air Burns Wood

A jet of air burning a hole in pieces of wood will be show the smoke tunnel. Nearby a machine under development at



A future mechanical engineer observes the operations of one of M numerous stress analysis machines.



A Course Two (Mechanical Engineering) student adjusts the controls his laboratory equipment.

used in surgical operations on the lungs and heart will be e plained.

Other low temperature effects will also be demonstrated in t steam lab. Rubber nails will be inserted in liquid nitrogen -359° F. and then driven into wood.

In the basement of Building One seniors will explain the wo they are doing on their thesis. They will in general state ho they chose their projects and the difficulties that they experienc in working on them.

A gyroscope which is used in space navigation will be operate at the Mechanical lab in Building Three, third floor. The princ ple of these devices will also be thoroughly explained.

The gas turbine lab in building 31 will demonstrate pum circulation, low speed cascadino and supersonic flow.

The operation of milling machines, the formation of chips an the measuring methods in metal cutting operations will be dem onstrated in the metal cutting lab in building 35.

Also the automotive lab and the divisions of refrigeration co trol and textiles will participate in the department's progra

The New Biology

Biology was once a science of classification and description. No such biology is practiced in MIT's Dorrance Laboratory. Biology at MIT employs sophisticated methods of the physical sciences to answer the basic questions of nearly all biological problems. What is the method of genetic transfer common to all life? What is the structure of living molecules?

The equipment and labs that MIT biologists use to unravel these fundamental mysteries will be displayed to interested visitors as Course Seven opens its doors for Open House.

One of the tools MIT biologists use to study heredity is microbial genetics. This uses viruses and bacteria as test "animals". The advantages of using them are their small storage space, easy feeding, tremendous numbers, low cost, and, most important, frequent reproduction. In a single day a geneticist can watch a hereditary characteristic proceed through 50 generations, providing him ample opportunity to see how a change of environment affects the evolution of the organism.

TRACER ELEMENTS

Another modern method of investigating the ways of living organisms is putting radioactive elements in an organism's environment and following, by its radioactivity, the element's path through the life processes. In the words of Dr. Herbert of MIT, radioactive tracing has "contributed most in the progress of biology for the last 15 years."

X-Rays Used

Analysis of proteins and the nucleic acids that carry the information of heredity is now done by X-ray diffraction, first perfected to study atomic structure. With this technique, some idea of the composition of these most complex molecules can be made.

Another type of complex molecule, the enzymes, also come under study. Among other methods shown will be electophoresis, the separation of chemical under electrostatic stress, and use of ultra-centrifuges.

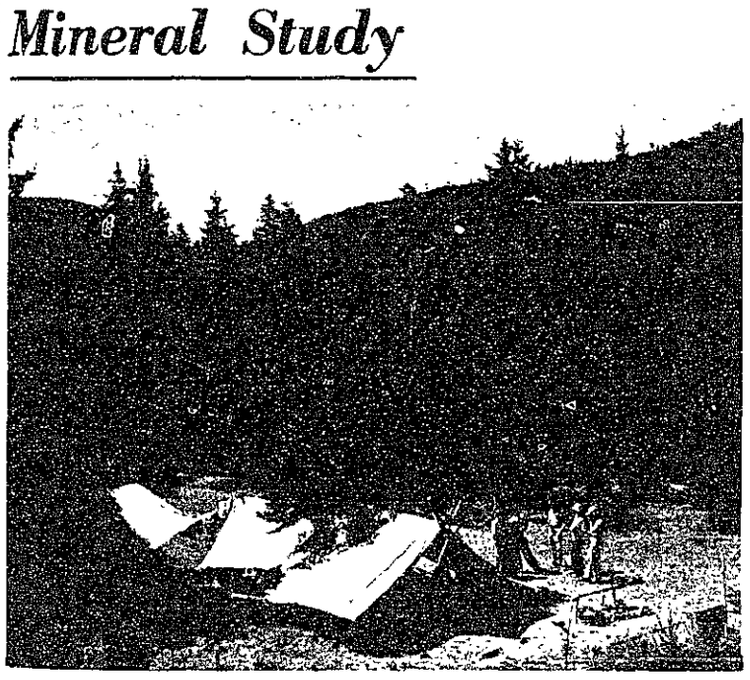
These ultra-centrifuges are another application of physical science to biology. These modern devices utilize centripetal force to get forces of 100,000 times gravity. Under such force, molecules sedimentate out in certain times. From these times important information about weight, size, and shape can be ascertained.

Sound Separates

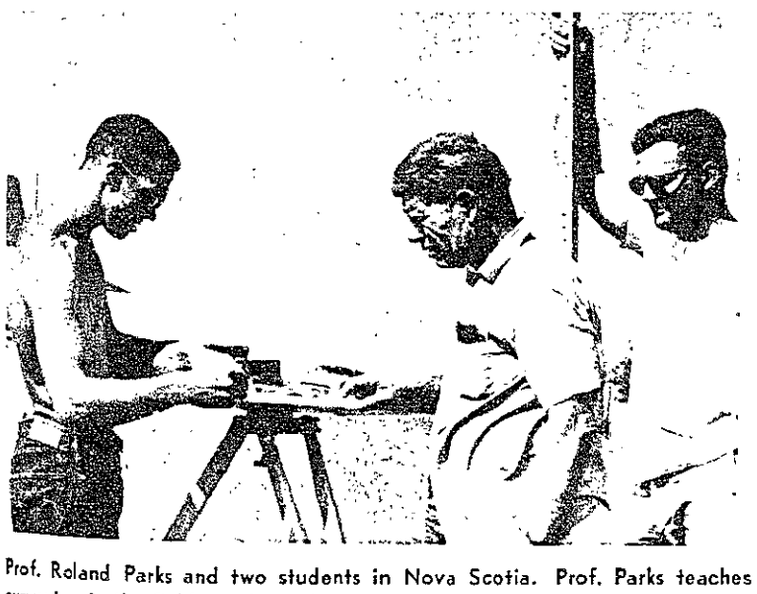
One of the modern technical phenomena which have helped biologists is ultrasonic sound. With this, disruption of material is quicker, cleaner, and less damaging to delicate structures than the old methods of physical abrasion and chemical separation.

One of the most famous devices used by biologists is the electron microscope. Dr. Hall, of MIT, has increased the resolution of the electron microscope to 5 to 10 atomic diameters. This enables the biologist to see some of the large molecules on which he works.

Mineral Study



Deep in the woods of Nova Scotia — the Department of Geology and Geophysics summer camp where students learn in the field.



Prof. Roland Parks and two students in Nova Scotia. Prof. Parks teaches surveying in the field, as shown here.

The geology and geophysics department's various labs will be open and operating under normal procedures in order that the public may see the actual work that goes on therein. Qualified personnel, both student and staff, will be on hand to answer questions posed by visitors.

At the present time, the geochronology and geochemistry labs are taking measurements to determine the age of granite samples. This is accomplished through the study of the ratio of potassium and argon isotopes that are in the specimen. It is believed that the original constituent of these rocks was potassium and that through the millions of years the potassium decayed into isotopes of argon. By comparing the ratios of these isotopes the geologists are able to determine the ages of the samples.

The X-ray laboratory has facilities which determine the structure and composition of various minerals by X-raying thin slabs (0.03 millimeter) of the specimen.

In other laboratories, measurements of the magnetic properties of minerals will be taken. Possible uses of these magnetic properties include determination of the location of the earth's poles millions of years ago. Magnetic particles that became embedded in sedimentary rock as it formed tended to align themselves with the earth's magnetic field. As the rocks were subjected to stresses and tensions these particles came out of alignment. It is hoped that measurement of these stress processes might aid in determining the original alignment of the earth's magnetic field.

MINING MOVIES

During the afternoon, motion pictures will be shown concerning mining and oil prospecting.

Shell Oil Company films include: "Prospecting for Petrolum", a film showing the development of oil collection methods and the formation of oil deposits, going as far back in time as ancient Babylon; "Ten Thousand Feet Deep" features seismic exploration for oil deposits and the drilling of a test well in the Louisiana bayou country; and, "Fossil Story", a movie showing fossil formation and the study of earth-locked fossil remains of life from 100 million years ago.

The Inco Nickel Company will present a film "Mining for Nickel" which will show the entire process in the establishment of a nickel mine; from the initial search for ore and study of the ore deposit to the development of the mine and the use of various mining methods.

Atomic Ship

A model of the atomic ship Savannah and movies depicting the building of its atomic power plant will highlight the Naval Architecture display for the MIT Open House.

The seven-foot model of the ship will be displayed in room 5-170 along with other very recent developments in Marine Engineering. Guided missiles, futuristic ship designs, and models of a variable pitch propeller will supplement the display.

Following the theme of demonstrating the basic features of Naval Architecture, the Course Thirteen department has displayed in room 5-108 the problems of building and launching a ship. Displays will show how fatigue, vibration and corrosion can destroy a ship. Featured will be the cracking in half of World War II Liberty ships. Course Thirteen Techmen will also display a model of a towing tank, used in structural design.

Ship Models Towed

The department has arranged to run tests in the actual towing tank in building 48, all afternoon Saturday.

Professor Laurens Troost, Jr., of the Naval Architecture and Marine Engineering Department had the following to say about his department's work: "The ship is the biggest moving object that man has ever devised. Its design and construction are without parallel in modern engineering. Designing a ship is indeed a demanding profession—yet one as fascinating as the stories and folklore of the men and ships that sail the sea. MIT is one of a handful of American universities preparing men for the future of this profession."

Ore Processes

Fabrication, separation, and physical metallurgy processes will be featured as divisions of the metallurgy department's Open House displays.

In the physical metallurgy section, three demonstrations will be presented. The first, a forging process, takes place at a low temperature instead of the high ones usually associated with forgery. Liquid mercury will be frozen by liquid nitrogen to a temperature below its melting point. The solid mercury is then removed from the cold bath and forged.

The crystal structure changes in steel as it reaches its eutectic temperature will be demonstrated with a taut steel wire drawn between two electrodes. As current flows through the system, the wire is heated to red heat, expanding and sagging between the electrodes. When the circuit is opened, the wire cools to its eutectic temperature where it heatsup again to red heat without external stimuli, finally cooling back down to room temperature.

The Mineral Engineering section will have several separation exhibits. In one, the sample mixture is placed on an inclined water table which allows the various components to separate out by weight, heavier ones first and lighter ones following. Several rock crushers will be on display, and will crush rocks to various sizes for the purpose of separation.

A froth-flotation process will also be in operation. In this technique, the ore, along with its impurities, is introduced into a liquid bath composed of water and oil. Compressed air is introduced at the bottom of the tank and the impurities adhere to the oil-coated bubbles, rising to the top of the tank where they are drawn off.

Iron Burned

Several metallic processes will be in progress throughout the afternoon, notably thermite reactions. Iron oxide and aluminum, ignited by burning magnesium ribbon, unite in a fiery display to form molten iron and aluminum oxide. The molten iron is so extremely hot that it will burn its way through a metal plate that is immersed in water.

Beer Mugs Cast

In the foundry, gentlemen from a project engineering group will cast beer mugs out of bronze and aluminum. The castings will take place at 1:30 and at 3:30. Also on display in the foundry will be several types of sands used for sand-casting and sculpting.

The metal fabrication section will demonstrate a deep-drawing process. A circular plate is placed across a die in the form of a circular hole. The plate is punched into the die and the resulting figure is eventually cup-shaped.

While the metallurgy department will not have scheduled lectures there will be guided tours through the labs with personnel available to answer questions.

Atomic Energy

Large scale exhibits will be featured at this year's Open House display by the Physics and Nuclear Engineering departments. The physics department will display an eight-and-one-half million electron volt Van de Graaff generator, a 350 million electron volt Synchrotron and a Cyclotron.

The Van de Graaff generator is capable of producing extremely high voltages. Nuclear particles are accelerated in the generator until they reach high velocities and emerge from the generator in a sharp beam.

The Cyclotron uses a strong magnetic field to keep the particles moving in a spiral path. The velocities of these particles increases as they obtain higher energy levels until they are deflated into an evacuated chamber where they strike different targets to produce nuclear reactions.

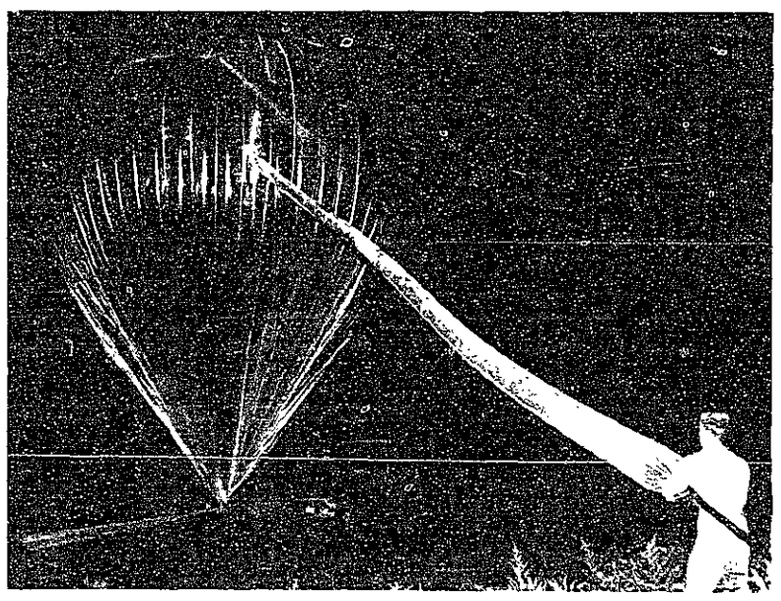
The Synchrotron accelerates particles by combining a time-varying magnetic field with a radio frequency electron field. Particles injected into the machine are kept in a circular path by the magnetic field. The particles pass a special accelerating gap which increases their velocities several hundred million times. They traverse a distance of over 1100 miles before they achieve the machine's maximum energy of 350 million electron volts. These particles then strike a tungsten wire to produce a narrow cone of X-rays. These X-rays contribute to the study of atomic nuclei, particularly, the study of their behavior under the influence of physical stimuli.

Originally, a linear particle accelerator was to be exhibited but a break-down in the control panel has made this impractical.

N E's First Nuclear Reactor

The nuclear engineering department will have the nuclear reactor on display and personnel will be available to answer

The doctor controls the neutron beam emmitted from the aperture in the ceiling of the MIT reactor in treatment of brain tumor. (Posed picture).



Helium is introduced into the top of a balloon of the type used by Course 22, Nuclear Engineering, in cosmic ray studies.

questions. The reactor, which has been at critical strength since July 21, 1958, has run at various power levels including full power—one million watts—for various tests and research purposes. In the near future this reactor, the first in New England, may be used in cancer research projects.

Physics Lab Demonstrations

The cosmic ray laboratories will demonstrate the many phenomena of cosmic rays. Cosmic rays will be transformed into light pulses through the use of a plastic scintillator under ultraviolet light. Additionally, measurement of radioactivity from a source will be shown using a Geiger tube tray.

The Junior laboratories will have apparatus set up for the measurement and observation of gas discharges and the magnetic properties of atomic nuclei.

Visitors will be invited to play shuffleboard with air-suspended hockey pucks. The intent here is not to overcome friction but to utilize it in order to score.

City Planning

The field of city planning is subjected to more derision than most MIT courses. The typical question is "Plan any city lately ", and true, the opportunity to plan a complete city is, as an understatement, rare.

The City Planning exhibit shows what "city planner" duties are. The problem of planning a city is a local and topical one. A typical problem might be: Should part of the Fenway be converted into a parking lot for Fenway Park, home of the Red Sox? If so, how?

The role of the city planner is to present various solutions to the city government. In his suggestions, he must analyze such factors as traffic flow, land depreciation, migration of populace to suburbs, cost, and the important intangibles, beauty and livability of a city.

Designs Displayed

The architecture exhibit contains several typical models the architecture students make to develop the feeling for form and structure they must have to be successful architects.

Most of the MIT architects design public buildings which generally do not make them as well-known generally as the more individualistic architects who design private, and generally, more radical structrures. The philosophy of Course Four, architecture, as expressed by its dean, Dean Pietro Belluschi, "The architect must be a competent technician. He must also be a man to whom people and life in all its facets and mysteries are objects of fascination, delight, and concern. His task in society, therefore, is no longer to follow old styles or merely to create new ones, but to give meaningful interpretation in physical terms of our complex civilization, to reflect our way of life and the substance of our culture."

SIX MIT VARSITIES COMPETE

Lacrossemen to Face Amherst; Predict Excitement for Spectators

One of the most thrilling sports spectacles of tomorrow afternoon's flurry of athletic activity will be the varsity lacross game with Amherst in the area enclosed by the cinder track on Briggs Field at 2:00. The 1959 edition of the MIT stickmen has proven itself to be even greater than last year's Class "C" Champions, with wins over Adelphi, Harvard, Brown, WPI and UMass. Only a 6-4 loss to powerful UNH mars their record.

The Engineers have shown strength at every position and have controlled the ball throughout every game but their setback. Despite their all-around ability, the Beavers do have several players who stand out above their team mates.

Attackman Paul Ekberg '59 has played a fiery brand of lacrosse, and his all out hustle has enabled him to score in every contest but one to become the team's second high goal getter. Chuck Conn '60 has been another stalwart on attack for the Engineers.

Fitzgerald Top Midfielder

Since the midfield has to cover both ends of play, while the attack and defense are confined to half, more men are used at these positions during the game. Six Techmen have contributed much to MIT's lacrosse successes with their midfield play, but outshining them all has been Chuck Fitzgerald '59. With his speed and stickhandling ability, the 6' 2" Fitzgerald has whipped home 13 goals in the first five games of the season to top all Engineer stickmen in scoring. He appears well on his way to best the total of 20 he garnered last year to earn him All-American honorable mention.

Jim Russell '59, John Comerford '59, Joe Skendarian '61, Nat Florian '60, and Larry Boyd '59 have added greatly to the Beaver offense from their midfield posts.

Spectators at any of MIT's lacrosse encounters haven't failed to notice their 6' 4" defenseman who has stopped so many opposing drives. John Cadwallader '60 has been the bulwak of the Beaver defense and Novis Smith '59 has given strong help.

Phil Frink '61 has been turning away enemy shots as the Cardinal and Gray netminder. He has been sharing the goalie's duties with Dix Browder '59.

Caoch Ben Martin has fielded his second great lacrosse squad in a row, and much of the credit for their fine showing goes to him.

Tomorrow's contest will be the final home appearance for the varsity stickmen.

All Oarsmen Row on Charles Tomorrow; Varsity Heavies Race for Compton Cup

Nine Engineer crews will take to the water tomorow in the season's biggest day of intercollegiate racing on the Charles River. It will be the only opportunity Tech fans will have this year to see both the lights and heavies in action on the same afternoon.

Coach Jack Frailey's varsity heavyweights, who have been training hard for the past week, will be seeking the Compton Cup when they meet Harvard, BU, Dartmouth and Princeton at 6 p.m. Last year MIT finished third behind the Crimson and Tigers in the event.

The prize for the winning varsity lightweight eight will be the Biglin Cup. Beaver mentor Val Skow will be sending his charges against Harvard and Dartmouth at 4:30 p.m. in an effort to capture the prize from the Cantabs.

The day's racing card will provide an important test for the Cardinal and Grey varsity units, who have yet to win a race this season. The lights have bowed to Harvard in their two starts, while the heavies placed third behind the Crimson and Syracuse last week.

The afternoon festivities are scheduled to begin at 3:30 p.m. when the Beaver frosh 150-pound shell will battle the Big Green and the Crimson over a 1 5-16 mile route. The JV light contest over the same course has been set for 4 p.m.

The varsity heavyweight oarsmen are shown in a workout on the Charles in preparation for the weekend's competition.

The freshman heavyweight race will see the same five teams as the varsity heavy tilt. Coach Ron MacKay's sweepswingers will be after their second win of the year when they turn out on the 1 3-4-mile course at 5 p.m. The JV heavies will precede the Compton Cup encounter by 30 minutes.

Early-rising fans will be able to see the second frosh heavies and lights and the third varsity lights sweep the Henley distance course starting at 9 a.m.

Probable Boatings

MIT Heavyweights

	Varsity	JV
8	Webber	Jensen
7	Hooper	Fletcher
6	Nield	Utgoff
5	Spooner	Peck
4	Culver	Grimmell
3	Weinman	Kendall
2	Morrison	Negin
1	Gockel	Hofland
Cox	Anderson	Buttner

MIT Lightweights

	Varsity	JV
8	Jeffries	Blosser
7	Arens	Parkoff
6	Moran	Uhlig
5	Platte	Fleischer
4	Allen	Blanchard
3	Zachor	Stefansky
2	Dill	Kinch
1	Suhrbier	Cheever
Cox	Olshaker	Dorfman

Tech Golfers to Face Army and Bowdoin

Although the varsity golf team has had little success thus far this season, defeating only one team while losing to seven in total competition, they are confidently looking forward to their three remaining regular matches and the highlight of spring play, the New England Championships.

Team captain Bob Rosenfeld '59, Medalist in the 1958 New England's, should have an excellent chance of repeating as the individual champion. His game has been erratic this spring, but a sizzling 68 in a recent triangular meet at the Oakley Country Club offers ample evidence of his tremendous ability.

Earlier in the season, the team was weakened by the loss of number three man, Colin Clive '60, who had an appendectomy. Other protégés of Coach John Burke, in order of their position on the team, are Bill Smith '59, Bob Larson '60, Jim Hurley '59, Garnert Nelson '61, J. W. K. Hibbard '60, and Art Hatch '61.

The golfers will host Army and Bowdoin tomorrow afternoon at Oakley in what promises to be a close, exciting meet.

AT HOME ON OPEN HOUSE DAY

Graduate House Stands Unbeaten Strong Contender For Softball Title

The power packed Graduate House made it four in a row, as they whipped Lambda Chi Alpha 10-1 last Sunday, in a League V encounter. The Grads thus maintained their one game edge over second place Graduate Dining Staff, also victorious this past week-end. However, in the only meeting between these two teams, the Graduate House won a close one 5-2.

Meanwhile, the Graduate Aero Society, a strong challenger for the title, retained their hold on the League VII leadership by rolling over Delta Kappa Epsilon 25-3. In other League VII activity, Alpha Tau Omega swamped Theta Chi 27-6.

The largest score of the week belongs to Pi Lambda Phi. The Pi Lambs emptied the bench as they trounced Student House 30-9. Outstanding in the field and at the plate for the victors were J. Diamond '60, left field, Fred Arditti '60, shortstop, and S. Wolberg '62, pitcher.

Tau Epsilon Phi received a breather this week as they won by forfeit over Phi Beta Epsilon. The Teps are currently leading League II. Other action saw Burton House B outlast Sigma Nu 15-9.

In League I, the field remained tightly bunched as Sigma Alpha Mu handily disposed of Alpha Epsilon Pi, 18-11. Phi Kappa took over the league leadership as they won their first and only game played so far, over Baker House B, 17-9. The Baker pitching staff which previously had been quite effective was able to do little to stop the booming bats of the winners.

As many of the regular season games have been rained out, the IM managers have scheduled a rash of 5:00 contests next week. It is hoped that the playoffs will begin the week following IFC and Dormitory Weekend.

Middlebury Stickmen Lose to MIT, 12-2

Special to The Tech

The varsity lacrosse team rolled up their sixth victory of the current campaign Wednesday afternoon on Briggs Field when they completely outclassed Middlebury 12-2. The game was rough and marked by many penalties, especially in the second half when the visitors realized they had no chance to win.

The Engineers scored five times without retaliation in the first quarter, as Paul Ekberg '59 had three and John Comerford '59 two. Chuck Fitzgerald '59 picked up three goals and Chuck Conn '60 one in the second and third periods, while Middlebury tallied twice. Conn registered another and Jim Russell '59 flipped in two more in the final session to make the victors' total an even dozen, as almost the entire MIT bench saw action.

Sailors Will Defend The Owen Cup At Navy This Saturday

The MIT sailors face a big weekend as they defend the Owen Trophy in the Eastern Dinghy Championship races at Annapolis. They also see action tomorrow in a Heptagonal Raven Regatta at Coast Guard and in an Octagonal Regatta Sunday here on the Charles.

At Annapolis competition should be very keen as skippers Bill Widnail '59, and Dennis Posey '59, with crews Pete Gray '61, and Jan Northby '59, sail Gannets against teams from Army, Brown, Coast Guard, Cornell, Dartmouth, Harvard, Navy, Penn, Princeton, Williams and Yale. George Kirk '60 will be at the helm in the Coast Guard races. Skippering in Sunday's races on the Charles will be Don Nelsen '61 and Walt Bagdade '61.

Saturday
- Varsity and Freshman Track with Bowdoin 1:15 P.M.
- Varsity Baseball with Clark 2:00 P.M.
- Freshman Baseball at Northeastern 2:00 P.M.
- Varsity Lacrosse with Amherst 2:00 P.M.
- Freshman Lacrosse with Lawrence Academy 2:00 P.M.
- Varsity Tennis with RPI 2:00 P.M.
- Heavy Weight Crew — Compton Cup with Harvard, Princeton, (Dartmouth, B.U.)
- Lightweight Crew — Biglin Cup with Dartmouth, Harvard
- Varsity Sailing at Coast Guard for Raven Meet
- Varsity Sailing at Navy for Owen Trophy

Sunday
- Varsity Sailing Heptagonal at MIT

Tech Hard Ball Club Led by Oeler, Blinn To Play Clark Here

With just over half the season under their belts, the MIT varsity baseball team has compiled a record of three wins, five losses, and one tie. The Engineers have won games from Rutgers 2-1, Bowdoin 5-4, Bates 4-1, while dropping contests to Catholic University, Johns Hopkins, Boston College, WPI, and Tufts. The second game of a doubleheader against WPI ended in a 5-5 tie because of darkness.

Al Beard '59, Dick Oeler '60, and John Blinn '61 have performed the pitching honors on the diamond for Tech this spring, and each of them has gained credit for a victory. For the most part, the infield has played well defensively, the outfield has come through with the hits, and team captain and 1958 Greater Boston All-Star catcher Warren Goodnow '59 has provided plenty of excitement both offensively and behind the plate.

Rooters for the Cardinal and Gray baseball team will have an opportunity to see their favorites in action tomorrow afternoon against Clark at Briggs Field.

Four Straight by Varsity Netmen Tangle with RPI at Home Saturday

MIT forged ahead in tennis this week as a charged up varsity team swept across the courts to take four straight games. To date, the netmen have an 8-3 record with six big games to go.

Tech met Bowdoin on April 23 and literally hammered the challengers into the ground. Raul Karman '31 took his number one match 6-0, 6-0 to get things rolling. The team looked good on the courts and finished with a score of 9-0.

Riding the crest of a winning streak, the raquetmen faced Colby on the next day. Offering even less resistance than Bowdoin, they succumbed to the varsity by the same total, 9-0.

On Saturday, the netmen saw action once more as they fought the University of Massachusetts. UMass proved to be stronger than usual, but Tech mastered the nets as they downed their rivals 8-1. Karman led the attack, taking the first singles match 6-1, 6-3, and he then teamed up with Jack Klapper '61 to take the first doubles duel 6-1, 6-3.

Tech Downs Williams in Close Match

The Engineers, scheduled to play Williams on Monday, postponed the encounter until Wednesday due to the weather. Wednesday presented far from ideal tennis weather, but this failed to stop the Beavers as they battled to a 5-4 win. Six of the nine contests went three sets as both teams showed plenty of skill and determination. Karman began his match by dropping the first eight games but dug in and began playing some fine tennis to take the match 0-6, 6-3 and 6-2. Klapper finally scored in his ordeal as it lasted almost two hours. All the points were long and both men played a steady game. The final tally was 8-10, 6-2, and 6-4. Jeff Winicour '59 stepped out to a commanding lead in his duel, by taking the first set 6-1 and leading 5-0 in the second when his opponent caught fire. Winicour finally took the battle 7-5. Karman and Klapper took the first doubles match, while Bob Hodges '60 and Dave Aaker '59 grabbed the number three match in three sets after dropping the first 0-6.

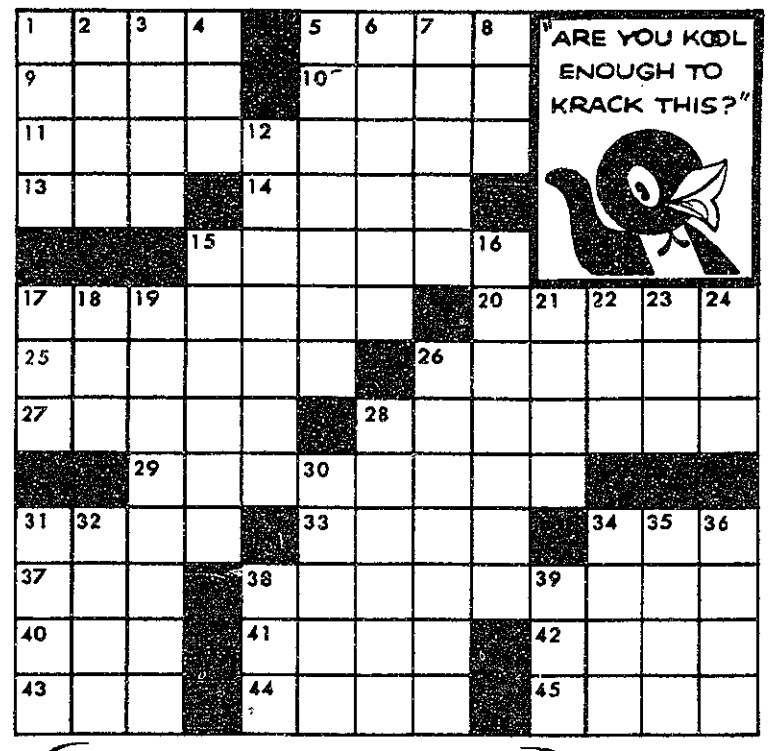
KOOL KROSSWORD No. 24

ACROSS

1. Can you stand it?
5. I Remember ____
9. Concerning a crazy mixed-up rein
10. Start to erase
11. What Kools are that the others aren't
13. You're label to be caught
14. Part of a chain
15. Anagram of hot sap (non-Kool smoker)
17. These are the things you want
20. Repent
25. Most common kind of bills
26. You'll get a charge out of this
27. Pork pals
28. Canine cuddlers
29. Fell, for actress Audrey?
31. They're suited to equine champs
33. Roger's partner
34. Knowledgeable fellow
37. Why Keats was in debt?
38. This goes there and that goes here
40. Mal de ____
41. Kind of steady
42. What to switch to Kools from
43. Kind of relief
44. An insect relative?
45. French islands

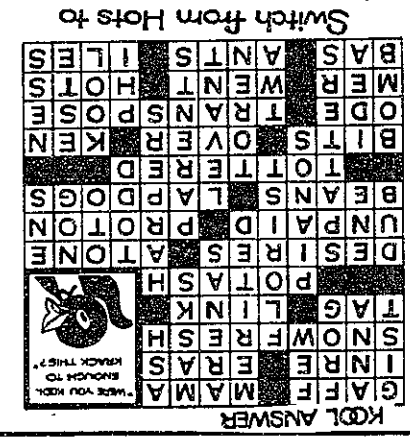
DOWN

1. The psychologist's end
2. Girl found in Manhattan
3. Larynx dweller?
4. This isn't many
5. Anagram of tired me
6. Spheres of action
7. They save face
8. A tree
12. He deals in dahlias and scents
15. Items for key people
16. Bazaar or Ferry
17. Make a knight of
18. Compass point
19. Quarrelers who spill blood?
21. Mrs. A. Lincoln, nee ____
22. Too confused, this Indian
23. Egg's last name
24. Short for an ensign
26. The gal and guy you left behind
28. Oscar with barbs
30. Movie actress Marta ____
31. They can be aerosol or atomic
32. Well, it's a thought
34. The most refreshing experience in smoking
35. Villa d' ____
36. For cool ____, smoke Kools
38. Airlines
39. Philosophy's beginning



KOOL ANSWER

Switch from Hots to Snow Fresh Filter KOOL



Abstract, Bizarre Exhibits Highlights of Math Display

Even the most cursory glance at Math course enrollment reveals that the "Queen of Sciences" is becoming ever more important. The Math Department's exhibit shows why mathematics has become so popular.

Intriguing and bizarre are the best words to describe the Mathematics and Imagination exhibit. Here the visitor can find one-sided surfaces, one-surfaced volumes, and many other interesting and unusual problems in dimension.

Displaying how Math can discard its abstractness and employ physical tools is the demonstration on how soap films cover minimum amounts of area, thus supplying valuable information to mathematicians.

A new and interesting part of the display is the "numbers game" which will feature probability and the theory of games. One application which will be shown is the computation of the random falling of a needle across the stripes of a flag. Other interesting problems and effects of probability will be shown.

The History of Mathematics, in diagrammatic form, will show how mathematics developed from drawings in the sand to giant, multi-million dollar computers. This section of the display will also feature rare books, with the original manuscripts of some of the geniuses who have made mathematical history.

(Continued from page 1)

Brain waves, along with FM radio, quantum physics, and the statistical mechanics of gases, are the subject of his most recent mathematical work called "Nonlinear Problems in Random Theory". Written from the tape recordings of a series of his lectures, with help from photographs taken of his blackboard equations, the book is the first on this subject to be printed in English.