Bhor attends Open World Seminar; Chipman reveals "Steel Curtain"

In the last of four speeches at an American-Egyptian Faculty Seminar held in Cairo, Frary, at which Dr. Nadar has been a guest of honor, Dr. John R. Sutcliffe of Carnegie Institute of Technology, as outstanding member of the American Engineering Community Association in Cambridge, Massachusetts, on Tuesday, November 19, 1957.

The Tech

New Lincoln Lab Radar Watches Sputniks; For Ballistic Missile Defense Research

Announcement of a new long-range radar, which, it was revealed for the first time, has been used in observing Russian satellite, was made in New York last night by Dr. Julius A. Stratton, Chancellor and acting President of the Institute of Technology. The radar, on Millstone Hill, 35 miles northeast of Boston, was installed by Lincoln Laboratory for research in problems of ballistic missile defense. Dr. Stratton said

Dr. Robert M. B. Roberts has been appointed to head of the Laboratory's Defense Systems Research Laboratory. He will have the same title and duties as the Laboratory's current head, Dr. Robert C. Pettersen.

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Surveyor Is Not Invited to American-Egyptian Seminar

In the October 30 meeting of the Student Community Association at Millstone Hill, Mr. Robert M. B. Roberts was elected to represent the Student Community Association at Millstone Hill in the upcoming academic year.

Dr. Robert M. B. Roberts has been appointed to head of the Laboratory's Defense Systems Research Laboratory. He will have the same title and duties as the Laboratory's current head, Dr. Robert C. Pettersen.

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Experimental high-power long-range radar installation developed by MIT Lincoln Laboratory at Millstone Hill in Westford, Massachusetts, is now in operation.

Inscornm Members for Dropping Class Reps: Freshmen Disagree

The motion raised at the November 7 meeting of Institute Committee, providing for a major change in representation on the council, and said that, rather than dropping class reps, the council would not create an open amendment, but no successors would be elected. The representative of the House, Professor Chipman first stated that, as a member of the Academic Senate, he would like to see WTBS provide the transmitting power. He also said that Inscornm should make a definite statement on their approval or disapproval of Field Day activities.

The class representatives now in office would not be removed by the new amendment, but no successors would be elected. The representative of the Sophomore, Junior, and Senior classes all feel that dropping their offices would be a gain for Inscornm.

The Senate has brought us to a turning point in history. Science, not masses of the bravest men, will be the major factor in the future. The Senate has brought us to a turning point in history. Science, not masses of the bravest men, will be the major factor in the future.

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MIT SYMPHONY ORCHESTRA

John Corley, Director

Overture—"Iphigenia in Aulis", Gluck; Concert No. 1 in E flat, Strauss; Symphony No. 3, Hanson.

On Saturday, December 16, the MIT Symphony Orchestra under the able direction of John Corley gave its first concert of the season in Kresge Auditorium.

Opening with the Overture to Iphigenia in Aulis the orchestra, after a false start, proved itself to be a most competent organization. The strings were delicate yet assured under the able direction of John Corley, after a false start, proved itself to be a most competent organization.

The director, John Corley, who took over complete musical responsibilities of this organization only a few short years ago, has built the MIT Symphony Orchestra into an excellent musical group of which the MIT Community should be justly proud. Judging from the good attendance and response of the audience, we have much to look forward to in the musical pursuits of the MIT Symphony.

—Allen C. Langed '58

kibitzer

S--10 6 5 4 3 2
H--10 7 5 4 3
D--10 7

WEST  S--9 8 7
   H--9
   D--J 8 6 5 2
   C--8 7 6 3

SOUTH  S--A
      H--K Q J
      D--A K Q 9 3
      C--A K 10 9 2

The bidding:

N  E  S  W
P  P  P
P  P  DHR  P

Opening lead: nine of spades

This hand from a recent party session provides a good lesson for the beginner to never give up even when it appears that all is lost. Remembering, no matter what cards in the dummy pays off.

East had a fence, if shaded opening. South did not want to take any chances on being left below game. He could see only two foun with any kind of normal distribution, regardless of partner's strength. East doubled, regardless of partner's strength, on the obviously poor distribution and high cards, while South, still bold to the end redoubled.

West opened the nine of hearts. When the dummy was spread, South was disheartened to see that it provided no means of setting up the club suit by two finesses. However, it was noted that if clubs broke 4-4 there was still a chance to bring home the contract losing only one club and the heart. So South proceeded along this line.

West took the opening lead and returned the ace, South following. South laid down the top two clubs, ruffed a club in the dummy, returned to hand with the ace of spades and led another club, uttering the words: "There is a God after all" when the suit broke. South, with visions of an overtrick, now trumped a spade to get back to his hand, and proceeded to extract trumps. He got the nute. However, South had more trump led than declarer, and it looked to declarer as if he were going to lose the jack of diamonds as well as the ten of diamonds. Had East drawn this card the end play was forced to lead with him.

Opening with the Overture to Iphigenia in Aulis the orchestra, after a false start, proved itself to be a most competent organization. The strings were delicate yet assuring in the introduction, and, as this theme was developed they produced fine crescendos and decrescendos until the end. The work was beautifully crisp, yet sensitive, telling notes. Throughout the overture the balance among the different sections was superb. Aside from the fact that all the first violins had their own ideas about bowing, the performance of this first work was very well received.

With Jerry Litton, MIT '60 as soloist, the orchestra next performed the Liszt piano concerto No. 1 in E flat, Strauss; Symphony No. 3, Hanson.

Now is the time to talk about CAREERS with IT&T

Representatives of International Telephone and Telegraph Corporation will be interviewing Engineers and Physicists at M. I. T.

Wednesday, November 25

For positions with the following IT&T Divisions and Associate Companies

FARNSWORTH ELECTRONICS COMPANY
Fort Wayne, Indiana

FEDERAL TELECOMMUNICATION LABORATORIES
Nutley, New Jersey and San Francisco, California

FEDERAL TELEPHONE AND RADIO COMPANY
Clifton, New Jersey

INDUSTRIAL PRODUCTS DIVISION
San Francisco, California

KELLOGG SWITCHBOARD AND SUPPLY COMPANY
Chicago, Illinois and Palo Alto, California

AMERICAN CABLE & RADIO CORPORATION
New York, New York

COMPONENTS DIVISION
Clifton, New Jersey and Palo Alto, California

FEDERAL ELECTRIC CORPORATION
Loth and Paramus, New Jersey

INTELE SYSTEMS CORPORATION
New York, New York

ROYAL ELECTRICAL CORPORATION
Paterson and Warren, New Jersey

IT&T TELEPHONE AND RADIO OPERATING GROUP
New York, New York

For details, consult with your Placement Officer on a call up for a scheduled interview with IT&T representatives. You may be certain that we are looking forward to meeting you.
MIT Solar House Tests Feasibility Of Sun Heating, Found To Be Impractical For Temperate N.E. Climate

"Looks like a uniquely conceived modern home in the eighteen to twenty thousand dollar price class," is the description that Popular Mechanics has for MIT's new solar house, which is located in Lexington. This three-bedroom, experimental house is the third one designed and built by MIT to test solar heating in northern climates.

The outstanding feature of this two-story house is the collector unit, 666 square feet inclined at 40 degrees from the horizontal. Underneath the glass sheets is black-painted copper. The solar heat passes through the glass easily and is absorbed by the black-surfaced copper. Most of this heat will be absorbed by water passing through copper coils fastened to the underside of the sheets.

This water then flows into a 1,000 gallon insulated storage tank in the basement. This tank has sufficient heat storage capacity for a three day period of cloudy weather. Water from this tank is pumped to a heat exchanger, where a fast releases the heat and a fan transfers it to the house in the ducts. The piping is so arranged that whenever heat from the sun is not sufficient to keep the house warm, an oil furnace will turn on automatically and heat the water. It is estimated that the yearly cost of oil for auxiliary heat will not exceed $50.

In the summer, the solar-heated water will circulate only through the domestic hot-water system. Water in the storage tank will be cooled by a small refrigeration unit, which is less costly to install than and operate than the usual home air conditioners. All air will be filtered, both in summer and winter. To change over the system from winter to summer operation requires only the turning of a few valves.

The solar-heated house on Memorial Drive showed the importance of a well-designed collector unit. The new house has a collector that is right, resistant to the accumulation of snow and dust, and is self-cleaning.

There are large windows on the east and west ends of the house in both floors. The only visible interior items of the solar house that differ from conventional homes are special tight-fitting draperies to cut down heat loss at night.

The whole program is sponsored by the Goffrey L. Cohn Fund and was planned by the MIT Committee on Space Heating with Solar Energy. Members of this committee are Prof. Lawrence Anderson, Hoyt C. Hollel, Albert Diiit, A. L. Rosenbark, and Joseph Kapl.

"Essentially Impartial" for N. E. Prof. Anderson has stated, "a solar house is still economically impractical for general use in a northern climate such as New England, but it is more feasible in areas where there is ample clear weather and where cost of fossil fuel is abnormally high. We hope through further research to overcome the peculiar problem that makes it unfavorable for other conditions."

\[\text{Christian Science Lecture To Be Given NOVEMBER 20th} \]

The availability of hibler, hupier, more abundant living through splendid understanding of the subject of a lecture on Christian Science to be given at MIT Wednesday, November 20th, by Harry F. MacRae of Dallas, Texas.

Mr. MacRae, a member of the Christian Science Board of Lectureship, will speak in the Little Theatre of Kings Auditorium at 5:15 p.m., under the auspices of the Christian Science Organization at MIT. His subject will be "Christian Science: The Way to Dominion and Freedom Through Prayer." All members of the MIT community and their friends are invited to attend.

\[\text{TEXAS INSTRUMENTS INCORPORATED} \]

\[\text{4000 LEMMON AVENUE DALLAS, TEXAS} \]
Tribute To Teamwork: 7-1-1

Best Season In Years For Booters

by Dick Solomon '59

As the final period run announced the 0-2 victory over Dartmouth last Saturday, MIT closed out its most successful soccer season in many years. The seniors, one of whom broke the one loss record is a tribute to the teamwork of the Powersville team.

The best season of the year was to be seen in the battle with Dartmouth, the powerful front line remains: Sophomore goalkeeper, Rudy Seifter; Captain Rod Brandt, Eddie Kiser, and Herb Johnson. Although many free-kick field men are leaving, a young and promising team was formed.

The end of the Dartmouth game also heralded the last play of many seniors on the team; next year's squad will be looking for a new backfield. Leaving the team were: goalie Rudy Sugi, who has directed the Tech backfield for the last three years and is one of New England's best goalkeepers; Captain Rod Braxton, Eddie Changkasiri, Huber Warner, Bart Keen and front line remain: Sophomore 

Ruggers Win

At Troy, New York, the MIT Rugby club took their first victory of the fall season over Cornell, 12-5.

The Tech Ruggers scored four times, twice in each half, to pull away from MIT then began to dominate the game with a characteristically slow first period rally, with the best soccer being exhibited in the latter periods. Scoring, Ron DeWit, and Herb Johnson. Although many free-kick field men are leaving, a young and promising team was formed.

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What's doing...

at Pratt & Whitney Aircraft in the field of Combustion

Historically, the process of combustion has excited man's insatiable hunger for knowledge. Since his most primitive attempts to harness this phenomenon, he has been tremendously fascinated with its potentialities... perhaps never more so than today with respect to the use of combustion principles in the modern aircraft engine.

Theories of many sciences are being applied to the design and development of high heat release rate devices at Pratt & Whitney Aircraft. In the realm of aerodynamics alone, one of many airflow problems that exist in combustion work is a thorny one for advanced powerplants. In spite of the apparent simplicity of the combustion process it actually takes place in the aftermath of an advanced jet engine in a flow that is known as the fuel-air mixture. The combustion process in a jet engine on test is viewed simultaneously recorded by a high-speed motion picture camera.

The combustion process as it actually takes place in the aftermath of an advanced jet engine on test is viewed simultaneously recorded by a high-speed motion picture camera. What the engineer observes is simultaneously recorded by a high-speed motion picture camera.

World's foremost designer and builder of aircraft engines

PRATT & WHITNEY AIRCRAFT
Division of United Aircraft Corporation
EAST HARTFORD 8, CONNECTICUT

Pratt & Whitney Aircraft operates a completely self-contained engineering facility in East Hartford, Connecticut, and is now building a similar facility in Palm Beach County, Florida. For further information about engineering careers at Pratt & Whitney Aircraft, write to Mr. F. W. Powers, Engineering Department.

The combustion process at the Technology Store

Shoes

BROWN MELLO CALF
Popcorn Lined (swearlew or leather)
STA-SMOOTH INNERSOLE
[will not crack, cut or cause foot blisters]
STA-FLEX CONSTRUCTION
(requires no breaking in)

BOstonian

MANSFIELD

$13.95-$23.50

$10.95-$17.95

The container groove in a product is actually taken place in the aftermath of an advanced jet engine on test is viewed simultaneously recorded by a high-speed motion picture camera. What the engineer observes is simultaneously recorded by a high-speed motion picture camera.
Late Fiji Drive Takes Betas 16-7

Phi Gamma Delta's Pete Hohorst '57 intercepted a ten-yard pass from Robin Cross '59 to Jim Russell '59. This same combination which played outstandingly all game long added the extra point. In the second period Cross intercepted a pass on the Beta two, but on the next play the whole Fiji line converged on Cross for the safety. The Betas threatened once more before the half, but the Fiji held on the ten-yard line as time ran out.

Fiji Offense Moves
As the third period came to a close the Fiji offense finally began to click with runs by Bob Williamson '59 and Al Bead '59 interspersed with passes from Beaud to all star end Chuck Ingraham '58. Early in the 4th period Beaud '59 hit Hal Smith '57 all alone at the 30 yard line as time ran out.

DU's 41 Tallies High As Hundreds Tangle

Last Friday and Saturday, Rockwell Cage was converted into a massive wrestling gymnasium as almost one hundred intermural matches were held in determining the winners and runners up in eight weight classes. First, second, third, and fourth places were determined with first place winners receiving a medal and recognition of their victories. The individual winners and their affiliations were:

- 167 lb. class- Flip Lombard, SAE '61
- 157 lb. class- B. Schneidman, Burton '58
- 147 lb. class- B. Schneidman, Burton '58
- 137 lb. class- D. Latham, DU '61
- 130 lb. class- B. Barrett, DKE '60
- 120 lb. class- Featherstone, SAE '58
- 110 lb. class- Reed Freeman, SAE '58
- 100 lb. class- D. Latham, DU '61

The three leading point winners and the winning teams were as follows. DU won with 41 points-first, SAE with 36 points-second, and Fiji Club with 30 points-third. Burton House finished fourth with 20 points. By far the outstanding showing of one team was that of Fiji Club who with only two wrestlers entered (who took first place) managed to finish third overall.

This first intramural tournament was a success in intramurals and received much merit for the MIT Wrestling Team.

Phi Mu Delta, Baker Cop Grid Encounters

Surprises dominated the B Division grid contests Saturday, as Baker House rolled over TEP 26-0, and Phi Mu Delta crushed 1:15 Club 26-6, leaving all four teams tied for first with records of one win and one loss. The Baker defense, spearheaded by Frank Tapparro '60, Dick Sherman '60, and Len Terner '61 gained almost as much ground as the offense as they pushed the losers back. The victors' scoring came on a tie of passes by Mar Alper '59 to Ron Rosenberg '59, Jerry Glass '59, and Kerstelin '59, and a forty-yard run by Bob Kaplan '59.

A pair of touchdown passes and two long, scoring end runs provided Phi Mu Delta their victory margin.

For real enjoyment—REAL beer!
ANYONE FOR SKIING

WARRIORS LUGGAGE'S LATEST TWO-FOOT COLOR FILM

presented by

PROFESSORS SKI CLUB
SAT. EVE., NOVEMBER 23rd
CAMBRIDGE HIGH AND LATIN SCHOOL AUDITORIUM
Broadway at Townsend St.
8:15 P.M.
Donations $1.50

TCA OFFICE OPEN TILL 9

Beginning this Friday the TCA office will be open until 9 p.m., although the mail service will close at 5 as usual. This practice will be con

1 ST POLIO SHOTS NOW

The Medical Department wishes to call attention to the fact that the full course of three injections of polio vaccine requires a period of eight months to complete, and since the danger of polio is greatest in the early months of the year, it is urgent that those with no protection start their shots now.

The shots are given in the Infirmary between 9 a.m. and 5 p.m. daily. There is no waiting, a charge of one dollar is made for each shot.

WTR'S ANNOUNCES

. . . that it will rebroadcast the remaining lectures by Niels Bohr at 11 p.m. on the night they are given.

. . . that play-by-plays of all home and some away basketball games will be broadcast at 8:15 p.m., starting December 4.

. . . that a new program, Seabury Presents, has been inaugurated, and will be heard Tuesday at 8:30 p.m. and Thursday, 7H 8:30 P.M.

. . . that a new program, Seabury Presents, has been inaugurated.

4TH FUND RAISER

The 4th Fund Raiser, sponsored by the Seabury Club, will be held in Baker House Dining Room on Saturday, November 23rd, 1957 from 7:30-1. Free drinks and some away basketball games will be available at Building 4, members $4, non-members $7. Tickets now on sale at Building 10.

THREE THINGS TO REMEMBER

1. There will be a rally for Junior Varsity and Freshman basketball. $2 per game. No experience needed. Call Ray Landis, Cl 7-8691.

2. Funds are needed. Please come to the All Institute Swim.


4. TO RENT—4 room furnished house. Walnut, near Waterworks Inn, at 99 Whittier Road. Attached garage; completely furnished and ready to move into. Available Dec. 1 for 4-6 months. Phone TW 4-0274.


6. WANTED—Riders for Christmas Holiday. Leaving December 20 for Greenland and points north. Let us know if interested. Contact C. C. at 10 AM.


8. 814-0694.

9. Mrs. Jane Reid, UN 4-6900 Ext. 4175.


11. The Medical Department wishes to call attention to the danger of polio. The full course of three injections of polio vaccine requires a period of eight months to complete, and since the danger of polio is greatest in the early months of the year, it is urgent that those with no protection start their shots now.
