

## LOWELL INSTITUTE COMMENCES SERIES OF FREE LECTURES

Prof. Russell of Princeton  
University Will Speak  
On Astronomy  
TO BEGIN NEXT MONTH

Under the direction of Professor Henry N. Russell, Ph.D., D.Sc., the Lowell Institute will present a series of free public lectures embracing the general subject of "The Physics of the Stars" beginning on Monday, February 2. Professor Russell is well known as Professor of Astronomy at Princeton University and is a Research Associate of the Mount Wilson Observatory.

All of the lectures will be given in Huntington Hall at 491 Boylston Street, at eight o'clock in the evening. The doors will be opened half an hour in advance of each lecture but will close promptly at the beginning of each and will remain closed throughout each lecture. Tickets may be secured free of charge with an application through the mail to the Curator of the Lowell Institute at Huntington Hall, inclosing one stamped addressed envelope for each ticket desired.

### PROGRAM

1. The Study of Starlight. Brightness, Colors, Spectra. February 2 (Monday)
2. The Temperatures, Dimensions, and Masses of the Stars. Relation Between Mass and Luminosity. February 4 (Wednesday)
3. Variable and Temporary Stars. Relation Between Period and Luminosity. February 6 (Friday)
4. The Interpretation of Stella Spectra. Ionization and Its Consequences. Stella Atmospheres. February 9 (Monday)
5. The Same, Continued. February 11 (Wednesday)
6. The Interior of a Star. Problems of Constitution and Evolution. February 13 (Friday)

## NEW POSTER CONTEST WILL START MONDAY

All students are eligible to compete in the Open House poster contest which opens on Monday, January 26. At that time the information to be contained on the posters will be supplied at Rogers and also at Room 1-331, the Combined Professional Society's room. The contest will close at 9 o'clock on February 16, and all posters must be turned in at Rogers before that time.

## FRESHMAN OFFICERS CHOOSE COMMITTEES

Bonfire Tentatively Planned  
For Early This Spring

Following is a list of the members of the Freshman Dance Committee chosen last Monday: Henry D. Humphreys, chairman; Peter Barry, Sayward H. Farnum, John B. Dunning, David C. Faddis, Charles G. Glueck, Louis P. Holladay III, S. Norton Miner, and George M. Kingsland.

At the same time a smoker committee was picked, made up of the following members: Henry D. Humphreys, chairman; Albert M. Heintz, Samuel S. Goldstein, Samuel P. Brown, Hoyt P. Steele, Constantine S. Dadakis, John T. Burwell, John R. Newell, Reginald G. Murdoch, and Charles T. Stewart.

Although the freshman bonfires have not been very successful so far, the class of 1931 being the first and only one to have a successful fire, the class officers have decided to have one in the Spring, and advise all freshmen to keep their ties for future use.

## FACULTY CLUB MAKES PLANS FOR MEETING

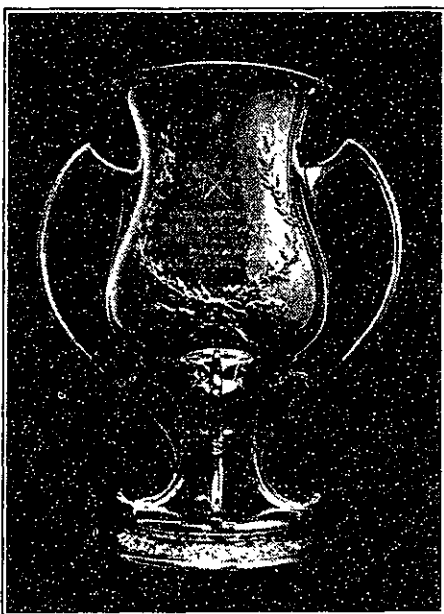
Following the favorable response to the first informal Faculty social gathering which was held in the Emma Rogers Room directly after the last meeting of the instructing staff has encouraged the Executive Committee to arrange the same program for Wednesday, January 21.

It is expected that the Faculty Meeting will be over shortly after 4:00 o'clock; members of the club are then invited to gather in the Emma Rogers Room where refreshments will be served. It is hoped that members who do not attend the Faculty Meeting will find it convenient to join the others in the Emma Rogers Room.

## Sophomores Object To Repetition In Lecture

Instructors in the Department of Military Science seem to be laboring under the delusion that the statements they make on lecture are important enough to be repeated again for a maximum amount of benefit. At least this was the first impression gained by a section of Sophomores, as they listened to the opening sentences of a lengthy discussion familiar to them, Tuesday morning. Responding with a loud chorus of groans the victims informed their leader that he was speaking out of turn. Realizing his mistake the instructor admitted that he should have made the lecture during the afternoon and that he was responsible for fact that the scheduled instructor was not present.

## Largest of Three Cups For Winners at Squash



Emerson Trophy

## EMERSON DONATES SQUASH TROPHIES

Cups Are Awards to Winners  
In Tournament To Be  
Played Soon

As an additional inducement for squash players Mr. Charles J. Emerson '04 has donated three silver trophies, one of which is shown above. This is a large cup about a foot and a half in height, with quite a bit of ornamentation. It is the permanent trophy, on which the names of the winners of the tournaments in the next few years will be inscribed.

To decide the name to be inscribed and also the possessor of the smaller cups a tournament will be run at the beginning of the second semester. The opening date will be about the 11th of February and the tournament will continue for about a month. Signups can be made on a card on the bulletin board across from the cashier's office.

## Yale University Discontinues Its Mid-Term Exams

Substitutes Three Reading  
Periods Throughout The  
Academic Year

Dean Clarence W. Mendell of Yale has announced that Yale has adopted several vital changes in the college curriculum which will go into effect next year. Chief among the changes are new requirements for degrees, abolition of the midyear examinations, inauguration of three reading periods throughout the academic year and general changes in the method of instruction.

These changes have for their purpose the emphasis of method and mastery of subject rather than the acquisition of a certain number of credits. They have been passed by the Yale faculty and approved by the Yale Corporation. The changes will place the responsibility and initiative for a comprehensive and useful education more directly on the shoulders of the students and at the same time tend to automatically weed from the college those who are not in college primarily for an education.

The new arrangement will effect changes in the general scholastic requirements in which a student will be admitted to Yale in full standing only when he has successfully completed the entire work of his freshman year. In his statement Dean Mendell said:

"Each student at Yale shall select not more than five courses each year and juniors and seniors whose work is of quality grade may, with the written approval of the class officer or dean, elect less than five courses."

"A student will be admitted to the junior class in full standing only when he has completed successfully the entire work of his sophomore year and the same with the senior class entrants."

"The student will be recommended for the degree only when he has completed successfully the work of all four years and has received a grade of 27

(Continued on Page Three)

## VARSITY CAGERS LOSE TO HARVARD BY 32-25 SCORE

Free Tuition At  
M.I.T. Asked For  
Local Students

Committee on Schools Requests  
Privilege In Place of  
Exempt Taxes

Free tuition has been requested for Cambridge students at Technology, Harvard, and Radcliffe in an order unanimously adopted by the Cambridge school committee Monday night. Such students as would be admitted free would have to have been a resident of Cambridge for four years at least and would have to be able to pass the entrance requirements. This was mentioned by Russell A. Wood of the school committee, who introduced the order. He said "only 30 or 40 students a year could pass the examinations." The reason given for its endorsement is that Cambridge loses \$2,000,000 a year in taxation on them, and that the three institutions own two thirds of the non-taxable property of the city.

## MANY SIGN UP FOR MID-YEAR OUTING

Signups for the exam outing at The Ark, Jaffrey, N. H., are almost completed, the T. C. A. announced yesterday. Twelve men have already turned in their names; there is room for four more. There will be a meeting of all men going on the outing, in the T. C. A. office Friday at five o'clock.

Up to last night, no signups had been made for the Outing Cabin at Camp Massapoag for the holiday following the examinations. It is expected, however, that there will be a demand for the cabin later.

## Saturday Is Last Day For P. T. Substitution

All freshmen substituting track for P.T. are reminded that they must sign up in Mr. McCarthy's office before Saturday, Jan. 24, if they wish to continue to take track in place of P.T. Coach Hedlund hopes that all men who have been with him during the first term will continue with track and also hopes to see many new faces next term. During the first term over 90 men reported for track in place of P.T., this being the greatest number ever in the history of the Institute, but accommodations are available for many more.

## Students Investigating Properties Of Clay in New Ceramics Course

Examples of Old New England  
Pottery on Exhibition  
In Building 2

Although Ceramics was one of the first arts known to man it was not introduced as a subject in the Institute curriculum until two years ago. The first work in ceramics at Technology was started about ten years ago when Professor C. L. Norton and his son, Professor F. H. Norton, undertook researches on various phases of the art. These led to a number of inventions and new developments.

The two men invented a machine for making silica brick, and developed a kaolin firebrick for lining boilers and furnaces. This refractory, the most important of the developments from a commercial point of view, met with immediate approval and is now being produced by two large factories. An excellent sample of this brick and a number of other articles made in the ceramic laboratory, such as tiles, vases, and terra-cotta casts, are on exhibition on the first floor of Building 2. This collection also contains some historic New England pottery which has been loaned to the Institute.

New England was once the leading ceramic producing section in the country, and the center of this industry was in Cambridge. As soon as the coal beds in the middle-west were opened, many of the manufacturers were attracted to that section because of the cheap fuel, and it was not long before New England was displaced. With the exception of a few brick factories, the industry is now practically extinct in

## FRESHMEN BEATEN IN CLOSE CONTEST BY CRIMSON FROSH

Motter and Feustel Star for  
Cardinal and Gray—  
20-16 At Half

## FOUR HUNDRED SEE GAME

When the smoke had cleared from under the basket Monday night, a very enthusiastic gathering of M. I. T. fans, much to their disappointment, found that Harvard had taken two exciting and close basketball games from the Technology Varsity and freshman teams. The stands in the Hangar Gym were filled to capacity with Engineer rooters, who displayed more spirit than has been in evidence at any time since Field Day about the Institute grounds.

### Beavers Lead at Start

Entering the game an overwhelming favorite, the Crimson five soon discovered differently. The Beavers opened the scoring with a foul goal, when Moushegian became overzealous in an attempt to stop a shot by Motter. Holland, the Harvard left forward put his team ahead by sinking one from under the hoop and later a foul attempt, which resulted from Sysko trying to block the field goal. The lead then returned to Engineers on two nice shots from the floor, one by Feustel and the other by Harrison. This was the last time during the game that they were in the lead, Harvard coming back to tie the score and then pile up an eight-point advantage. Though these eight points were never overcome, the total was cut down, the Crimson leading by only two to four markers until the last few minutes.

At the close of the first half the score was 20-16. Towards the end of the final period, Harvard was still leading, but for a short while it looked as though Technology was going to stage a rally. The situation was well handled by the Crimson five, however, as they widened the gap in the score by two field goals, after which the whistle was all that was necessary to complete the game. The final score was 32-25.

### Motter High Point Man

Sysko was the outstanding Technology man on the floor, playing a fine game at guard. He stopped many a threatening Harvard offensive with his fast footwork and thinking. Mot-

(Continued on Page Three)

## Accurate Formula of School Colors Permits Their Exact Duplication

Measurements on Aged Ribbon  
Made By U. S. Bureau  
Of Standards

The exact shades of cardinal and gray to be used in the official colors of the Massachusetts Institute of Technology have been determined scientifically, and the Institute now has a formula by which these colors can be reproduced in the future without variation in shade. This is believed to be the first time that an educational institution has made its official colors the subject of scientific research.

The study was begun in 1926, when the alumni council appointed a committee to decide upon and standardize two colors, one a cardinal red, and the other a silver gray, as the official colors of Technology.

Cardinal and gray were first used to represent the Massachusetts Institute of Technology in 1876. The traditions that have grown up about these early colors during the past half century mean so much to Technology men that the committee determined that its first duty was to decide upon shades that were faithful reproductions of these colors as they were first used.

Pieces of fabrics believed to be from the original colors were sent to the United States Bureau of Standards where the color measurements were made. A spectrophotometer, the most precise instrument for measuring color, was used to study the specimen. A record of the brightness of the colors at each wave-length of

the spectrum was made, and the result recorded in a formula which makes it possible to reproduce the color accurately.

Still other measurements of the colors were made at Technology, and dyeing methods designed to aid in reproducing the colors in various fabrics were worked out as a thesis problem by Ernest M. Fell, a member of the class of 1930.

### Colors Adopted in 1876

It was at a meeting of the class of '79, held early in 1876, that the question of Technology colors first came up, and a committee of which Mr. Alfred T. Waite '79 was chairman was appointed to consider the matter. The class voted to accept the committee's choice and ask the other classes to adopt cardinal and silver gray as the Institute colors. The colors were first used at the time of the prize drill in May, 1876, when the battalion guidons were made of red and gray silk. Later they were used for hat-bands, when the students visited the Centennial Exposition at Philadelphia.

Charles R. Fletcher '76 a member of the class which originated Technology's colors had much to do with their selection. Cardinal red, he said, was chosen to denote American red blood, and the actual shade finally decided upon by the committee was one which seemed to resemble the blood red of the northern New York cardinal flower. Douglas gray was chosen to denote faith, stability, and confidence.

Although it may be fairly ques-

(Continued on Page Three)