Managers' Association are cooperating. The annual general meeting will be held in the University of Leeds on Thursday, March 21, and the anniversary dinner will take place in the Town Hall, Leeds, the same evening. The Railway Clearing House has granted facilities by which those attending the meetings will be able to travel from all parts of Great Britain to Leeds at the reduced rate of an ordinary fare and one third for the double journey.

THE Metropolitan Life Insurance Company has appropriated $10,000 for the study of influenza. The study will be conducted by the company's influenza commission, of which Dr. M. J. Rosenau, professor of preventive medicine and hygiene in the Harvard Medical School, is chairman. The commission was formed originally to help combat the influenza epidemic of 1918 to 1919.

UNIVERSITY AND EDUCATIONAL NOTES

A GIFT of $500,000 has been made to Washington University for an institute for research and study of eye, ear and nose diseases as a memorial to Oscar Johnson, one of the founders of the International Shoe Company. The institute will be under the direction of Dr. Harvey J. Howard, formerly director of the eye department of the Rockefeller Medical School in Peking. Teaching will be directed by Dr. Lee Wallace Dean, formerly dean of the medical school at the University of Iowa.

DR. JACOB GOULD SCHURMAN, American Ambassador to Germany, presented to Heidelberg University on December 18 a gift of more than $500,000 from friends of the university in the United States. Dr. Schurman was made an honorary citizen of Heidelberg, where a half century ago he entered the university as a student.

TRUSTEES of the Rockefeller Foundation have placed $170,000 at the disposal of the University of Utrecht to establish a school of physiology.

THERE has been completed and occupied at Iowa State College a new building for dairy industries, which with its equipment cost $500,000. It was formally dedicated on November 14.

HUGH M. HENTON, formerly assistant professor of metallurgy and mining at the Washington State College, has become associate professor of metallurgy at the Alaska Agricultural College and School of Mines.

DR. WERNER GERLACH, of Hamburg, has been called to a professorship of pathology in the University of Halle.

DR. OSCAR B. MUENCH has accepted the position of head of the department of chemistry and physics of New Mexico Normal University, East Las Vegas, New Mexico.

PROFESSOR POETZL, of Prague, has succeeded Professor Wagner-Jauregg as head of the psychiatric clinic at Vienna.

DISCUSSION AND CORRESPONDENCE

PYREX GLASS AS A RADIUM CONTAINER

RECENTLY Dr. L. F. Curtis described in *Nature* (Vol. 120, p. 406, 1927) his experience at the Bureau of Standards in using pyrex glass to store a solution of radium salt containing 140 milligrams of the element. After a year and a half of use he found a network of fine cracks developed in the glass container above the water-line, which were therefore attributed to the effect of alpha ray bombardment. The flask was otherwise intact and had remained gas tight.

Having just previously prepared in this laboratory a system in pyrex glass for the collection of radon (emanation) from a solution of chloride containing 265 milligrams of radium element, it was decided to attempt to employ pyrex for one year—with all due safeguards in case of its failure.

The experiment, which has been completed without accident, confirms Dr. Curtis's results in every respect. The object of the present note is to give some additional details which may be significant in interpreting the effect

Not only was a longitudinal system of fine closely spaced cracks developed in the upper part of the 250 cc flask in the area extending for an inch below the neck, but larger cracks less frequently spaced extended longitudinally downward exactly to the water-line (the flask was half filled) which were crossed by large transverse cracks extending almost continuously around the flask. Just below the neck (one half inch in diameter) and also near its top where it was constricted to connect with quarter inch tubing leading to the purification system, spiral cracks had formed, passing several times around the tube with regular spacing of about 1 mm.

From inspection of the system, the writer concluded that the cracking was probably due to the gradual relief of preexisting strains in the glass, by a process of expansion under alpha radiation. The expansion may have been caused or assisted by chemical action produced in the glass by alpha rays, such as the decomposition of water. On the other hand, ordinary soda-lime glass which also contains water does not crack, and presumably, therefore, does not contain strains to the same degree. It should be mentioned that there is some evidence of incipient scaling on the

inner glass wall accompanied by interference colors, which has suggested to others that the forces might be those of contraction rather than expansion, and probably produced by, rather than merely relieved by, alpha ray bombardment.

Two factors seem to control the process, intensity of radiation and degree of strain. For example, the walls of the connecting tubing showed no cracks, on account of the smaller volume of radon contained per unit of area, but nevertheless careful examination disclosed a single crack at a point where a joint and again where a bend had been made, both at points of extra stress.

A few of the larger cracks had come all the way through the wall to the surface, although the alpha rays penetrate only about .002 mm.

For future radium collection an ordinary glass flask has been substituted. The graded joint to the rest of the pyrex system is kept covered by mercury, except during actual collection, to avoid prolonged exposure to alpha rays.

Both Rutherford and Mme. Curie long ago found that fused silica is not a suitable container for radium, owing to its cracking. It is, therefore, interesting to find this same quality in glass of high silica content but not in ordinary glass of lower content.

S. C. LIND

SCHOOL OF CHEMISTRY,
UNIVERSITY OF MINNESOTA

A NEW TERM FOR THE 10^{-8} CENTIMETER UNIT

ONE of my favorite indoor sports consists in attending meetings of societies devoted to the physical sciences, and listening to the pronunciation by different speakers of the Swedish word ångström, used to designate the 10^{-8} cm unit. Although the correct sound is something like *awngstrem*, at least 75 per cent. of American scientists, including not a few Nobel prize winners (of all people!), shift the vowels and render it *engstrawm*. In print this word also suffers, being sometimes spelled with a simple *a*, and sometimes even with *e*. Some organizations have indeed adopted *a.u.* as the official abbreviation, thus obscuring its derivation.

One way to deal with this situation would be to obviate entirely the necessity of using the word, and the proposal is therefore made here that units of 10^{-8} cm be given a new designation, namely atom-meter, with the abbreviation *am*.

The following advantages are possessed by the proposed symbol. It is one character shorter than the widely used *a.u.*, yet differs from this so little that substitution of the one for the other could be carried out with a minimum of misunderstanding. It does not commit an error in transliteration, but starts with the same vowel as the word for which it stands. And it fits into the international series of designations for units of length, adding to the series *km, m, dm, cm,* and *mm* one more roman-character abbreviation.

EDGAR T. WHERRY

WASHINGTON, D. C.

THE EXCELSIOR GEYSER, YELLOWSTONE NATIONAL PARK

IN an article describing a new geyser in Yellowstone National Park[1] it is stated that the old Excelsior Geyser has been extinct since 1888.

In the summer of 1890 I was directed by Professor Richard Rathbun, in charge of scientific investigation of the U. S. Fish Commission, to join Professor S. A. Forbes in a survey of the lakes and streams of Yellowstone National Park.

We arrived at Cinnabar on the seventeenth of July and spent our first night in the park in camp at Swan Lake Basin, about four miles from the Mammoth Hot Springs Hotel, a short distance south of "Golden Gate." The following night we camped on Canon Creek, a small tributary of Gibbon River.

At about 8:30 on the morning of the nineteenth we reached what our guide, Elwood Hofer, called Teton Hill, so named, he said, because the Teton Mountains were here visible. The Lower Geyser Basin lay at our feet, and one peak of the Tetons could be seen far to the south. At one point a column of steam was rising which we estimated to be from eight hundred to one thousand feet in height. Hofer identified this steam as coming from Excelsior Geyser, which he said had been inactive since 1888.

Two hours and a half later we arrived at the Excelsior Geyser and learned that there had been eruptions in the night and morning and that the steam which we had seen from Teton Hill had risen from the last eruption. Here, also, Hofer's statement that the geyser had not been active since 1888 was confirmed.

On August 18, Professor Forbes and I were collecting on Fire Hole River from the Upper to the Lower Geyser Basins. The following extracts from notes made at the time may not be without interest in this connection.

At the bridge just below Riverside Geyser, the temperature of the water, eighty feet down stream from the bridge, near shore on the geyser side of the stream, before the eruption was 17° C. During the eruption it rose to 21°. At the center of the stream before eruption it was 15°, during eruption 16°; on the opposite side before eruption 15°, during eruption

[1] *Science Newsletter*, August 11, 1928, p. 76; SCIENCE, August 17, 1928, p. xii, of *Science Supplement*.