On June 25 helium was compressed in a narrow brass tube forming communication between two German silver tubes. The brass tube and part of the two German silver tubes were in a liquid helium bath. At a pressure of 130 atmospheres the tube system appeared to be blocked. When the pressure was diminished by 1 or 2 atmospheres the tube system was open. The temperature of this experiment was somewhat uncertain. By diminishing the pressure of the liquid helium bath the same phenomenon was observed at a temperature of about 3.2° K. at 86 atmos., and at a temperature of about 2.2° K. at 50 atmos. From the regularity of the phenomenon it appears that we were observing the solidification curve of helium. This method of observing solidification has indeed already been used by Kamerlingh Onnes and Van Gulik in preliminary measurements on the curve of solidification of hydrogen.

A repetition of the experiment on July 1 confirmed the early observations. At 4.2° K. helium solidified at 140 atmos. The solidification curve was prolonged to 1.1° K., and the helium solidified then at 26 atmos. The exact numerical data will be given elsewhere. The solidification curve bends so that at the lower temperatures it shows a tendency to become parallel to the axis of the temperatures. So far as can be ascertained from these observations, helium is expected not to have a solid-liquid-gas triple point.

Finally, helium was compressed in a glass tube provided with a magnetic stirrer after the pattern of Kuenen. The observations on the solidification of helium were confirmed. The stirrer was seen to stick when the helium solidified. In one experiment part of the substance was liquid and part solid. One could hammer the solid block with the stirrer that was in the liquid part. A limiting surface between the solid and the liquid could not, however, be seen. Solid helium forms a homogeneous transparent mass, the refractive index of which probably differs extremely little from that of the liquid.

RADIATION FROM THE CARBON ARC

AN investigation is being made at the Bureau of Standards of the radiation from the carbon arc, a matter of great importance in the treatment of diseases by exposure to light, especially sunlight. However, sunlight can not always be obtained, hence the demand for an artificial source approaching sunlight in its characteristics.

The investigation is being made in duplicate: (1) By mapping the ultra-violet spectrum by means of a quartz spectroradiometer, and (2) by measuring the spectral components of the total radiation emitted by the arc, by using a thermopile and screens which completely absorb certain spectral regions and freely transmit others.

Thus far studies have been made of the standard carbons on the market, *viz.*, "white flame," "red flame," "yellow flame," "blue flame" and "neutral core" carbon electrodes; also several special carbons with cores of nickel, tungsten, etc. The effect of varying the current has been studied, using 15, 30, 60, 90 and 122 amperes.

The high-intensity arc (120 amperes) has been found to be closest to the sun in spectral composition. It emits considerable radiation of wave lengths longer than 4μ, which are not in the solar beam, but this can be eliminated easily by using a window of fused quartz, which absorbs the long infra-red rays.

THE COMMITTEE ON INTELLECTUAL CO-OPERATION OF THE LEAGUE OF NATIONS

THE following despatch from Geneva, dated July 29, appeared in a recent issue of *The Boston Transcript:*

The intellectual and scientific leaders of the world are attending this week the meeting of the committee on intellectual cooperation of the League of Nations in Geneva. The committee has taken steps toward coordinating the intellectual work of the world under the chairmanship of Professor H. A. Lorentz, one of the world's most noted physicists and secretary-general of the Netherlands scientific society. Others present were Dr. Albert Einstein, representing Germany; Dr. Vernon Kellogg, permanent secretary of the National Research Council, representing the United States; G. A. Murray, professor of Greek at Oxford, representing Great Britain, and Mlle. K. Bonnevie, zoologist, representing Norway.

Questions affecting universities, especially concerning progress in arts, letters and sciences and also policies in bibliography, were discussed. Exchange of students between countries was urged as the most effective means of advancing the intellectual life of the nations by the American delegate, Dr. Vernon Kellogg. "In my opinion no more important step toward fundamental development in internationalism has been made in recent times than the multiplication of international scholarships for the élite of the younger generation of scholars."

To facilitate the development of international scholarship, the committee considered the possibility of easier passport regulations, less expensive visas and reductions in transportation rates for international students, and encouraged the formation of international student associations. The committee also urged the establishment of university information offices by all countries and the cultivation of courses in internationalism at all universities.

An important report on scholarships was presented on behalf of Mme. Curie, who is absent in Brazil. In her recommendation she points out that since science has become so highly specialized, students must go to the particular places where they can obtain the best training for the subject in which they are interested, regardless of whether it is at home or abroad. She advocates two kinds of scholarships; one for the student who is just beginning his research, the other for the advanced worker