

lege to determine those that are equipped to give proper service.

It is a stupendous task; but with the support of the public—employers and employees—the economic saving will amount to millions of dollars, many lives will be spared, and thousands of potential cripples will be restored to perfect health.

The American College of Surgeons has taken the leadership in a program of personal health so that the people may have the advantage of each and every discovery in the prevention of disease and in the cure of illness.

The approved hospitals, now avail-

able in every community, are urged to furnish the facilities of a diagnostic clinic to all scientific doctors in their district. The family doctor may take his patients to these Health Inventories for periodic health examinations, and there have the advantage in making his diagnosis of all up-to-date scientific apparatus and trained aids that are a part of every hospital approved by the American College of Surgeons. Thus a comprehensive audit of every patient's condition will be insured and the interests of the independent practitioner—the family doctor—will be protected.

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These are responsible for the east-west and the longitude effect found in earth's equatorial belt.

The part of the ionization that is sensitive to the earth's magnetic field increases rapidly with increasing latitude from Panama to Spokane because incoming secondaries of energies decreasing from eight to two billion get through the field's blocking effect in rapidly increasing numbers with increasing latitude, adding greatly in northern latitudes to the underlying ionization of the upper air produced by incoming photons.

Dr. Arthur H. Compton of the University of Chicago reported that there seem to be two kinds of cosmic ray bursts, an ordinary sort and a rare type about four times larger than the usual kind.

"This is very difficult to explain by any known nuclear process and the ordinary explanation would involve an element of atomic weight 1000," Dr. Compton explained.

Dr. Compton was led to this conclusion by cosmic ray measurements made this past summer in the American Rocky Mountains with Dr. G. S. Brown, Dr. H. A. Rahmel, and Prof. R. D. Bennett of Massachusetts Institute of Technology.

*Science News Letter, October 13, 1934*

### ASTRONOMY

# Complete Huge Disc Intended For 200-Inch Telescope

THE world's largest block of glass—originally intended for the proposed 200-inch reflecting telescope of California Institute of Technology—has now been completed. Officials of the Corning Glass Works announced that the 20-ton piece of glass will be removed from the annealing ovens to make way for another twin glass disc.

Over half as wide as the average city lot and more than two feet thick, the great glass block, shaped like a slice of pineapple as it comes from the can, has served as a valuable "trial horse" for future work. Having learned by experience the problems incidental to the pouring and casting of such a large piece of glass, engineers of the glass works are now spurring work on a second disc the same size.

### Would Require Grinding

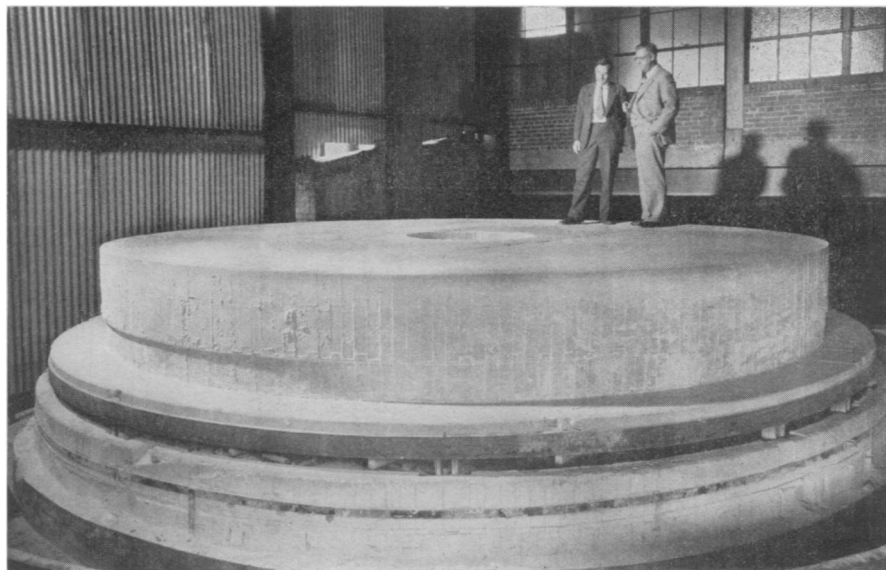
The present block of glass, it is claimed, would make a satisfactory telescope mirror but a great amount of grinding would be necessary because of the unfortunate accident which occurred at the pouring last March. At that time ceramic material used to produce a honeycomb back on the disc floated to the surface and had to be removed. The present block, therefore, is solid glass throughout. It is simpler, declare the Corning scientists, to pour and cast a second disc.

It would have been extreme good fortune indeed if the first disc cast had been chosen for the 200-inch tele-

scope mirror. Astronomers recall that when the French optical firm was casting the disc for the great 100-inch mirror of the Mt. Wilson instrument, three castings were made. After tests the best one of these was chosen. It happened to be the first cast.

The pouring of the second 200-inch disc—17 feet across—should occur before the end of the year, it was announced.

*Science News Letter, October 13, 1934*



### A GIANT IN GLASS

Twenty tons is the weight of the great block of glass originally intended for the new 200-inch telescope of the California Institute of Technology. Seventeen feet across and twenty-seven inches thick, the comparative size of the disc can be judged by the men standing on it. They are Dr. J. C. Hostetter, research director of the Corning Glass Works and Dr. George V. McCauley, physicist in charge of making the mirror.