

Light's Speed Decreasing?

Is the speed of light decreasing? Is this one supposedly stable cosmic yardstick in a varying, relativistic universe itself undergoing shrinkage?

M. E. J. Gheury de Bray writing in *L'Astronomie*, the official journal of the Astronomical Society of France, ventures the daring speculation that the velocity of light is decreasing at such a rate that each year it darts through space about four kilometers a second slower than it did a twelve-month earlier. He cites in support of his claim the results of determinations of the velocity of light during a period of over three-quarters of a century, of which only one, made in 1855 with apparatus which may have been faulty, is really notably out of step.

The velocity of light is usually stated as 186,000 miles, or 300,000 kilometers, per second, which is fast enough to take it seven times around the earth while the clock ticks once. But for exact work in astronomy, physics and other sciences, determinations to fill out the three blank ciphers usually ignored in ordinary statement are desired, and these have been made a number of times. The most recent research was that of Dr. A. A. Michelson, of the University of Chicago, in 1926, which set the figure at 299,796 kilometers a second. This, according to M. de Bray, is the lowest velocity ever observed, but the new determination, on which Dr. Michelson is working now, should turn out even lower.

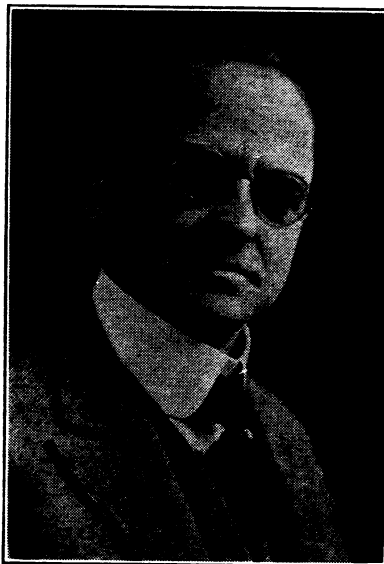
The series of determinations, in order to their dates, are given by M. de Bray as follows, the figures indicating velocity in kilometers per second:

1849.....	313,300
1855.....	298,000
1855.....	305,650
1871.....	300,400
1885.....	299,940
1902.....	299,895
1906.....	299,880
1924.....	299,802
1926.....	299,796

The differences between these determinations are insignificant from the practical point of view, but if the present claims receive support from subsequent determinations, the accepted ideas in theoretical physics, especially those on which relativity is based, are in for a revolutionary upsetting.

Science News-Letter, October 1, 1927

More than 1,300,000 head of poultry were lost in the Mississippi River flood district in the three months of the heaviest inundation.



WILLIS RODNEY WHITNEY

Father of G. E. Research

If Aladdin were reincarnated today he would not ask for a magic lamp but a chance to work in the General Electric Company Research Laboratories under the direction of Dr. Whitney, the director since 1904. For out of this great institution for the investigation of the nature of things have come things and events that the magicians of the east never could have dreamed.

In that great building at Schenectady work Coolidge, Langmuir, and scores of other physicists, chemists and engineers, their endeavors coordinated by the genial, perceiving and inspiring leadership of Dr. Whitney. Cathode ray tubes, nitrogen filled lamps, ductile tungsten, X-ray tubes, new sorts of boilers, radio apparatus and a thousand and one wonders related to the application of electricity to modern life have had their genesis in the organization that Dr. Whitney has built.

The Massachusetts Institute of Technology claims Dr. Whitney as both an alumnus and a non-resident professor of chemical research and it was from the faculty of that institution that he was taken to become director of the General Electric Company research activities. He was given the Willard Gibbs medal in 1916 but his greatest decorations are the products of G. E. research.

Science News-Letter, October 1, 1927

Government home economics experts have designed summer garments for children which will enable them to get the benefit of the sun's rays while playing outdoors.

"Forcible Feeding" of Wheat

Forcible feeding methods applied to plants, instead of to recalcitrant prisoners, promise to improve the quality of wheat, and incidentally to improve the price the farmer gets from the miller.

An exhibit of the results of applying nitrate fertilizer to wheat fields, not at the conventional time just before sowing but much later in the season when the grains are well into their formative period, is being shown at the Chemical Exposition in New York.

The method was worked out by Dr. Jehiel Davidson of the Bureau of Chemistry and Soils of the U. S. Department of Agriculture. He applied 100 pounds of sodium nitrate per acre to wheat land when the crop was in the early stages of ripening. When the grain was harvested it was found that the protein content had been increased by 27 per cent or more over that in grain from similar but untreated fields.

Since a large proportion of this protein increase is in the form of gluten, the stuff that makes flour sticky and suitable for bread-making, millers are often willing to pay a premium amounting to about 30 cents on the bushel for this grade of wheat. At twenty bushels to the acre, this premium amounts to \$6 per acre. The cost of the fertilizer averages \$3 per acre, and the net profit to the farmer for adopting this system of later fertilizer application therefore amounts to about \$3 per acre.

Ordinary wheat naturally high in protein is generally shrunken, which detracts from its value, while the wheat obtained by the method described above is just as plump as normal wheat. Baking tests carried out by Dr. Davidson together with J. H. Shollenberger of the Bureau of Agricultural Economics, have shown that the high protein wheat obtained in the new way yields bread of superior qualities. It is thought not unlikely that the housewife may be willing to pay a premium on flour yielding a better bread.

Science News-Letter, October 1, 1927

Kilimanjaro, the highest mountain in Africa, has been climbed for the first time by a woman.

Tarahumara Indians of Mexico pace the deer until it falls exhausted, and then kill it.