

ASTRONOMY

Possible New Northern Light Like Celestial Searchlight

Observation of Mysterious Bluish White Beam Moving From East to West Has Been Reported Three Times

THREE observations of a mysterious beam sweeping across the heavens from east to west, like a celestial searchlight, and probably some form of aurora, or northern lights, have come to the attention of the Harvard College Observatory at Cambridge, Mass. J. L. Dunham reported seeing the phenomenon during August, having observed it from a camp near Greensboro, in northern Vermont.

According to Mr. Dunham, it stretched from the eastern horizon to the western, passing close to the zenith, the point directly overhead. It was about a degree wide, he said, and in about 15 minutes moved a little to the south. He observed it from 9.55 to 10.12, when clouds interfered, and by 10.45, when it cleared, the band of light had disappeared. It was sharply defined, he said, and bright enough to obscure all but the brightest stars behind it. It was not colored, like a rainbow, but appeared bluish white, like the ordinary aurora.

Confirmation of Mr. Dunham's observation is contained in a report to *Science* by Dr. Charles F. Brooks, professor of meteorology at Clark University. Dr. Brooks at the time was near Littleton, N. H., about 27 miles to the east and 15 miles to the south of Mr. Dunham. He saw it at 9.50 the same evening until 10.15. When he first saw it, it extended from east to west, directly overhead, but he states that it slowly moved south, at a speed of about 10 degrees in 10 minutes.

"During the last ten minutes," he said, "the beam was distinctly south of the zenith and during the last five faded rapidly and broadened till it was scarcely noticeable." At this time he found it to be about five degrees wide.

Dr. Brooks also said that he had noticed a beam of the same sort several years ago from Silver Lake, N. H. Another similar beam was seen from Cambridge on the night of August 6, at 1.50 A. M., by L. E. Cunningham and E. M. Lindsay. They also reported that the beam was similar to a searchlight, passed directly overhead from east to west and

had sharply defined edges. They estimated its width at about three degrees.

Whatever the beam was, it was probably very high, for both Dr. Brooks and Mr. Dunham saw it practically overhead, even though one was about fifteen miles farther north than the other. Dr. Brooks suggests that it may have been an auroral arch of the ordinary kind, which lost its arch-like appearance when directly overhead and one looked up inside it. Both Dr. Brooks and Mr. Dunham reported seeing other displays of northern lights the same night. Mr. Cunningham also noticed a number of meteors the same night that he saw the effect, but these were probably merely adventitious.

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GEOLOGY

Mammoth Beryl Crystal Added to Famous Collection

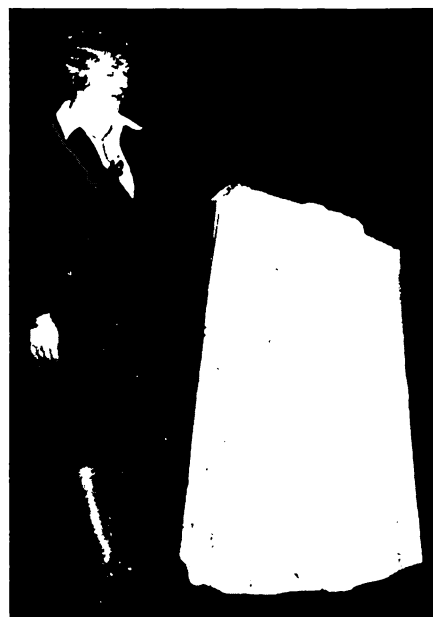
A MAMMOTH crystal of beryl, weighing approximately 1,000 pounds, has been presented to the Field

MINING

U. S. Radium May Compete With Foreign Product

IT WOULD be possible for the U. S. Bureau of Mines to manufacture one gram of radium from vanadium-uranium-radium ores in Colorado and Utah, at a cost comparable to the price for which radium can be purchased from the Belgian Congo.

Dr. G. F. Loughlin of the Geological Survey has made a survey of the mines in these states and has reported to the House Committee on Mines and Mining. This committee expects to have a hearing on a bill introduced by Representative Clyde Kelly of Pennsylvania,



A HUGE EMERALD
Might have been formed had this great crystal of beryl received slightly different treatment during age-long geological processes.

Museum of Natural History, Chicago, by William J. Chalmers, a trustee of the institution. It is three feet two inches long and has a diameter of two feet at the base, the widest part. It was discovered in a quarry at Albany, Me.

The crystal will be the largest specimen in the famous Chalmers crystal collection of the museum, and is a striking illustration of the size to which crystals may grow.

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which directs the Bureau of Mines to produce one gram of radium from domestic sources for use in government hospitals.

Representative Kelly is in favor of increasing this to three or four grams.

In the mines in question, uranium used to be the product sought, but the ores are worked chiefly today for vanadium. Uranium and radium could be extracted from the vanadium ores as by-products, so that the chief cost of mining and exploration could be borne by the vanadium production. Dr.



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Loughlin suggests the addition of uranium units to existing vanadium plants or the building of new mills for the extraction of both vanadium and uranium. Of late years uranium has been mined only by gouging out small quantities to sell to manufacturers of radium belts and radio-active waters.

Although warning that his estimate is only a guess, Dr. Loughlin says he

believes that radium could be extracted from these ores at a cost of \$50 a milligram.

It is expected that the House Committee will probably report favorably the Kelly bill. Representative Kelly believes that the Belgian monopoly on radium should be broken. The price of radium from the Belgian Congo is now about \$60,000 per gram.

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NUTRITION

More Food Value in Sweet Than in Irish Potato

SWEET potatoes are of higher food value than white potatoes, contrary to common belief.

The protein of the sweet potato, ipomoein, is richer in the nutritionally-essential amino-acids that compose proteins than that obtained from the white variety. This has been shown in Washington by Dr. D. Breese Jones and his collaborators in the Bureau of Chemistry and Soils of the U. S. Department of Agriculture.

Proteins, those complex compounds of nitrogen, are necessary constituents of any diet. Ordinarily we obtain our greatest amounts of these from meat, eggs or milk. Potatoes and sweet potatoes are more important as sources of starch or fuel-energy-giving material, as are also the cereal foods.

Potatoes of both kinds, however, contain proteins that are superior in nutritional quality to those of corn and white bread. They contain a greater proportion of the essential building materials for human nutrition.

The sweet potato has a further advantage, Dr. Jones finds. He has isolated and studied protein from seven or eight varieties. Not all of the nitrogen in white potato is due to protein, but to other substances of less food value. These are not found in the sweet potato.

The sweet potato is also very satisfactory in regard to its content of the essential vitamins. The common potato contains less vitamin A. Thus the sweet potato has much to recommend it as a balanced food.

The potato has been claimed by Dr. M. Hindhede of Denmark as the perfect food. The sweet potato is largely unknown in Europe though it was probably introduced there a hundred years before the common "spud."

It is even mentioned in Shakespeare. It looks as if the Danish enthusiast might have to transfer his attention now to the all-American product.

Sweet potato flour can be added to wheat flour in making bread, with satisfactory results. A process has also been worked out by the Bureau of Chemistry and Soils for making syrup from sweet potatoes.

Sweet potatoes form one of the chief vegetable foods in the southern states. The Department of Agriculture suggests that a larger percentage of the crop than at present might be fed to farm animals as it constitutes a cheaper and more productive source of carbohydrate, or fuel-energy material than corn as a supplement to such protein concentrate feeds as cottonseed, peanut and soybean meals.

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BIOLOGY

Embalmed Gorillas Secured for New York

SEVERAL embalmed bodies of full-grown gorillas, including one specimen of the extremely rare mountain gorilla of the Kivu region, are now available for anatomical study by scientists of Columbia University and the American Museum of Natural History. Announcement of this acquisition, rarest prize known to anatomical science, was made in Cleveland by Dr. William K. Gregory, speaking before the American Association of Physical Anthropologists.

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Fossil leaves with autumn coloring have been found in Oregon, the coloring being due to iron oxide.