

American Chemical Society, Prof. Wilder D. Bancroft and John E. Rutzler, Jr. of Cornell point out that the anthocyanins vary in color from red or purple through blue and green to yellow. The specific shade in any particular plant appears to depend on the acidity of the sap in the plant.

The development of anthocyanins appears to be due to plant enzymes. If you could inactivate the enzymes without killing the leaves it would be possible to prevent the development of red in leaves. Or, in contrast, if the Norway maple could get the proper enzyme its leaves would turn red in the fall.

Expose a red flower to ammonia vapor, state the scientists, and the blue in

the flower is apt not to be permanent in the absence of a stabilizer. If it changes fairly rapidly to yellow one gets no blue but only green. If it changes very rapidly to yellow one gets neither blue nor green. The leaves of a poinsettia are a case of this.

It seems probable, the scientists add, that all blue flowers contain a color-stabilizer. Sodium chloride, sodium nitrate and alum solutions are reported to stabilize the blue in particular cases.

No systematic study of other stabilizers for blue in flowers appears to have been made, but efforts seem worthwhile in this direction for out of it would come, conclude the scientists, "the production of blue roses."

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ducing secondary barytrons (heavy electrons) must be much more penetrating than photons. This high penetrating power suggests their identification with the neutretos (neutral particles having mass and other properties similar to the barytron) postulated by Heitler."

## Ray Variations Explained

**W**ORLD-WIDE variations of cosmic ray intensity can be explained by the presence of a great ring of electricity whirling around the earth, far out in space.

This ring of electricity is the same mechanism which can account for the drop of cosmic ray intensity that occurs during severe magnetic storms, said Dr. S. E. Forbush, of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington, to the Society.

Electrical rings, Dr. Forbush added, were first postulated by the Norwegian scientist Dr. Carl Stormer to explain certain characteristics of the aurora.

The magnetic effect of the current in this ring of electricity, plus the magnetic effect of the earth's permanent magnetic field, would be expected to have a result equivalent to an increase in the earth's magnetic field. Such an increase in turn, would account for a decrease in cosmic ray intensity.

World-wide cosmic ray variation, Dr.

### PHYSICS

# High Altitude Research Finds Evidence For Neutretto

## This Newest Particle Has Mass and Other Properties Of Mesotron But Is Without Any Electrical Charge

**H**IGH altitude research at 14,200 feet has led to the identification of what physicists believe will be still another atomic particle known as the neutretto. The newest particle is without electrical charge and has the mass and other properties of the heavy electron.

The latter has been known by a variety of names, including barytron. Recently Nobelist Dr. Carl D. Anderson and Dr. Seth D. Neddermeyer of California Institute of Technology suggested still another name—the mesotron—for the heavy electron, in order to bring some order out of the chaos of nomenclature for this intermediate mass particle. (See *SNL*, Nov. 26)

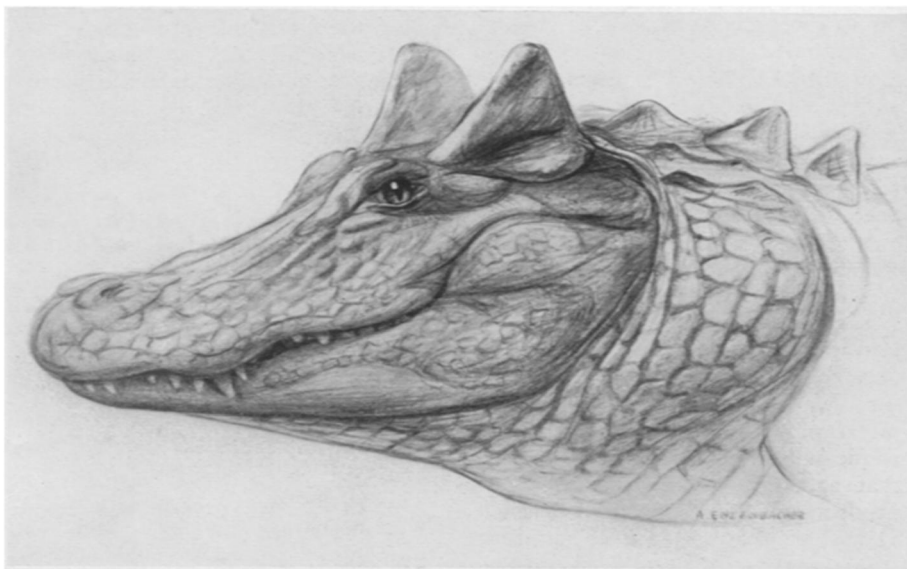
Mention of the discovery was made in the report of Francis R. Shonka of Chicago and De Paul Universities to the meeting of the American Physical Society. Mr. Shonka's report was introduced to the Society by Prof. Arthur H. Compton, University of Chicago Nobelist.

The new research, leading to the discovery of the particle, consisted of measuring cosmic ray intensity at high altitudes when various thicknesses of lead were placed in several selected positions about the four Geiger-Muller detecting tubes.

Great thicknesses of lead were required to bring out the maximum ob-

served effects. Says the Shonka report:

"In view of the great thickness of lead required to give the maximum effect, these non-ionizing particles pro-



WITH A SMILE

*This extinct reptile, new to science, was probably not quite so friendly a creature as the artist here presents him in a drawing based on the fossil skull. The horned crocodile was discovered by the Field Museum Paleontological Expedition to Colorado, and is described in a new publication by Karl P. Schmidt, curator of reptiles and amphibians. The age of the reptile is given as paleocene, which makes it approximately 55 million years old.*