

## PHYSICS

# Cosmic Rays May Have Local Origin in Our Own Galaxy

OUR OWN galaxy may be the birthplace of cosmic rays, instead of remote interstellar space. This drastic revision of scientific thought was tentatively advanced at the Symposium on Cosmic Rays sponsored by the University of Chicago by Nobel Prizeman, Dr. Arthur H. Compton.

The new hypothesis is at variance with the exploding universe theory of the origin of cosmic rays advanced by the Belgian scientist-priest, Abbe G. Lemaitre, which has found considerable acceptance among physicists.

The basis for Dr. Compton's viewpoint is his failure to find any evidence of the so-called "galactic effect" in the rays' intensity.

It has been previously suggested that there should be a variation of the cosmic radiation, throughout the day, if the rays originated beyond the Milky Way. According to theory, more rays should be received in the northern hemisphere than in the southern, because the northern hemisphere would be the forward moving side of the earth, in the rotation of the galaxy.

The situation would be like that of a person riding on a merry-go-round in the rain, who would be hit by more rain drops in the face than in the back, explained Dr. Compton.

Prof. M. S. Vallarta, of the Massachusetts Institute of Technology, told the symposium of his calculations of this "galactic rotation" effect and its magnitude, if it existed. Observations made throughout the world, Dr. Compton said, have failed to find an effect even one-tenth as large. These observations have forced the conclusion that the cosmic rays therefore originate "locally" within our galaxy.

"We should continue to think of the cosmic rays as very old, perhaps dating from the origin of our galaxy itself, perhaps being the accumulation of millions of years of some gradual process giving rise to high energy particles. We should not, however, think of them as coming from space which on an astronomical scale is very remote," the Chicago physicist said.

*Science News Letter, August 6, 1938*

## HOME ECONOMICS

# Keep Stocking Diaries; Life Stories of 253 Pairs

THE life stories of 253 pairs of silk stockings, kept in diary form by 50 school teachers and other employed women, were revealed at the American Home Economics Association meeting.

Dr. Ida A. Anders, professor of textiles and clothing at the University of Tennessee, reported that delicate two-thread hose were worn on the average ten times; three-thread hose 18 times; and four-thread hose 20 times.

Stocking-buying experiences of the 50 women and an additional 50 were also recounted. Dr. Anders found these women were most impressed by appearance of stockings, when buying. Price came second and durability third. Although 29 brands of stockings were bought, 40 per cent of the women stuck to the one brand they preferred.

## Children Grow Brighter

A child may grow more intelligent by associating with bright children.

Or, he may lose some of his precious intelligence by having to mingle too closely with dullards.

Evidence regarding this newest psychological understanding of human intelligence was presented by Dr. Beth L. Wellman of the University of Iowa. Dr. Wellman told of children whose I. Q. improved from "average" rating to "genius." Favorable educational experiences were responsible for the change, she said.

A child's intelligence may be helped, she said, by putting the child in situations which encourage him to think independently, to use his intellectual

curiosity, and situations which enrich his experience and challenge his ability to keep up with the group. Experiences which lack these opportunities for self development are likely to produce a loss in I. Q., she added.

"Our notion in regard to the nature of intelligence is undergoing radical revision," Dr. Wellman declared. "The idea of an unchangeable I. Q. must be discarded."

Intelligence tests are still useful, she said, but must be interpreted differently.

## Living Rooms Evaluated

What the old family living room looks like to young high school students was reported to the meeting.

In one Alabama county, 200 high school boys and girls reported on the living room at home, Henrietta M. Thompson of the University of Alabama said. The results which she described show no problem of ultra-modernism. Oil lamps and unpainted walls are more in evidence.

The students' reports, summed up, include:

1. All but four of the living rooms have pictures; but 40 per cent of the pictures come from calendars and magazines.

2. The average living room has 2.5 windows, but over half of the windows are held up by a stick or hook.

3. The favorite furniture is a set, and the average number of pieces used is 8.5.

4. Ninety-five per cent of the homes are frame buildings, and 44 per cent are unpainted.

5. About one-third of the homes have access to electricity; two-thirds use kerosene or gasoline lamps or a local generating plant.

Improvements especially desired by the high school students Miss Thompson said, include refinished walls and floors, new furniture, radio, new lamps, a definite color scheme, and better arrangement of furniture.

*Science News Letter, August 6, 1938*

## MEDICINE

## Chances Good For Finding Chemical Cure for Cancer

THE CHANCES appear good that a chemical cure for cancer will, some day, be found. This hopeful view is justified by a review Dr. Carl Voegtlin, chief of the National Cancer Institute of the U. S. Public Health Service, recently gave of the present status of the chemical attack on cancer.

The future angle must be kept in