



DETERMINES ENERGY DISTRIBUTION—Shown in place before the 100,000,000-volt betatron in the General Electric Research Laboratory is the gamma ray spectrum analyzer used in studying the radiation from this device. It was developed by Dr. James L. Lawson of G-E as a labor-saving device.

are being devised. These may accelerate the collection of astronomical data and supplement the photographic plate and the human eye in recording telescopic views.

There are no important eclipses on the 1949 calendar, with only two of the moon and two partial ones of the sun.

There is always a chance that there will come into view a very bright comet that will attract wide public attention, although brilliant naked-eye comets have been rare in recent years. Such new comets can not be predicted.

Radar-Tracking

The interest of the military in anything that flies high in the upper atmosphere will accelerate the study of meteors or shooting stars. Much can be learned about conditions high above our heads by radar-tracking these speedy and tiny visitors from outer space.

There will be continued research on guided missiles and rockets, but most of this work is secret and will not be announced at the time it is done. One of the great events in human history will be the flinging of an object outside the gravitational influence of the earth. It is not improbable that an attempt will be made to shoot a small rocket to the moon in the next few years as a test and demonstration, its arrival to be signaled by the flash of an explosion.

With man-carrying planes now admit-

tedly flying faster than the speed of sound, aviation's era of supersonics will undoubtedly continue with continued discoveries and inventions in ultrafast flight, although most of the progress will be hidden by military secrecy.

In commercial aviation, more attention will be paid to the installation of various landing devices using both radio and visual devices that will guide planes to a landing strip under conditions of bad visibility.

There will be a growing realization that the methods of psychiatry and psychology can be used in understanding and remedying the conflicts upon the international scene, just as they have proved useful in personal family and community situations. Application of these ideas may prove of some aid in preventing or postponing war and the conditions that lead to international misunderstanding.

From those who treat the mentally ill there will come new reports of the effectiveness of surgery upon the brain as a treatment in the hands of specialists, while electric shock therapy is likely to be used more discriminatingly and therefore upon fewer patients.

New evidence about man's ancestors may come from two intensive searches now in progress. From South and East Africa there are likely to be new finds that may radically alter our concept of the earliest stages of human development. In America, especially in Alaska, progress should be expected

upon the problem of how early man came to this continent and how.

From surveys that archaeologists are making before dams back up water over sites of early Indian habitations, especially in the Missouri Valley, new ideas of pre-Columbian civilization may be obtained.

It may be found that there is more truth than generally credited to the idea that the Vikings discovered and explored America before the time of Columbus. There may be general acceptance of the genuineness of the Viking relics found here and this will cause anthropologists to consider the effect upon the Indians of such an early European contact.

All over the world there is a rising desire for more information and education, with an accent upon the need for more scientific knowledge and investigation. This applies to almost all countries and locations, not just America.

Much knowledge about how human beings learn and how various kinds of abilities can be distinguished and cultivated is about to bear fruit. Such psychological developments could aid industry, and they could extend into the home and school. New methods of infant care and pre-school education will be demonstrated during the coming year.

One of the consequences of the re-election of President Truman will be the probable creation of the National Science Foundation by the next Congress. The beginnings of an expanded research program by the federal government can therefore be expected in 1949.

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GENERAL SCIENCE

Do Not Burden Scientists With Routine, Is Advised

➤ DON'T PRESSURE scientists to produce to order. Don't direct their researches along so-called practical lines. Don't urge them to write reports merely for prestige.

This advice was given by Dr. George W. Morey, Carnegie Institution of Washington scientist, who directed optical glass production in both wars, and who was given the first Arthur L. Day medal by the Geological Society of America in New York.

Such men as the famous lone-wolf researcher, Willard Gibbs of Yale, need only be let alone, afforded every facility they want, and not burdened by administration and organization that they don't want, Dr. Morey declared.

Industrial research, contrasted with creative individual research, can be done, Dr. Morey said, by groups that are charged with systematic attempts to improve processes and products.

Governmental research, now being supported on a large scale financially, may attract "the aggressive personality who sees a golden opportunity for personal aggrandizement," Dr. Morey warned.

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