

ASTRONOMY

Earth Predates Some Stars

Astronomer-mathematician presents new theory of creation of universe, estimates that small astronomical systems came into being earlier than large ones.

► THE EARTH and other planets in our solar system are much older than many of the stars in our Milky Way galaxy of stars and nebulae, Dr. David Layzer of Princeton University told members of the American Astronomical Association meeting in Amherst, Mass.

"Small astronomical systems came into being earlier than large ones," Dr. Layzer stated in presenting his new theory of how the universe such as we know it was created.

The great cluster of galaxies, each containing a myriad of stars, in the constellation of Virgo, the virgin, will one day become a cog in a much larger wheel, the Princeton astronomer-mathematician predicted.

The universe began with matter in gaseous form uniformly distributed through space, Dr. Layzer believes. This gas began to expand some two billion years or so ago, and will continue to expand for billions of billions of years. But sometime in the distant future there will be more contraction than expansion. The expansion-contraction cycle is repeated every ten billion billion years, he calculates.

Dr. Layzer visualizes the universe, which is ten billion billion trillion times as massive as the sun, as being created in this manner:

"As the universe expands, small condensations form, releasing just enough energy to maintain the expansion. As the expansion continues these condensations convene into clusters of condensations, these in turn into larger clusters, and so forth. In short, the expansion generates a hierarchy of rather loosely-knit clusters within clusters.

"The coming together of small clusters to form a large cluster gives rise to disruptive tidal interactions among the small clusters. These persist, of course, even after the large cluster has itself become a member of a

still larger cluster. Thus energy is continually funnelled from the clusters of every given level of the hierarchy to the smaller clusters on the next lower level."

Such systems do not always build up into larger ones, however, but sometimes dissolve. When a cluster gains energy, it becomes less compact and is more easily dissolved by tidal disruption, Dr. Layzer pointed out. When a cluster loses energy, it becomes more compact and less susceptible to tidal disruption.

In addition to clustering and funnelling, Dr. Layzer considers that gravitational contraction also played a vital role in the evolution of stars and the solar system.

The key to Dr. Layzer's theory of the creation of the universe is a continuing supply of energy liberated by the local clustering of matter. Mathematically, he has calculated the energy of an "expanding, homogeneous, spherical Einstein universe," and believes the result bears out his premise.

Science News Letter, January 10, 1953

PSYCHOLOGY

Psychologist Reports "Mom" Blaming Childish

► MOM IS not necessarily to blame for the psychological quirks of her children. Parents as well as children have rights.

Psychologists and psychiatrists were taken to task for their mother-blaming complexes of recent years by Dr. Jane Loevinger, Washington University psychologist, speaking before the American Association for the Advancement of Science meeting in St. Louis.

Parenthood should be recognized for the sake of mothers and fathers as well as for children, she argued. Parents are not of interest merely for the sake of the child. Adults who have children are people as well as parents.

In reading "how to be a perfect parent" books, each parent chooses that advice on how to raise children least appropriate to him, she finds. Each parent seeks rationalizations for the most irrational aspects of his behavior.

Mothers who read about child-rearing are those who are already overburdened with conscience. Dr. Loevinger believes this emphasis on child's rights and mother's duties serves to increase the anxiety difficulties of parents.

The mother-blaming complex, Dr. Loevinger suggested, is an aspect of immaturity, just as much as the traits of the child that are labeled "momism."

Science News Letter, January 10, 1953

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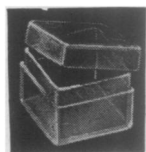
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