ASTRONOMY

Sun Is Just a Youngster Two Billion Years Old

Sun Lives, Scientist Says, By Alchemic Conversion Of Hydrogen into Helium; Has Ten Billion Years Ahead

THAT the sun is just a youngster, only two billion years old, and will probably live to the age of twelve billion, is the opinion expressed by Dr. George Gamow, professor of physics at George Washington University, in an interview during the General Electric Science Forum program broadcast from Schenectady, N. Y.

"Probably the best proof," Dr. Gamow said, "of the view that the entire stellar world had a definite beginning in some distant past can be found in the observations of Dr. Hubble of Mount Wilson Observatory. His results indicate that the large stellar groups, known as island universes, and similar in their nature to our stellar system or Milky Way, are receding from each other at a rather high speed. From the observed velocity of the recession, one can easily calculate that the separation of these giant stellar clouds must have taken place only about two billion years ago." At some period before that time, the matter of the stars formed one continuous mass of hot gas. "The epoch when this primitive gaseous chaos was broken up by the process of progressive expansion into the separate stars can be truly considered as the period of the physical creation of the world."

"In particular, the formation of our earth, which, according to geological data, is just about two billion years old, also falls within the same period."

Dr. Gamow rejected the hypothesis that the distances between the stars had always been substantially what they are now and that the earth and the other planets had been formed in a violent collision between our sun and some other star. Calculations show, he said, that in such an event it is extremely improbable that more than one collision could have occurred during the entire past of stellar existence. If, on the other hand, the stars two billion years ago were very close together, collisions should have been frequent, and suns accompanied with planets should now be the rule rather than a most extraordinary exception.

The sun lives, Dr. Gamow declared, by the alchemic conversion of hydrogen into helium. This is the source of its light and heat which it expends so lavishly. It is atomic power on the grand scale—which we on earth have only succeeded in imitating microscopically. It is the same with the other stars.

Since hydrogen is the fuel of the stars, their probable life spans can be predicted on the basis of how much they have on hand and how fast they are expending it.

Our sun is now about 35% hydrogen, and at the present rate of consumption, Dr. Gamow stated, this will last for another ten billion years.

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