SOME ASTRONOMICAL EVIDENCES FOR A YOUTHFUL SOLAR SYSTEM

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Data concerning meteoric dust, the Poynting-Robertson effect, and disintegration of comets are shown to indicate much shorter ages for the solar system than those assumed by evolutionists. All of these methods are demonstrated to support ages much lower than 5 x 10^9 years commonly asserted by uniformitarians.

Introduction

Numerous arguments have centered on the age of the earth, the solar system, and the universe as a whole. Though the chronology of geological and astronomical events is based on many dubious assumptions and questionable ventures beyond the province of science, it is absolutely necessary for the evolutionists to try to establish a long chronology.

Most evolutionists believe that life began by a chance process in a shallow sea and that the world we see today came about by gradual and infinitesimal changes taking place over vast and almost limitless stretches of time. The evolutionist tries to eliminate problems which face his naturalistic scheme of origins by covering the whole issue with a veil of time.

Thus, long periods of time have become a tenet in the evolutionist's creed. For example, the physical appearance of rocks in the Franklin Mountains, El Paso, Texas, suggests the rapid deposition of sedimentary material and consequent movement of the rocks while in a somewhat unconsolidated or semi-plastic state. At one time a geophysicist of evolutionary faith viewed these rocks with me and agreed about the appearance of catastrophe. But, he resisted this ultimate conclusion by pleading for long time and gradual process in their origin.

Also, time is fostered as a rationale for the missing links in the evolutionary explanation of the fossils. While discussing the problem of missing links with an evolution-minded geologist, I asserted that the fossil links are still missing and probably were nonexistent. He reminded me that the links might have been present originally and then after subsequent erosion they are not to be found. I remarked that if the links could not be found, one could not know that they were present in the past. At this point an evolutionist places his faith in epochs of unknown time to solve his difficulties.

There are very basic difficulties and limits placed on working into the past. In the second law of thermodynamics, or law of entropy, physicists deal with the natural and continual tendency of the universe toward disorder. It is a study of deteriorative processes. The attempt to work backwards into the past where deteriorative processes have dominated is fraught with many insuperable obstacles. Entropy of the universe is increasing, chaos is gradually replacing order. One cannot measure backward to the beginning by studying the decay processes, as has been shown by authors of past articles in this publication.

One of my college professors once remarked that, even if most or nearly all mutations are harmful to the organism, during a vast period of time a few beneficial mutations would occur and these would produce the upward progress of the organism. He overlooked the effect of lethal mutations upon the organism in the meantime. Given enough time, the evolutionist believes that the improbable becomes probable.

Dr. Harold F. Blum,[1] however, points out that an increased time span for a biological system increases the probability of reaction equilibria being set up in the chain and does not increase the probability of improbable reaction products being formed. Time cannot supply what the evolutionist needs even if it existed in the quantities he demands.

Yet in spite of strong evidence to the contrary, many people feel that if the earth is very old, evolution will somehow or other be the answer to the question of the origin of the universe and life in it. Therefore it is still quite pertinent to ask if things are as old as evolutionists claim.

Many telling attacks can be launched against the various methods of geochronology. Some of the very basic assumptions of these methods such as steady state existence of C-14 in the atmosphere, constancy of decay rates in the long radiological clocks, etc., seem to be erroneous. I will limit the present paper, however, to presenting several indicators which imply a rather short age for the Solar System. In pointing these out, I will follow the thinking of the scheme which is the basis of any dating system, namely: the measurement of some physical quantity produced in the time associated with some event (Q), the determination of the rate at which this quantity is produced (R), and, consequently, the calculation of the time involved in the production of the quantity (T), and consequent dating of the past event, where:

$$T = \frac{Q}{R}$$

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Meteoritic Dust Influx

The first of these indicators has to do with the influx of meteoric dust into the earth's atmosphere and finally down onto the earths surface and into its oceans. This dust material is called micrometeorites since the particles are obviously very small. These particles are moving so slowly that they do not burn up with entry into the atmosphere and they settle very gradually to the ground.

The material may be collected in chemical trays, and then analyzed as to what is extraterrestrial. Only the mass of the magnetic meteoric material is used in the calculations, since stony meteoric matter cannot be clearly separated from terrestrial matter. Consequently, estimates of the influx of meteoric dust are very conservative since stony meteorites are considered far more abundant than iron meteorites.

Estimates of the influx range considerably with different investigators. The Swedish geophysicist, Petterson, estimates 14,300,000 tons of meteoric dust come onto the surface of the earth per year.[2] In five billion years there should be a layer of dust 54 feet in thickness on the earth if it were to lie undisturbed. This should, of course, put a tremendous amount of nickel (since it is a major constituent of meteorites) into the oceans.

Nickel, on the other hand, is actually a rare element in terrestrial rocks and continental sediments and is nearly nonexistent in ocean water and ocean sediments. This seems to indicate a very short age for oceans. Taking the amount of nickel in the ocean water and ocean sediments and using the rate at which nickel is being added to the water from meteoric material, the length of time of accumulation turns out to be *several thousand years* rather than a few billion years.

From the record of the lunar landings the accumulation of dust on the surface of the moon is very small (not much more than 1/8 inch).[3] The moon moves through the same region of space that the earth does and consequently should have about the same influx of meteoric dust as the earth. N.A.S.A. scientists were worried that a lunar ship would sink down into the postulated huge amount of dust that should have accumulated on the surface in about 4.5 billion years of assumed time.

Also, in the "sea" areas, where the lunar ships landed, there should have accumulated more dust than elsewhere on the moon. Yet the amount of dust is amazingly small. What could have happened to all the dust?

Although more data and calculations are needed to substantiate this conclusion, from the absence of dust, we may deduce a short period of time for accumulation, and thus a young age for the moon. If the earth is about the same age as the moon (as the Scriptures assert and as some astronomers suggest), then the earth is also young.

Poynting-Robertson Effect

A second indicator of youth (low entropy state) is given by the Poynting-Robertson Effect. Solar radiation has an important influence on the orbits of small particles, which have a large ratio of surface area to mass. Several points of consideration are significant.

First, there is a simple outward force from the sun due to radiation pressure. For particles with diameters of a few thousand angstroms or less, this force may exceed the gravitational attraction of the sun and blow them out of the Solar System.

Second, the solar radiation received by a particle is Doppler-shifted to cause an increase in radiation pressure if the particle is approaching the sun, and a decrease if it is receding; thus, changing elliptical orbits to circular ones.

Third, the angular momentum of an orbiting particle is progressively destroyed by the fact that it receives solar radiation, which has only a radial momentum from the sun, and re-radiates this energy with a forward momentum corresponding to its own motion about the sun. This produces a drag force on the particle causing it to spiral into the sun. This is called the Poynting-Robertson Effect.

The particle re-radiates energy it receives from the sun back into space as fast as it is received, thereby getting rid of momentum also. If it is radiating energy equally in all directions, this would not by itself alter either the direction or rate of its motion. After a loss of a millionth part (for example) of its mass, it would have lost a millionth part of its own momentum and the velocity of the remaining portion would be unaltered.

But during this time it would have gotten back the same amount of mass by radiation from the sun, so that its mass is the same as at the start, but its momentum is a millionth part less. Its orbital velocity will therefore be decreased by a millionth part. This effect is similar to that of the particle moving through a resistant medium. The orbit diminishes in radius and the particle moves into the sun along a very closely-wound spiral.

Robertson found that a particle of rock (density 2.7) one centimeter in diameter started at the earth's distance would fall into the sun in 10 million years. In a time of 2 billion years any masses of rock less than six feet in diameter within the earth's orbit would be cast into the sun. This "sweeping up" process would get rid of anything less than three inches in diameter inside Jupiter's orbit, and anything less than 1/10 inch in diameter inside Neptune's orbit.

Yet significant quantities of meteoric matter are known to exist! There are the particles grouped around the sun which reflect what is called the zodiacal light. A tremendous amount of matter is there! Although no attempt will be made here to determine a definite age for the Solar System using this information, it is possible to deduce a much smaller age than the evolutionist demands, when one considers that there is much particulate matter still circulating. Such would not be true if the Solar System was of great age!

Age of Comets Calculated

As comets travel around the sun, they are continually undergoing disintegration from gravitational and radiative effects of the sun and planets. This phenomenon may be taken as a third indication of young age of the Solar System.

Comets have been observed to diminish in size and even to break up. Debris for meteor showers remains along their orbits. Comets are generally of two types: short-period and long-period. Certain astronomers believe that comets, and the planets, came into existence about the same time. If this is true, then the lifetime of a comet can be estimated and the age of the planets accordingly determined.

Some Russian astronomers estimate the maximum life of a short-period comet is 25,000 years. Lyttleton[4] estimates that no short-period comet can survive longer than approximately 10,000 years. Considering the "dynamical" effects of the planets in causing the long-period comets to be ejected from the solar system, Lyttleton estimates that only one in 10,000 could be left after 4.5 billion years. This does not take into account physical disruption of the comet which would further reduce this estimate.

Calculation of a short life for comets has led to a number of hypotheses to explain away the obvious corollary of a young Solar System. These attempts have ranged all the way from ejections of comets from the planet Jupiter to comets coming from the galaxy outside the Solar System. Certain astronomers have also suggested that there is something akin to a "deep-freeze" storage of comets outside the solar system toward the nearest star, which is continually replenishing the supply of comets to the Solar System.

Numerous attempts have been made to avoid the notion of youth, but as yet there is no real substantiation for any of these suggestions. Had the age turned out rather large by this method, however, I assume that the evolutionists would have welcomed the results unquestioningly! Lyttleton makes the comment:

> In the whole age of this system, a comet with average period 100,000 years would make 4.5×10^4 returns to the sun, and if at each one of these it lost only 1/1000 of its mass, through tail-formation and meteor stream production, the initial mass would have been more than 10^{19} times as great as the present mass-which at a minimum means several times the mass of the sun![5]

When one adopts a naturalistic explanation of origins, he is soon driven to incredible extremes!

Other Indicators of Youth

There are other indicators for a smaller age in general, such as the destruction of the spiral arms of the galaxies due to differential rotation. Objects in the galaxies rotate in Keplerian orbits where the velocity decreases outward from the center of the galaxy. This causes a winding up of the spiral arms in a short time (relatively speaking). It is believed by some that the magnetic field maintains the coherence of the arms. However, the strength of the field seems rather small. Also, there is the rapid break-up of the star clusters. The helium content of the atmosphere is yet another interesting sign pointing to young age of the earth. Helium content of the atmosphere, its exudation rate from the lithosphere, and other considerations indicate a maximum atmospheric age of around 10,000 to 100,000 years.[6]

These are a few of the signs pointing to a young age of the earth and the Solar System. Much excellent work with regard to the age of the earth has been done already by Dr. Melvin A. Cook concerning the radiological "clocks." His work indicates that these clocks too may give very small ages for geological events when all external influencing factors are considered.

References

[1]Blum, Harold F. 1955. Time's arrow and evolution. Second Edition. Princeton University Press, Princeton, N.J.

[2]Pettersson, H. 1960. Cosmic spherules and meteoric dust. *Scientific American,* 202:132. February.

[3]*El Paso Herald-Post,* July 21, 1969.

[4]Lyttleton, R. A. 1988. Mysteries of the solar system. Clarendon Press, Oxford, England, p. 110.

[5]*Ibid.,* p. 147.

[6]Cook, Melvin A. 1966. Prehistory and earth models. Max Parrish and Co., Ltd., London, p. 14.