The Deadbeat Universe

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by

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ISBN 0-933407-03-3

Revised 2003

Preface

We always thought of ourselves as being at the center of the Universe and at rest. It was not until very recently that Copernicus explained how our Earth is orbiting the Sun and that the Sun, not the Earth, is at the center of our solar system. Today's theories such as Einstein's special and general relativity, still believe that we and our galaxy, are at the center of the Universe. In fact, relativity with its "cosmological principle" claims that any observer on any galaxy in the Universe can consider him or herself at the center and at rest. In other words, everything is relative and there is no preferred or absolute point in space to relate our location or frame of reference to, thus the term "relativity". This view creates certain problems. Imagine how difficult it was for astronomers before Copernicus' time, to set up mathematical equations for planetary orbits with the Earth at the center and at rest and how difficult it is today to deal with a Universe that has more than one center in which we are motionless and at rest. It is understandable why we tend to believe that we are at rest since the star studded sky seems motionless relative to us and we have no feeling or conception of velocity or acceleration. For example, we cannot feel that we are hurling through space around the Sun fifty times faster than a rifle bullet at an orbital velocity of 30 km/second (18 miles/second). Nor do we feel our velocity around the center of our galaxy which is ten times higher or our velocity relative to the rest of the Universe which is still another thousand times higher and which equals c, the velocity of light.

There is no doubt that a clever mathematician can construct mathematical equations that will describe planetary orbits with the Earth at the center or equations that will work for a Universe where we assume ourselves to be at rest and everything else moving relative to us. To build a good conceptual theory on such equations is difficult if

not impossible. The problem is that by accepting the theory of relativity we deal only with relative motion and denounce the existence of absolute motion. Why not accept both? For example, if we are part of a large system in which everything is moving about in an organized fashion, then there will obviously exist both relative motion between bodies as well as absolute motion, with respect to a common center of the whole system. The fact that we are moving at a velocity of c with respect to the rest of the Universe and still subject to a minute cosmic acceleration of a_0 towards its center, is what this work is based on. One can compare our galaxy and the rest of the Universe to a swarm of bees in which all members are moving relative to a common average point. In our Universe, where all matter is subject to a mutual gravitational attraction, such a point is the center of mass of the system or the point to which everything is attracted. Knowing our absolute speed c and gravitational acceleration a_0 in such a system makes it possible to create exact mathematical solutions which can pinpoint parameters such as mass, size, age and temperature of the Universe to mention a few. To date there are no such solutions obtainable for distances beyond the solar system. Most equations in this book are based on the harmonic motion of the Universe and will accurately describe the contracting-expanding Universe. The outcome implies that we are part of a "deadbeat" or a one cycle Universe that is in a state of contraction and the most compelling evidence for this type of cosmology are the equations describing atomic orbits in Chapter 6 section 6.3. It will also be shown that the observed cosmic 2.76 K microwave temperature is a direct result of collective or thermolized radiation from all stars and matter in the Universe. The lifetime of our galaxy is about 8 million, million years and the cosmic model described promotes both evolution and continuous creation (Chapter 7 section 7.4).

It is not the intention of this book to reject Einstein's work since many of his basic equations and discoveries are used throughout. It is merely to point out that the conceptual explanation of his relativity needs to be changed and that further progress can be made if we add

the idea of absolute and relative motion, as well as absolute and relative energy. It is not the first time a great theory has to be modified. For example, Isaac Newton, the father of modern physics, had his theories modified by Einstein himself and Einstein's model of a static Universe had to be altered by contemporary science to a dynamic expanding-contracting Universe. We are still far from a perfect theory that will explain everything. The field of natural science is like a labyrinth where progress is made in small steps and where each step usually ends up at a dead end and considerable time passes before a new path can be found. There are two ways to derive a scientific theory. One is by logical reasoning where a theory has to be both conceptually and mathematically sound. The other is by mathematical modeling where equations are structured to fit observations and where conceptual explanations are often missing or misleading. The theory of electric current in solid conductors is one example, where mathematical reasoning requires current to flow from positive to negative, when in reality the opposite is true. One of my favorite subjects is mathematics. I believe mathematics to be a wonderful manmade tool and there is no doubt that mathematical physics has had much success, but I also think that page after page of abstract Picasso mathematics might scare off many potential new scientists. I therefore like to add that it is important to remember that the laws of mathematics must obey the laws of physics and not the other way around. Mother Nature does not know of numbers or digits. She behaves more like an analogue computer rather than a digital computer. This book is written for anyone intrigued by the subject of basic physics and cosmology, and even though it contains numerous equations, only a limited knowledge of algebra and trigonometry is required. In fact, I believe most of the equations can be skipped since numerical solutions are already provided and the purpose of the equations is merely to prove a point, or to describe a scientific statement in rigid mathematical terms.

L.W. Boulder Colorado, 1997

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