

PART III -- THE PHYSICAL EVIDENCE FOR THE UNIVERSAL EXPONENTIAL DECAY

- *The Galactic Rotation Curves Anomaly*
- *The Pioneer Anomaly*
- *The Flyby Anomaly*
- *The Dark Flow Anomaly*
- *The Common Cause of the Anomalies – The Universal Decay*
- *Calculating The Anomalous Acceleration from The Decay Rate*

SECTION 5

Introduction to the Physical Evidence

THE ANOMALOUS ACCELERATION

There is throughout the Universe an acceleration that is not yet recognized let alone identified or understood although it has been (unknowingly) detected in that some of its effects have been observed and reported on. That acceleration [which is in addition to that of natural gravitation and which has no connection with gravitation] is small, centrally directed in every system that it appears, and acts independent of distance. The cause of that acceleration will be addressed shortly; however the purpose of the present evidence is to demonstrate that that anomalous acceleration exists and operates throughout the Universe.

THE SCIENTIFIC PROBLEM OF THE NEW AND UNKNOWN

The poet, Samuel Taylor Coleridge, in a philosophical lecture delivered in 1819, said, “Whoever is acquainted with the history of philosophy during the last two or three centuries cannot but admit that that there appears to have existed a sort of secret and tacit compact among the learned not to pass beyond a certain limit in speculative science. The privilege of free thought, so highly extolled, has at no time been held valid in actual practice except within this limit.

When new phenomena present a new challenge by calling for new, original hypotheses, whether because of the absence of any current hypothesis or because of the failure of all prior attempted hypotheses, the response of the science community at large, sometimes, is to ignore the new phenomena and the new data, to in effect dismiss them from the scientific search for knowledge.

Because it is an active creative process of new original material, the developing of new potentially valid hypotheses is more difficult than the observation of phenomena and the testing of resulting hypotheses, which is a relatively passive process.

Four independent unrelated phenomena, none of which has an established explanation nor a successful hypothesis, have now been extensively observed and a large amount of data substantiating the phenomena have been developed. However, with the exception of the search for “dark matter” interest in further investigating the phenomena seems to have disappeared as has the developing of badly needed potential hypotheses.

Even in the case of “dark matter” the current interest is solely in attempts to detect and identified that hypothesized substance and, in spite of that there now has been going on a century of that search with no positive results, there has been no interest in investigating hypotheses alternative to that of “dark matter”.

The four independent unrelated phenomena can be shown to be the result of the same common cause operating on each to produce the diverse independent phenomena. The four phenomena are as follows.

- In 1933 F. Zwicky reported that the rotational balance of gravitational central attraction and rotational centripetal force in galaxies appeared to be out of balance, that a small additional centrally directed acceleration of unknown source appeared to be needed and to be acting. Numerous galactic rotation curves confirm that there is such an anomalous acceleration present and necessary in all rotating galaxies.
- In 1998 the Pioneer Anomaly was first reported. The anomaly is a small acceleration, centrally directed [toward the Sun], constant, distance independent, and of unknown cause, observed in the tracking of the Pioneer 10 and 11 spacecraft from launch until their near departure from the Solar System.
- In 2008 the Flyby Anomaly was first reported. The anomaly is unaccounted for changes in spacecraft speed, both increases and decreases, for six different spacecraft involved in Earth flyby from December 8, 1990 to August 2, 2005.
- Also in 2008 a previously unknown large scale flow of galaxy clusters all in the same direction toward “the edge” of the observable universe, the Dark Flow anomaly, was first reported. The mysterious motion, originally noted in 2008 using the three-year WMAP survey, is now [2010] confirmed by a more comprehensive five-year study .
- A fifth phenomenon and the earliest, astral Redshifts discovered by E. Hubble before the above, turns out to be primarily related to the same underlying phenomenon causing the others.

The same common cause operating on each is a locally centrally directed, small acceleration that is non-gravitational, distance independent, constant, and unaccounted for.

Next: The Galactic Rotation Curves Anomaly.