ESSAY 123: ENERGY FROM m SPACE

The m theory of classical and quantum dynamics has been developed recently in UFT415 to UFT429 and is so named because it is developed in the most general spherically symmetric space described by m, which in general is a function of r. The theory has been developed rapidly in the well known Euler Lagrange, Hamilton and Hamilton Jacobi systems of the nineteenth century, three complete systems of classical dynamics. During the course of this advance, a new complete system of dynamics was inferred, the Evans Eckardt dynamics based on the fact that the hamiltonian H and the angular momentum L are constant. The power and accuracy of computer algebra has been used at every stage, so problems that would have been intractable in the nineteenth century and even in the era of early mainframes, have been solved numerically on a powerful desktop.

There have been several startlingly original results of m theory. In the Euler Lagrange system for example the existence has emerged of a new force defined purely by the geometry of m space itself. This force does not exist in special relativity or Newtonian dynamics. Its existence has been confirmed precisely using the Hamilton system of dynamics in m theory. This m force is accompanied by a new source of energy which is governed by the geometry of m space. In earlier ECE work reported in about seven hundred papers and books from 2003 to date, this energy was referred to as "spacetime energy". It manifests itself in the well know radiative corrections such as the anomalous g factor of elementary particles and the Lamb shift in atomic hydrogen. In the standard model of physics the vacuum used to calculate the Lamb shift is filled with fluctuating electric fields which cause the electron to "shiver", and in the thirties this phenomenon was developed by Schroedinger and named zitterbewegung or shivering. The Lamb shift was first calculated by Bethe using this idea. So when standard physics refers to the vacuum it does not mean a "nothingness", it means a system with finite energy (fluctuating electric fields). This energy can be transferred to an electron, producing a g factor that is about 1% different from the g factor of Dirac theory, which is exactly two. In m theory the g factor of the electron is due to the m function itself, and is due to the way in which the space differs from the Minkowski spacetime in which Dirac theory is developed. In this process total energy is conserved.

The Lamb shift in atomic H is calculated in relativistic quantum m theory from the spin orbit hamiltonian, in which the m function changes the fine structure. This theory may already be sufficient to produce the Lamb shift purely from the general geometry of space, without having to postulate the existence of fluctuating electric fields. This would be a triumph of m theory. It has already produced unexpected and completely original results. For example in UFT417 the theory predicts the possibility of infinite energy from m space, and the possibility of superluminal travel. The m theory also predicts the possibility of retrograde and forward precession in orbits, and for the S2 star gives an essentially elliptical orbit that is not Keplerian or Newtonian. In the S2 star the Einsteinian general relativity (EGR) collapses entirely by two orders of magnitude. The m theory is able to describe the velocity curve of a whirlpool galaxy. In this case the EGR again fails entirely. The m theory is able to describe light deflection due to gravitation without the use of EGR, and the m theory of the anomalous g factor of the electron produces a vacuum particle with mass. This explains the mass of the universe without the use of dark matter.

The m theory explains the spin connection of ECE2 theory from the fundamental geometry of the most general spherically symmetric space. The spin connection emerges from the ability of m theory to produce the m force. This was found to be exactly the same in Euler Lagrange and Hamilton dynamics in m space. These are a few of the many advances made rapidly in UFT415 to UFT429. To date the m theory has been developed for classical and quantum dynamics, but can be extended to any area of physics. It is part of the by now

famous Einstein Cartan Evans unified field theory, so once the spin connection is calculated from m theory, the two theories merge. The UFT series of papers on www.aias.us and www.upitec.org contain many self consistent concepts and ideas, and in fifteen years it has become clear that ECE can be developed infinitely. Similarly after thirty years of development from 1899 to 1929 it become clear that quantum mechanics could be developed infinitely.