

Update December 2020

Cosmic Solutions and G Eliminated from GR

This quarter has seen the publication of an extended version of last quarter's paper on viscosity red shift, the elimination of the Newtonian gravitational constant G from general relativity and cosmology and the outline of how to extend the Einstein equation to include charge systems and potential energies.

The extended work in the paper *Astronomical Redshifts Reinterpreted* includes potential solutions to cosmic paradoxes and other issues and is included in this journal as well as being published as a preprint on Researchgate.

The cosmic solutions proposed were on the horizon problem, flatness problem, structure problem, fermion families, inflation, black holes, homogeneous and isotropic universe, baryon asymmetry, dark matter, zero point energy, vacuum energy, redshift observational effects, magnetic monopoles, dark energy, expansion of space, the gravitational constant, strength of gravity versus charge fields, GR versus QM environments, omega lambda, the cosmological constant, multiverses, failed big bangs, pre-fermions, big bangs and steady state combined and how the electromagnetic effect is transmitted.

These solutions are mostly based on the foundation principal that all particles from meons up to cosmological black holes always have total energy of zero.

One extreme potential interpretation might be that each galaxy is its own big bang in the act of failing. Each has inflated by some amount from an initial unmerging and has expanded away from that point as far as the energy released by loop resizing allows.

The result will be a galaxy based on the same threefold-symmetry as our galaxy, except that the size of the loops will be different. This changes the chemistry of nuclear reactions and the size of its electron loop. The effect is to shift the whole galactic emission spectrum by the same fraction as its electron loop is different to our electron. This means that there is an unknowable factor affecting the observable redshift of all galaxies and their stars.

The main work involved extending previous elimination of G from Newtonian equations to general relativistic ones with the result that the Einstein constant is shown not to be a constant and is not related to G. This has been published in the *Journal of Physics and Chemistry Research* Volume 2 Issue 3.

On-going work is looking at how to adjust the Einstein equation to include charge and potential energy. The issue is complex because all interactions must look at meon pairs simultaneously, both as ZMBHs in the background as well as each pair within loops. Although the chase effect can be modelled as a vibration because the chase action reverses as loops rotate, each meon in the background – if it extends to infinity – always has potential energy that sums to zero for its meon type when they are all stationary.

Also included is a paper on the physical reason why the electron spin g-factor exceeds 2.

M Lawrence