Essay 118 : THE EFFECT OF TORSION ON THE BIANCHI IDENTITY

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When ECE theory was first being developed from March 2003 onwards the famous Einsteinian general relativity was still based on the Bianchi identity of 1902. Sometimes its discovery is attributed to Ricci in about 1885, but Ricci did not write up his calculations and it was discovered again by Ricci's student Bianchi in 1902. Both worked at the Scuola Normale Superiore in Pisa. ECE was however based on the outset from Cartan's geometry of the early twenties, because this geometry includes torsion as is well known. Torsion was unknown to Bianchi and Ricci. When torsion is included, the first Bianchi identity becomes the Cartan identity, proven rigorously in the ECE series of papers.

This seemingly abstract geometry has a direct bearing on the most famous theory of physics of the twentieth century, Einsteinian general relativity, and its most famous equation, the Einstein field equation of 1915. This is because the field equation uses the second Bianchi identity directly, and so the field equation also omits torsion. Therefore the Einstein theory was wrong from the outset. Torsion and curvature and torsion are always non zero in any type of geometry, and are defined by the first and second Maurer Cartan structure equations. It is shown in the definitive proofs of ECE theory, proofs that simplify UFT99, that if torsion is forced to vanish, then so does curvature, and there is no gravitation. There cannot be curvature without torsion as Bianchi and Einstein believed.

It became evident after about four years of development of ECE theory, from the Spring of 2003 to 2007, that the second Bianchi identity of 1902 was in need of development to include torsion. This was finally achieved in UFT88, which by now is probably the most read paper on the Bianchi identity. UFT88 completely changes the second Bianchi identity by use of torsion, and was written by Horst Eckardt and myself just after Horst had travelled to Craig y Nos Castle to initiate discussions. I had been introduced to him by Laurence Felker. Therefore UFT88 refutes the second Bianchi identity of 1902 and with it the Einstein field equation of 1915. By careful and accurate use of scientometrics, it quickly became clear that UFT88 was making an unprecedented impact. It is now read regularly at the best universities in the world by rankings such as Webometrics, Times and QS.

It is possible in the scientometrics to identify staff and students only from URL's of universities, institutes or similar. It is probable that about this number again syrudy UFT88 from private computers, so from the time it was written to the date of writing, December 2015, it is estimated that the paper has been read about fifty thousand times. The quality of the readership is very high, and is consistently at a very high plateau. UFT88 is now the most read scientific paper in the world on the Bianchi identity. This can be seen by use of keywords "The Bianchi Identity" in Google. The paper appears third on the first page of Google after obsolete general items from Wolfram and Wikipedia. Since UFT88 was written, the Einsteinian theory has been refuted in many ways in the UFT series and has been replaced by ECE2. This is the essence of Alwyn van der Merwe's post Einsteinian paradigm shift: the teachings of the obsolete physics are rejected by the best in the world.

UFT88 was followed by UFT99, which demonstrates how torsion and curvature are always present simultaneously in any valid geometry, and then by UFT109 reporting the discovery of the Evans torsion identity, an exact identity obeyed by any geometry. These discoveries were synthesized in UFT313 in the Jacobi Cartan Evans or JCE Identity, which is the precise correction of the second Bianchi identity for torsion. The JCE identity incorporates the Evans identity. UFT313 is a paper of advanced tensor calculus, and in the ECE2 series, it was developed using vector algebra. The JCE identity has already made a big impact as the scientometrics show, and it should be regarded as the final form of UFT88.

Therefore these already famous papers have changed gravitational physics completely, and within the most advanced unified field theory available, ECE2 theory.