SOME REFUTATIONS OF EINSTEINIAN GENERAL RELATIVITY (EGR)
ESSAY 80

   The following is a list of some but not all of the various refutations of Einsteinian general relativity, Big Bang, and black hole theory over a hundred years by many distinguished scientists.

1) Karl Schwarzschild on Dec. 22nd 1915 in a letter to Einstein in which he gave a metrical solution without singularity. This letter has been translated by Vankov and is available on the web.
2) Refutations by Vankov in a paper accompanying the Schwarzschild letter.
3) Refutations in 1918 by Bauer and independently by Schroedinger.
4) Refutations by Levi-Civita, who frequently corrected errors by Einstein in tensor analysis.
5) Refutations by Cartan in well known correspondence with Einstein on the existence of torsion, neglected completely by Einstein.
6) Refutations by Einstein himself as he attempted to construct a unified field theory, circa twenties to 1955.
7) Rejection of Big Bang by Einstein circa 1939.
8) Rejection and numerous refutations of Big Bang by Hoyle and co coworkers from 1950 onwards.
9) Rejection of the Hawking Penrose Singularity Theorem by Hoyle and co workers in well known debates.
10) Rejection of singularities such as black holes by the Hoyle School from 1950 onwards.
11) Qualitative and complete experimental refutation of EGR by the discovery of the velocity curve of whirlpool galaxies in the late fifties.
12) Qualitative and complete refutation of EGR by overwhelming experimental evidence from astronomy, notably galactic dynamics.
13) Numerous experimental refutations of Big Bang by the observations of Halton Arp.
14) Numerous websites of information all refuting Big Bang experimentally. These are reviewed in UFT120.
15) De facto refutation of the geometry of EGR in the first and second Cartan structure equations which define torsion as well as curvature.
16) De facto refutation of EGR by the action of the commutator of covariant derivatives on any tensor in any space.
17) Various proofs that the geometrical connection is antisymmetric in its lower two indices.
18) The geometry of EGR is based on the arbitrary choice of a symmetric connection by Christoffel in the eighteen sixties, in an era when neither curvature nor torsion were known.
19) The curvature tensor was first introduced in the first years of the twentieth century and used the arbitrary symmetric connection uncritically.
20) The curvature tensor is defined by the action of the commutator of covariant derivatives on any tensor, this operation reveals that the connection is antisymmetric.
21) If the commutator is used without firstly assuming a symmetric connection, its action on any tensor isolates the torsion tensor as well as the curvature tensor.
22) The torsion tensor is made up of the difference of connections, both taking the antisymmetry of the commutator.
23) The antisymmetry of the commutator must also be incorporated in the curvature tensor.
24) The existence of torsion is basic to unified field theory, notably the Einstein Cartan Evans unified field theory.
25) A symmetric connection means that the torsion is incorrectly zero.
26) The second Bianchi identity used by Einstein incorrectly used a symmetric connection.

27) The field equation of Einstein was based directly on the second Bianchi identity and the field equation of Einstein is incorrect.

28) The correct field equations must be based on the Cartan and Evans identities which incorporate torsion.

29) The use of the correct field equations shows that every metric of EGR is incorrect, tabulated in "Criticisms of the Einstein Field Equation" (CISP 2011, preprint on www.aias.us).

30) As shown in great detail by Crothers, all aspects of the Big Bang and black hole theories are incorrect, as pointed out by Einstein in 1939.

31) The Einstein field equation is incorrect, so the misnamed Schwarzschild metric (MSM) is also incorrect.

32) The MSM was used by Einstein and others to derive an effective potential, which is also incorrect.

33) This incorrect effective potential was related to a force using classical methods, even though EGR does not define potential energy and force.

34) A classical Lagrangian method was used with this force in a classical orbital equation, even though the theory is non classical.

35) It has been found by computer algebra that the method used to derive orbital precession is erroneous in general, and produces singularities.

36) EGR does not produce a true precessing ellipse in consequence.

37) The EGR force law is erroneous, it is a sum of terms inverse squared and inverse fourth power in r.

38) The true force law of a precessing ellipse is the sum of terms inverse squared and inverse cubed in r. This cannot be obtained from MSM and EGR.

39) The method used in calculating the perihelion precession of planets is self inconsistent, in that one part of the calculation is Newtonian and the other is non-Newtonian.

40) If EGR is used self consistently for all perihelion precessions, it fails qualitatively as shown in UFT240.

41) EGR cannot be a precise theory because it fails qualitatively in whirlpool galaxies, a precise theory must describe all data precisely. EGR cannot be precise in the solar system.

42) In papers such as UFT150B and UFT155 it as has been shown that EGR contains numerous errors when applied to the calculation of light bending by gravitation and to the calculation of gravitational time delay.

43) The concept of null geodesic leads to inconsistent results and numerous errors.

44) The incorporation of photon mass in to EGR leads to numerous difficulties.

45) The calculation of an integral by Einstein in his light bending theory is basically incorrect.

46) There are numerous difficulties in the experimental determination of light bending by the sun.

47) The experiments on radiation bending by satellites have been heavily criticised for design faults, notably by Marmet and co workers.

48) Gravitational radiation has not been detected.

49) The claims made by Gravity Probe B have been criticised heavily, especially in regard to the Lense Thirring effect.

50) The Hawking Penrose singularity theorem has been refuted by Crothers.

51) The Hawking Finkelstein gravitational metric has been refuted by neglect of torsion.

52) All black hole metrics have been refuted by neglect of torsion.

53) Gravitational string theor metrics have been refuted by neglect of torsion.

54) As in UFT240 and notes to UFT241, the EGR correction to the perihelion calculation of planets has been incorrectly applied. The true result is n times greater.

55) As shown in Note 241(2) all the results attributed to EGR can be obtained from the true force law of the precessing ellipse.

56) The use of the MSM leads to many self inconsistencies and mathematical errors as shown in UFT papers from about UFT190 onwards.

57) A self consistent theory of gravitation unified with electromagnetism can only be forged with torsion, as in the 240 UFT papers to date.