1)

Notes for Paper 52, Part 3.

The Main Equations for New Energy

Baerbocks Notation

$$j = \frac{A^{(0)}}{\mu_0} \, d \wedge T \qquad -(1)$$

$$J = \frac{A^{(0)}}{\mu_0} \, d \wedge \tilde{T} \qquad -(2)$$

$$\square q_V = R q_V \qquad -(3)$$

$$T = d \wedge q_V + \omega \wedge q_V \qquad -(4)$$

$$D \wedge (D \wedge \omega) = 0. \qquad -(5)$$

The source of new energy is the torsion T. This gives the currents j and J. The two currents are picked up from spacetime and stored for use as an electromotive source. This is a battery powered by spacetime torsion, T, and its Hodge dual $\tilde{T}$. The torsion T is defined as in eqn (4) by the tetrad q_V and the spin connection ω. The tetrad is defined by an eigenequation, eqn. (3). The latter is the ECE lemma. The tetrad is therefore a wave of spacetime. Those waves may interfere constructively to give resonances in j and J. Therefore

2) the voltage of the battery may become very large, given the right design of the battery, (a circuit or material). The spin connection is always controlled by the second Bianchi identity (5). The scalar curvature R is proportional to the scalar magnitude of the canonical energy-momentum vector. So energy and momentum are transferred from R to j and J. Total energy-momentum is conserved.

Standard Notation of Differential Geometry

$$j^a = \frac{A^{(0)}}{\mu_0} d \wedge T^a \quad - (1a)$$

$$J^a = \frac{A^{(0)}}{\mu_0} d \wedge \tilde{T}^a \quad - (2a)$$

$$\Box q^a = R q^a \quad - (3a)$$

$$T^a = d \wedge q^a + \omega^a{}_b \wedge q^b \quad - (4a)$$

$$D \wedge (D \wedge \omega^a{}_b) = 0 \quad - (5a)$$

In the standard notation the tangent spacetime indices appear, but the base manifold indices are not written out.

3)

Complete Notation

$$j^a_{\mu\nu\rho} = \frac{A^{(0)}}{\mu_0} (d \wedge T)_{\mu\nu\rho} \quad - (1b)$$

$$J^a_{\mu\nu\rho} = \frac{A^{(0)}}{\mu_0} (d \wedge \tilde{T})_{\mu\nu\rho} \quad - (2b)$$

$$\Box q^a_\mu = R q^a_\mu \quad - (3b)$$

$$T^a_{\mu\nu} = (d \wedge q^a)_{\mu\nu} + \omega^a_{\mu b} \wedge q^b_\nu \quad - (4b)$$

$$D \wedge (D \wedge \omega^a_{\mu b}) = 0 \quad - (5b)$$

Standard Model of Electrodynamics

1)
$$j = 0 \quad - (6)$$

$$R = 0 \quad - (7)$$

and a Saltery powered by spacetime does not exist, such as a gravitative level.

2) The spin connection vanishes:

$$\omega = 0. \quad - (8)$$

3) The potential field is not recognized as a tetrad field, and the electromagnetic field is not recognized as a spacetime torsion.