224(5): Refutation of the U(1) Sector with Antisymmetry.

In U(1) electrodynamics of the standard model the field tensor is defined by:

$$F_{\mu\nu} = \partial_\mu A_\nu - \partial_\nu A_\mu . \quad -(1)$$

By antisymmetry (UFT131 ff):

$$\partial_\mu A_\nu = - \partial_\nu A_\mu \quad -(2)$$

and in vector notation:

$$\underline{\nabla} \phi = \frac{\partial \underline{A}}{\partial t} , \quad -(3)$$

$$\frac{\partial A_j}{\partial x_i} = - \frac{\partial A_i}{\partial x_j} \quad -(4)$$

This implies that:

$$\underline{\nabla} \times \frac{\partial \underline{A}}{\partial t} = \underline{\nabla} \times \underline{\nabla} \phi = 0 \quad -(5)$$

$$= \frac{\partial}{\partial t} \left(\underline{\nabla} \times \underline{A} \right)$$

In the standard model:

$$\underline{E} = - \underline{\nabla} \phi - \frac{\partial \underline{A}}{\partial t} , \quad -(6)$$

$$\underline{B} = \underline{\nabla} \times \underline{A} . \quad -(7)$$

From eqs. (5) and (7):

$$\frac{\partial \underline{B}}{\partial t} = \underline{0} \quad -(8)$$

The Faraday law of induction in the

d) standard model is:

$$\underline{\nabla} \times \underline{E} + \frac{\partial \underline{B}}{\partial t} = \underline{0} \quad - (9)$$

so

$$\underline{\nabla} \times \underline{E} = \underline{0} \quad - (10)$$

therefore $\underline{B}$ is a static magnetic field, so $\underline{E}$ is also a static ~~magnetic~~ electric field.

If $\underline{B}$ is static, then:

$$\frac{\partial A}{\partial t} = \underline{\nabla} \phi = \underline{0} \quad - (11)$$

and so:

$$\underline{E} \stackrel{?}{=} \underline{0} \quad - (12)$$

Antisymmetry leads to the collapse of the $u(1)$ sector symmetry because the electric field disappears and the magnetic field is static.

$$\boxed{\text{Therefore the entire theory of the Higgs boson collapses. It is based on a } u(1) \text{ sector symmetry.}}$$