$$a_w = \mathbf{p}_e * H\,\mathcal{E} = \lambda_{y1}\,\mathcal{E}^2$$

In fact, it is the quotient of the two acceleration terms (as a multiplier of the electric field frequency $\mathcal{E}$) that enters into the determination of the cyclotron frequency F_B:

$$\mathcal{E}/a_w(4\pi^2 L_{2°}) = \mathcal{E} * \frac{a_L}{a_w} = \mathcal{E} * \frac{\ell_c F_B^2}{\lambda y_1\,\mathcal{E}^2} = F_B$$

This clearly presented the frequency shift undergone by such waves once they interacted with the coil length. By defining n as the total number of charges composing, at any one time, the total charge Q of the secondary, we were able to show that F_B could also be expressed as a function of the fixed υ_k frequency term that separates ionizing from non-ionizing photon radiation (and which can be written as numerically identical to the electric frequency $\mathcal{E}_k$ of ambipolar radiation), and as involving the ratio of quadratic superimposition between massfree longitudinal spinning waves and the resultant light waves:

$$F_B = 4^2(W_{v2°}{}^4/c^4)\,(\mathcal{E}_k/n)$$

Evidently, this frequency term is arrived at by some substantial angular deceleration of the massfree waves, even if their linear velocity remains that given by $v = W_{v2°}$.

The above facts compel us to identify F_B with F_{cyclo}, since, as the reader will remember from before [1], for massfree charge the cyclotron frequency is a function, not of $W_k = \mathbf{p}_e/\lambda_e = \int = q/m_e$, but of $W_v = \mathbf{p}_e/\lambda_{y1}$. And here, in the analysis of the TC, we encounter F_B as a 'magnetodynamic' (ie cyclotronic) frequency that is constitutive of the magnetic acceleration term (the reciprocal of the inductance of the secondary) and of the voltage wavespeed at resonance, $W_v = \ell_c F_B$.

The function, then, for the cyclotron frequency of induction coils can be written as-

$$F_B = (L_{2°act} * W_{v2°})^{-1} = (4\pi^2\,L_{2°}\,W_{v2°})^{-1} = W_{v2°}/\ell_c = W_{v2°} * \mathbf{B}_{2°}/2\pi$$

with the corresponding angular 'velocity' being -

$$\omega_B = 2\pi\,F_B = 2\pi\,W_{v2°}/\ell_c = W_{v2°} * B_{2°}$$

and the value of the magnetic field, as the induction field $B_{2°}$ of the secondary, being directly given by: