

1)

Results from Friedmann Lemaitre Robertson Walker Dynamical  
Line Element and Metric Elements.

Coulomb Law

$$\begin{aligned} \underline{\nabla} \cdot \underline{E} &= -\phi \frac{\ddot{a}}{a} \\ &= \frac{4\pi}{3} \phi \rho (\rho + 3p) \end{aligned} \quad - (1)$$

Ampere Maxwell Law

$$\underline{\nabla} \times \underline{B} = \frac{1}{c^2} \frac{\partial \underline{E}}{\partial t} + \mu_0 \underline{J} \quad - (2)$$

$$J_r = -\frac{2k(kr^2 - 1)}{a^4} - \frac{\ddot{a}}{a^3} (kr^2 - 1) \quad - (3)$$

$$J_\theta = \frac{kr^2 + a^2 - 1}{a^2 r^4} + \frac{k}{a^2 r^2} \quad - (4)$$

$$J_\phi = \frac{kr^2 + a^2 - 1}{a^2 r^4 \sin^2 \theta} + \frac{k}{a^2 r^2 \sin^2 \theta} \quad - (5)$$

Results from Stationary Schwarzschild Metric

$$\underline{\nabla} \cdot \underline{E} = 0 \quad - (6)$$

$$\underline{\nabla} \times \underline{B} = \frac{1}{c^2} \frac{\partial \underline{E}}{\partial t} \quad - (7)$$