Next Consequences of Equation of Fields

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Abstract: The particular cases of the equation of fields have been discussed. The reasons of the fluctuations of charges have been explained.

We have the equation of fields:

$$\sum_{n=0}^{\infty} a_n\, g^n + \sum_{m=0}^{\infty} b_m \frac{1}{g_m} + \sum_{l=1}^{\infty} c_l \underbrace{\int \dots \int}_{l} \underbrace{ln \dots ln}_{l} \underbrace{gdg \dots dg}_{l} = const \qquad (1)$$

The fields are consequences of sources, so we put g = Q.

If Q < 1 where e =1 , the first term of the series is convergent.
We have the equation of charge:

$$\sum_{n=0}^{\infty} Q^n = const \qquad (2)$$

$$a_n = 1 \bigwedge_{n \in N}$$

Then naturally

$$\frac{1}{Q^m} \to \infty \bigwedge_{m \in N}$$

but we put $b_m = 0$ for every m and this constant $0 \cdot \infty$ is absorbed by the const on the right member of the equation.

If Q > 1 the second term of equation (1) in convergent analogically.
Of course the

$$\bigwedge_{n,l} a_n = 0 \quad \text{and} \quad a_l = 0\,.$$

Then every m = 1.

The charge fluctuations in quantum fluid are implicated by two mechanisms.

a) It is necessary to take under consideration the constants a_n in equations (1) and (2). At the beginning these constants are free.
We solve these equations looking for these constants.

b) There are the subseries in the series. For example in a series $\frac{1}{2^n}$ the series is $\frac{1}{4^n}$.
It implicates two notions in the electric and two notions in magnetic interactions but four notions in the electromagnetic interactions and four in the electroweak interactions, too.

We should analyze the third term yet.
Naturally here $g = Q$ may be too, but Dirac's deltas are taken into the integrals.