Fundamental Potentials of Most Often Investigated Interactions

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ABSTRACT: One has stated that the Newton potential and the Coulomb potential are particular cases of the potential of the strong interactions. It means that one will not easily succeed in getting rid of the black holes connected with each interacting particle.

We have:

$$\varphi_{gr} = \alpha \frac{m}{r} \tag{1}$$

$$\varphi_{el} = \beta \frac{q}{r} \tag{2}$$

And $m = \gamma |q|$ so:

$$q = \pm \frac{1}{\gamma} m \tag{3}$$

Compare [1].

If we have gravitational black holes, so we have electromagnetic black holes too. I know that the equations (1) and (2) are only approximations and the black hole is not connected with every singularity. However, in both types of interactions the potential $\frac{1}{r}$ is the fundamental potential and in gravitation there are black holes, so in electromagnetism black holes should appear.
From [2] we obtain:

$$\varphi_{strong} = A \frac{e^{-kr}}{r} + B \frac{e^{kr}}{r} \tag{4}$$

The second term of the formula (3) can't be naturally rejected. It can describe for example the confinement of quarks.

We have here an exploding white hole and collapsing black holes what together creates the superposition.
Because the charge of the homogeneously charged sphere (ball) is such as if the whole charge was concentrated in its geometrical center, so we have an opposite situation: the “point” charge is in the reality the sphere charge.
The same concerns mass. So there aren’t “point” charges.
We get rid of the large numbers of black holes at the price of the loss of the point charge, but it works only in the case of the potentials (1) and (2) and it doesn’t work in the case of the potential (4).
The formulas [1] and [2] are only approximated equations, but the gravitational wave is deduced from these approximated formulas.
In purpose to obtain the total gravitational and electric potential one should expand (1) and (2) in a series of the type:

$$\varphi = \sum_{n=1}^{\infty} \left(\frac{1}{r}\right)^{n}$$

So we have the formula of the type (4) and it isn’t easy to get rid of the black holes.

References:

[1] Z. Morawski, “Attempt at Unification of Interactions a Quantization of Gravitation”, this website
[2] E. H. Wichmann, “Quantum Physics”
[3] L. D. Landau, E. M. Lifshits, “Theory of Field”