

OBSERVATIONS

This paper proposed a method to solve the analytical solution of the SP and based on the mirror image current theory, the 2D and 3D analytical solution formulas were derived. Some things in the paper were not clear and properly stated which made the paper difficult to read especially the derivation of the formulas which is the major goal of the paper. Below are some of my observations;

1. I thought the formula accords with the Laplace equation in spherical coordinates is given by

$$\frac{1}{r^2} \frac{\partial}{\partial r} \left(r^2 \frac{\partial u}{\partial r} \right) + \frac{1}{r^2} \frac{1}{\sin\theta} \frac{\partial}{\partial \theta} \left(\sin\theta \frac{\partial u}{\partial \theta} \right) = 0$$

What happened to the denominators (r^2) in your own quoted equation?

2. Was equation 3 (the general solution of potential) in section 2.1 something you guys came up with, or was it already there? If the equation is already known, you ought to credit the authors or the source, in my opinion. Although equations 1.6 and 1.7 were mentioned, your manuscript does not contain any equations of that kind.
3. What steps led from equation 7 to equation 8? Is it feasible to simplify it and the connectivity for comprehension? If you have derived the majority of these equations, please state so. If not, provide appropriate citation by quoting the academics.
4. For someone who is not in the geosciences, most of the derivations might be unclear for them. I believe you should correctly demonstrate the connections and how you arrived to equation 13. All I'm asking is that you provide a step-by-step explanation of the derivations as this is your new formula, so that other researchers can comprehend the equations and draw conclusions from them. The Table 1 formulas must to be clearly described or demonstrate how you arrived at each of their instances.
5. Is it possible to put the result analysis of Section 3 and Section 4 in table format to support the figure results? The table will help to make the analysis more comprehensible.
6. For better understanding, it would be beneficial if you could explain section 3 following figure 4, and each figure should have an explanation. Section 4 should follow the same procedure as related to Figure 5. Provide a thorough

explanation for each of the following three figures: a horizontal electric dipole, b vertical electric dipole, and c tilted electric dipole.

7. It is not clear if you compared the formula for the 2D analytical solution you generated with the 2D measured data, just as you did for the 3D analytical solution

However, to make it easier, it would be even better if the previously mentioned points—particularly the derivation formula and the results—were broken down and discussed in detail while keeping in mind potential readers of the work who are not geoscientists. The current state of the document may make it somewhat difficult for someone who is not in the field of geoscience to understand, and the goal of any research paper is to provide clarity so that others can benefit from your work.