Interactive comment on “Brief communication: Electron pair donors and Earth’s energy generation” by Frederick Mayer

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Anonymous Referee #2 has raised a number of criticisms and suggests rejecting my Brief Communication. I respond to his criticisms below.

First, Referee #2 mentions “an unusual concept for thermal energy generation in the earth based upon “tresinos” and Cooper pair formations”. I think that unusual is an inappropriate description of the “tresino” energy generation process; unconventional might have been more appropriate as the geophysics community generally continues to believe in the Standard Earth Energy Paradigm (SEEP) that has been discredited in our earlier NPG paper (Mayer and Reitz, 2014). But, if Referee #2 had taken the time to read and understand our earlier NPG paper, he might have seen that the “tresino”
Earth energy generation picture resolves the numerous (observational and theoretical) paradoxes of the SEEP.

Second, Referee #2 says that “I cannot comment on the soundness of the concepts of "tresinos" and "Cooper pair formations" as this is not my field of expertise and these concepts are not explained in the manuscript.” Knowing that this would present a problem to reviewers of this Brief Communication in my revised version of the paper, I suggested: In order to facilitate clearer understanding, the reader is urged to consider our first paper (Mayer and Reitz, 2014) before addressing the present Brief Communication. It is expected that most geophysicists are believers in the Standard Earth Energy Paradigm (SEEP) which we show to be inconsistent with most of the geophysics measurements of heat and helium generation from the Earth. Because of this, some effort is required to fully understand the present work.

Third, because Referee #2 stated: “I cannot comment on the soundness of the concepts of "tresinos" and "Cooper pair formations" as this is not my field of expertise and these concepts are not explained in the manuscript”. Given Referee #2's own admission, it seems clear that he has been unwilling to spend the time to present a technically qualified review of my paper.

Fourth, Referee #2 says: “The only reference to a paper on magnetotellurics is cited out of context”. It’s not out of context because the referenced paper makes an important point that Magnetotelluric data scans often find zones of very-high electrical conductivity; see, for example, a typical paper by (Ritter, et al., 1999). Furthermore, the authors of this paper comment “A large number of electrical conductivity anomalies have been detected in the Earth crust around the world”. In addition, these authors say “there is no clear consensus as to the causes and origins of these anomalies, particularly in crystalline regimes”. Referee #2 seems to believe that, in fact, there is consensus in the geophysics community. Just because there are carbon deposits does not mean that they are responsible for MT data at a basic physics level. Furthermore, adding more references to this and other MT processes does not resolve the issue of
the underlying physics of the MT observations.

Finally, I believe that the new proposal for the MT observations is important to consider because the same electron pair donors are required to understand the Earth’s energy generation observed at many places around the Earth at relatively shallow depths as I discuss in this Brief Communication.