

Interactive comment on “A model for predicting changes in the electrical conductivity, practical salinity, and absolute salinity of seawater due to variations in relative chemical composition” by R. Pawlowicz

Anonymous Referee #2

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This paper presents a detailed analysis of the relationships between the electrical conductivity of seawater, practical salinity and absolute salinity. The model relies on a previously developed model for calculating the electrical conductivity of electrolyte solutions to predict the effect of chemical variations. The model is then applied to develop and analyze salinity corrections in actual ocean environments. The results are meticulously described and carefully documented. I recommend publishing this paper with the following very minor modifications to improve its clarity:

P. 2866, line 17. It would be useful to explain why this procedure is considered more
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correct. Is it more correct because it entails smaller numerical errors?

P. 2872, line 26. The symbol given here is CO_3^- . Should it be CO_3^{2-} or HCO_3^- ?

P. 2904, Figure 3. Although the Pa08 model appears to be working very well, there is a small bias, especially for ions with higher equivalent conductivities. What is the reason for this bias? I understand that this bias does not significantly affect the overall accuracy of the calculations but it would be useful to understand its origin.

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