Interactive comment on “Thermophysical property anomalies of Baltic seawater” by R. Feistel et al.

Anonymous Referee #2

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This paper addresses the important issue of how to estimate the overall thermodynamic properties of seawater in the presence of anomalous composition relative to reference composition seawater. No sufficient data currently exists to compute the Gibbs function in that case, so that the only way to assess the importance of composition anomalies is via a theoretical approach. The authors address this by using the FREZCHEM and LSEA_DELS models to estimate the effect of anomalous composition on the thermodynamic properties, and found for instance, a significant effect on sound speed. I find the approach interesting, well motivated, clearly written and of high significance to the field. In doing so, the paper also discusses important conceptual points relative to how to describe anomalous composition when there are extra (alien) or missing constituents relative to the reference composition seawater. All this will be useful to investigators in the field.