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Interactive comment on "Numerical implementation and oceanographic application of the Gibbs potential of ice" *by* R. Feistel et al.

Anonymous Referee #1

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In this manuscript the numerical implementation of the Gibbs potential of ice is described. The authors provide source code examples of the Gibbs function of ice and its partial derivatives. I think this is extremely useful and therefore the manuscript deserves publication. I have only minor comments concerning the presentation. It would be good to illustrate the oceanographic applicability of the software better. For instance, a nonexpert in this field should be convinced to use the heat capacity of ice calulated with the provided software instead of using previous approaches. What is the gain? Section 3 could be moved into a help file of the supplement because it is rather technical. In the output description of Visual Basic the unit of the derivative of the isentropic compressibility with respect to pressure should be 1/Paˆ2 (last row). In the introduction the reference to Hagen and Feistel (2004) is not available yet and rather specific I assume. I suggest too use another already published paper on detection of climate change.

The manuscript should be published with minor revisions.

Interactive comment on Ocean Science Discussions, 2, 37, 2005.