Dear Dr. Hall,

we would like to thank you for your positive feedback and constructive comments. Please find answers to your questions below where needed. All minor issues were corrected as you suggested.

Section 2

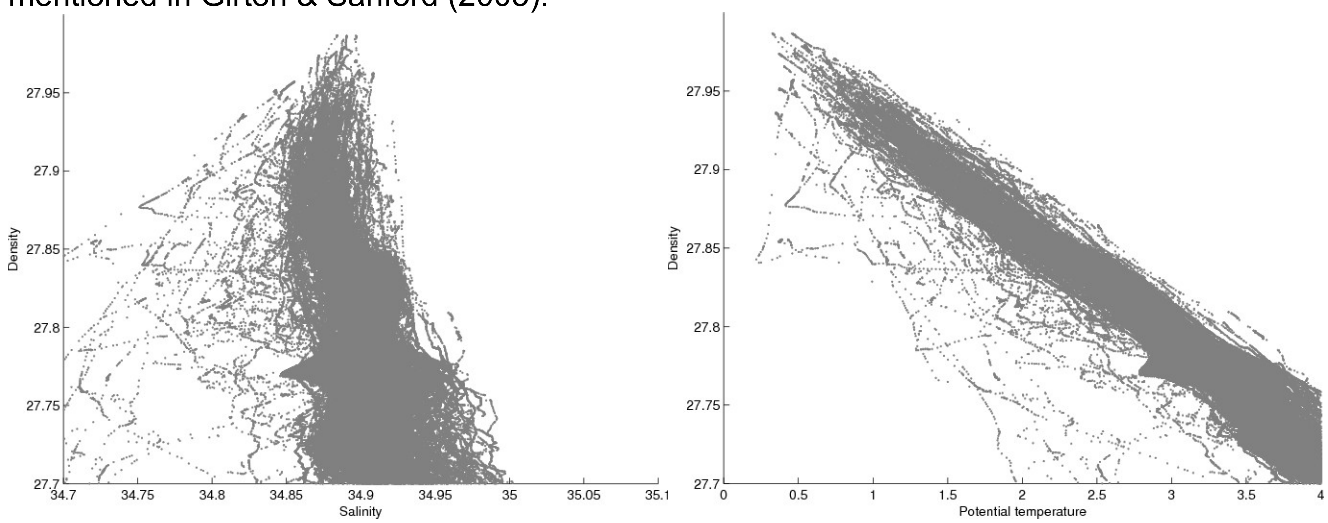
This section explains well the types of instruments used in the study and their spatial arrangement, but I felt that a separate figure describing the coordinate system used for each current meter would have improved clarity.

A figure was added to present examples for time series of u, v and T. This new Figure 2 also has a sketch showing the original coordinate system with north and east component and the rotated coordinate system aligned with the mean flow.

Section 3

On p. 2630 line 14 it is stated that salinity varies only by about 0.05 between the overflow plume and the ambient water, justifying the use of heat flux as a proxy for density flux. I felt the value of 0.05 should have been referenced.

Rudels et al. (1999) show a salinity section downstream of the Denmark Strait that confirms a salinity difference of about 0.05. A reference to their study was added in the text. Please see also the salinity-density and temperature-density relationships using the CTD data from this study below. They confirm the tight connection between temperature and density in the density range of the overflow water. The tight temperature-density relationship is also mentioned in Girton & Sanford (2003).



Also on p. 2631 line 21, values for the temperature gradients dT/dz and dT/dy are estimated in order to calculate the two remaining advective terms. I was unclear as to how these estimates were obtained.

The text was changed to explain the temperature gradients in detail. The temperature gradient dT/dy is the temperature change with downstream distance shown in Figure 5. The vertical temperature gradient dT/dz is calculated from the temperature difference between overflow water (~1°C) and overlying water (~6°C) over a distance of about 1000 m.

Section 5

This section provides very good detail of the numerical and integration methods used to calculate the eddy heat transports. However, I did find some of the material on p. 2636 slightly difficult to follow. A great deal of detail is given as to the integration methods used, upper integration isotherm boundary selection and vertical interpolation methods, together with the use of pairs of moorings to form a box with the upper isotherm to create an integration area. Although I understood this more clearly after re-reading several times, I felt that a figure relating specifically to the methods used here would have been helpful.

Figure 8 was added showing examples for the two different interpolation methods. We hope this makes it easier for the reader to follow the methods applied in this study.

I also thought more explanation was required as to how different error estimates were derived from the use of different interpolation methods, and a statement as to whether the errors are significant in this context (p. 2636 line 25-30).

The error estimate that we give here is only the difference in the results from the two interpolation methods. Therefore they are not significant in a statistical sense. We now call it an estimate of the uncertainty instead of error estimate.